



For sustainable production & consumption

ECO-PRODUCTS DIRECTORY 2011

Featuring products and services in the Asia-Pacific region
designed to contribute to the mitigation of global warming



Asian Productivity Organization

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ASIAN PRODUCTIVITY ORGANIZATION
Hirakawa-cho Dai-ichi Seimei Bldg. 2F
1-2-10 Hirakawa-cho, Chiyoda-ku, Tokyo 102-0093, Japan

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Foreword

Since 1994, the Asian Productivity Organization (APO) has been promoting the concept of Green Productivity (GP) as a way to achieve sustainable economic growth and address the pressing issues resulting from climate change. By offering various training courses in the area of GP, the APO helps countries within the Asia-Pacific region to utilize appropriate productivity tools in line with environmental management concepts and policies. The annual Eco-products International Fair (EPIF) is one such initiative, designed not only to heighten awareness of the GP concept but also to support the efforts of environmentally-conscious enterprises and organizations by providing a regional platform through which to promote their unique technologies and solutions for advancing productivity through greener methods.

The APO Eco-products Directory is another GP platform developed by the APO. This directory is a one-of-a-kind publication that encourages the concept and practices of green purchasing among both individuals and enterprises by providing access to information on products and services developed within the Asia-Pacific region designed to minimize harmful impacts on the environment. In an era when we are realizing that the way to protect our environment begins with changes in attitudes and lifestyles, this directory represents the strength, vibrancy, and creativity of the Asia-Pacific in leading the global battle against climate change by developing a greener regional community.

It is a great pleasure to make this comprehensive publication available to all interested in greener purchasing and consumption. It is hoped that the Eco-products Directory will continue to contribute to robust, sustainable development. The APO is very grateful for the guidance and support provided by the Committee on the Eco-products Database under the leadership of Chairperson Professor Ryoichi Yamamoto, the Eco-products Database Working Group, as well as other partners whose cooperation has been invaluable in publishing and disseminating each edition of the directory within the region and elsewhere.

Ryuichiro Yamazaki
Secretary-General

Tokyo
January 2011



Dear Readers

In recent years, we have been continually experiencing series of natural disasters and extreme weather conditions around the globe. Various figures and data represent a rapid rate at which global warming is developing, including the rise of average surface temperature and the rise in sea level. Experts say, we have but only a few decades before we begin to see drastic consequences of climate change. Scientists warn us that when we will pass these “tipping points,” the Arctic summer sea ice will vanish, the rainforests in the Amazon will start deteriorating, and cities around the world will become paralyzed from continuing occurrences of severe floods and storms. While governments around the world are getting together to develop frameworks and strategies to seek common environmental measures, at the same time, the question of which we, as global citizens, must ask ourselves is whether time still allows for us to sit back and hope that this point of no return in the climate change is years more away than predicted, or whether we need to be seeking our own roles in preserving the current state of our eco-system.

With initiatives such as the annual Eco-products International Fair (EPIF), first held in 2004, the Asian Productivity Organization (APO) has been introducing various programs to draw attention to the importance of the roles played by society as a whole in combating global warming through their activities to promote green purchasing. Such initiatives have not only helped to educate the general public on the ideas such as eco-products and eco-labeling, but also have continued to send out the message to economies within the Asia-Pacific region that it is the market players at both ends, the industries as well as the consumers, who can contribute in the re-designing of our lifestyles to minimize the negative impacts to the environment.

The Eco-products Directory, also published by the APO since 2004, is another of such innovative mechanisms to promote a green business platform. Under the guidance of the Green Productivity Advisory Committee and the Eco-products Directory Working Group, the directory provides a hands-on comprehensive guide to a range of products and services in the Asia-Pacific region that not only address the diverse range of environmental issues, but also propose inventive solutions towards building a greener economy and a greener society.

This directory is aimed to a wide audience in the Asia-Pacific region and abroad. It offers the governments an opportunity to recognize the efforts and innovations proposed by various businesses and related organizations in the pursuit toward ecologically sustainable economic growth, green growth. For businesses and organizations, the Directory offers a platform for sharing best practices of new technology and ideas in the area of green business. To consumers, the directory can

be an educational tool to assist them in recognizing products and services within the market that have one or more characteristics attempting to minimize the negative impact on the environment. For all readers, this directory provides the information and the know-hows to contribute to the battle against global warming by actively choosing and utilizing more environmentally friendly products and services. The Eco-products Directory, overall, communicates the message that, whether we are an individual or an organization, we all have a part to play in preventing the further degradation of our environment.

The 2011 issue of the Directory has expanded its regional profile by offering more solutions and technologies made available by a diverse range of enterprises in Asia-Pacific region. On that note, I would like to note and thank the various parties that have contributed their expertise in the making of this edition, including the Environment and Development Foundation (EDF), the Federation of Malaysian Manufacturers, Green Choice Philippines, Korea Environmental Industry and Technology Institute (KEITI), the National Productivity Center of India and Thailand Environmental Institute (TEI). We continue to rely on such partners, whose cooperation is inevitable in disseminating both the spirit and ambitions of this directory.

Ryoichi Yamamoto

Emeritus Professor, University of Tokyo

Chairperson of the Committee on the Eco-products Database, APO

Vice chairperson of the GP Advisory Committee, APO



Biodiversity Conservation and Green Purchasing

The United Nations declared 2010 the International Year of Biodiversity, and in October, the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP 10) was held in Nagoya, Japan. At this meeting, industrialized and developing nations held in-depth discussions on resource strategies, and particularly on conservation and sustainability with regard to biodiversity and the access and benefit-sharing (ABS) of genetic resources. As a result, CBD-COP 10 adopted the Nagoya Protocol on ABS and the Aichi Target, which is a strategic plan for the period 2010 – 2020 consisting of 20 objectives, including the goal of conserving at least 17 percent of the world's land and inland waters and 10 percent of its coastal and marine areas.

Biodiversity can be viewed in relation to the character of living things and as a form of interconnection beyond generations. It involves three levels – genetic diversity, species diversity and ecosystem* diversity. Diversity is important because living things become resistant to rapid changes in the environment (such as the spread of disease, insect pests and global warming) as a result of cohabitation with others through the food chain and different links in individual regions, and thereby avoid the risk of extinction. Today, biodiversity stands on the brink of a crisis. It is estimated that over the last century, biodiversity loss has progressed at a rate 1,000 times faster than the past average, with 40,000 species now becoming extinct annually.

The majority of this biodiversity loss is considered to stem from economic activities (such as changes in habitat environments due to development and land conversion for agricultural and industrial use), excessive hunting and overfishing, chemical contamination, invasion of alien species and global warming. Mankind cannot survive without the benefits of biodiversity, which include ecosystem services such as safe water to drink, food, medicinal supplies and air/soil purification.

To halt the degradation of ecosystem services, it is imperative that individual countries develop the necessary legislation and build the social costs of environmental deterioration into market prices (referred to as the internalization of external diseconomies). The final release of the Economics of Ecosystems and Biodiversity (TEEB) report, made public during COP 10, includes the provisional calculation that an annual investment of US\$45 billion (approx. 3.6 trillion yen) in ecosystem conservation (such as measures to protect animals, plants and forests) will generate long-term economic benefits, including marine resource enhancement and mitigation of global warming, worth US\$5 trillion (400 trillion yen) annually. On the other hand, up to US\$4.5 trillion of losses may be suffered if conservation efforts are not implemented (ref. Nikkei newspaper, morning edition, October 21, 2010). This monetary quantification makes it clear that we must change our notion of nature being free.

Efforts to conserve biodiversity have also gathered momentum in the business community since COP 9, with an increasing number of environmentally advanced companies developing and implementing biodiversity declarations, green guidelines and other related initiatives. The Aichi Target upholds that all stakeholders, including businesses, should implement plans for sustainable production and consumption and keep the impacts of using natural resources well within safe ecological limits. The Guidelines for Private Sector Engagement in Biodiversity issued by the Ministry of the Environment in 2009 provide a road map and underline important points

enabling companies in all sectors to take steps toward biodiversity conservation, and also give many examples highlighting the efforts of advanced corporations.

As a specific approach, the guidelines recommend the promotion of environmental impact assessment involving business activities, quantification of biodiversity and environmental communication involving stakeholders (e.g., suppliers, governments, communities and nongovernmental organizations) as well as a rapid shift to the production and sale of eco-products in consideration of biodiversity. Such developments are expected to help avoid risks such as increased material procurement costs and regulatory constraints and to create new business opportunities, including technological innovation for green markets, pioneering of products for eco-friendly certification, and corporate reputation enhancement.

Our conventional monoculture-based commercialization efforts (which tend to focus solely on efficiency) and the development of new technologies designed to overcome the elements of nature may be the cause of the looming biodiversity crisis. From now on, we need to develop systems and technologies that will allow us to live in harmony with nature and adapt to it rather than overcoming it. This may be an opportunity to learn from the wisdom shown by many Asian peoples of living harmoniously with nature. There is every reason to believe that efforts toward biodiversity conservation in the mainstream of society will lead to the resolution of various problems such as climate change, poverty and resource depletion.

We cannot afford to wait for the necessary legislation to be developed. We must first incorporate viewpoints of biodiversity into green purchasing guidelines and then move toward resolution by expanding green markets that are readily accessible to anyone, such as those for reliable products, goods with certification marks, organically grown farm produce and ecotourism.

Finally, it should be added that the spread of educational programs designed to increase urban children's knowledge and love of nature and living things is an important part of encouraging people to embrace green consumption and ensure that our precious Earth can continue to support all mankind.

**The concept of an environment encompassing correlations between living things (e.g., the food chain) and habitats, oceans, forests, wetlands and other environmental components*

Noriko Takemoto

Professor by Special Appointment

Graduate School of Life Sciences, Tohoku University

Director, Consortium of Environmental Organizations, Ecosystem

Adaptability Global COE

2

The State of Mutual Recognition for Type I Ecolabelling in Asia

One of the missions of the Global Ecolabelling Network (GEN* – a non-profit association of Type I environmental performance labelling organizations around the world) is to enhance cooperation and collaboration among its member countries. Mutual recognition among Type I ecolabelling organizations is part of such efforts to foster cooperation and collaboration.

As there are cases in which labelling organizations make unique mutual recognition arrangements with their counterparts, it is difficult to distinguish arrangements in a precise manner. GEN's mutual recognition schemes can be roughly divided in three types: 1) mutual recognition on auditing, testing and verification procedures; 2) mutual recognition based on the establishment of common criteria (partial mutual recognition); and 3) full mutual recognition. These schemes can be briefly outlined as follows: 1) In mutual recognition on auditing, testing and verification procedures, when two labelling organizations have concluded an agreement and a party in one of them (Country A) applies to use the labelling of the country to which the other labelling organization belongs (Country B), the labelling organization in Country A may conduct auditing on Country B's behalf. This provides overseas applicants with cost and access advantages. Even when on-site auditing and other processes are required, the labelling organization in Country B does not have to visit Country A, meaning that the costs and time-consuming processes involved can be reduced. 2) In mutual recognition based on the establishment of common criteria (partial mutual recognition), certification by a labelling organization can be accepted by the other organization if the product meets the criteria mutually agreed upon by the two labelling organizations in question (common core criteria). As this scheme does not require the applicant to undergo auditing again, it has the advantages of reducing the time, cost and number of time-consuming processes involved. 3) Full mutual recognition is a scheme in which two mutually agreeing organizations conduct auditing based on identical criteria using the same certification method. If one of them has already been certified for ecolabelling, the other can be certified without undergoing auditing. The common advantage among all these mutual recognition arrangements is that both the labelling organization responsible for auditing and the applicant can mitigate the costs and time/effort resources involved, meaning that the schemes facilitate access to label certification. (In all of these schemes, the labelling body that makes a contract with the applicant awards certification and concludes a license agreement.)

In 2002, Japan's Eco Mark concluded a partial mutual recognition agreement (the second type of scheme outlined above) for copiers and printers with Nordic Swan – an ecolabelling board composed of members from five Nordic countries. Under this scheme, auditing in regard to the common core criteria is omitted if an application is made for a product identical to one that has already been granted certification by another organization. Under this scheme, the usual time taken for auditing, which is generally more than three months, is reduced to just a week in some cases. Thanks to the considerable advantages this approach provides to both the auditing body and the applicant, around 20 certifications have already been granted under the scheme.

Partial mutual recognition mechanism

Example of Nordic Swan certification procedures for products certified with the Eco Mark



The State of Mutual Recognition for Type I Ecolabelling in Asia

Japan, China and South Korea have promoted mutual recognition of ecolabelling schemes for personal computers since 2005 and for copying machines since 2007. The tripartite framework is akin to 1) and 2) combined; auditing results for the common criteria in each labelling scheme are invoked for auditing in other labelling schemes. Also, for non-common criteria, the application-receiving organization conducts auditing on behalf of other bodies. In addition to the mutual recognition agreement, these three countries have taken further steps to try to establish regulations concerning the operation of mutual recognition schemes. This is an attempt to overcome the mutual recognition challenge facing all Type I ecolabelling organizations around the world that the common criteria are not actually used despite their availability (i.e., there are no certified products).

In fact, as part of GEN's Technical Assistance Program (TAP), Japan, South Korea, Taiwan and Thailand developed common core criteria (CCC) for paints and toner cartridges, and concluded mutual recognition agreements from 2002 to 2007. However, the scheme is not fully utilized. Despite the trouble taken to create mutual recognition arrangements, without certified products, their efforts do not help "to expand green markets for environmentally preferable products" – the original goal of the Eco Mark Type I ecolabelling in Japan. The regulations concerning the operation of mutual recognition schemes outline costs, communication structures and other practical, concrete details to ensure that actual operations using the mutual recognition scheme will progress smoothly.

Many countries, including China and South Korea, include Type I ecolabelling as a condition for inclusion on government procurement lists, meaning that such labelling cannot be ignored. Type I ecolabelling and mutual recognition schemes around the world will become important tools to promote the globalization of business activities and reduce burdens on the global environment. The facilitation of mutual recognition for ecolabelling programs to help them advance will continue to play an important role in the future.

*Global Ecolabelling Network (GEN)

The Global Ecolabelling Network (GEN) is a non-profit association of Type I ecolabelling organizations. Founded in 1994, it has 27 members and 3 associates (as of January 2011). Since its inception, the Japan Environment Association has taken charge of its General Affairs Office. The countries marked in bold below have GEN member organizations.

URL: <http://www.globalecolabelling.net/>

APO member countries

1	Bangladesh	6	India	11	Lao PDR	16	Philippines
2	Cambodia	7	Indonesia	12	Malaysia	17	Singapore
3	Republic of China (Taiwan)	8	Islamic Republic of Iran	13	Mongolia	18	Sri Lanka
4	Fiji	9	Japan	14	Nepal	19	Thailand
5	Hong Kong	10	Republic of Korea	15	Pakistan	20	Vietnam

* Source: APO website (http://www.apo-tokyo.org/01about_what_membership.htm)

Reference: Mutual recognition between Eco Mark in Japan and overseas ecolabelling organizations
<http://www.ecomark.jp/english/sougo.html>

Ikuko Yoshida

Promotion & International Cooperation Section Eco Mark Office
 Japan Environment Association

3

About the Carbon Footprint of Products (CFP) in Asian countries

Recently, countries across the world have begun developing CFP programs. All the Asian countries mentioned below strive to promote the establishment of such programs as part of national efforts to cut greenhouse gas emissions. The following is a brief overview of the projects conducted in South Korea, Taiwan, Thailand and Japan.

In South Korea, the quasi-governmental Korea Environmental Industry & Technology Institute (KEITI) started trial projects for its CFP program in 2008 and programs were launched in earnest in February 2009. A two-type authentication scheme, including the disclosure of the total amount of greenhouse gas (GHG) emissions associated with the life-cycle CO₂-equivalent emissions of specific products (Stage1: Carbon Emissions Certificate) and the reduction rates compared with standard products (Stage2: Low-Carbon Product Certificate), has been implemented. The amount of GHG emissions labeled on products are calculated by referring to the Product Category Rule (PCR), in which products are divided into five groups, including non-durable goods, durable goods that do not use energy, production goods, services, and energy using products, under the support of KEITI. The number of CFP-approved products has reached 276 from 61 companies as of November 2010. With the support of the South Korean government and the aggressive efforts of the distribution industry, the approved products can be often found in department stores, supermarkets, convenience stores, and other outlets. In terms of the market penetration rate, the CFP project in South Korea is believed to be the current vanguard in Asia.

In Taiwan, the Guidelines for Sustainable Energy Policy were issued in 2008, and each citizen is obliged to reduce greenhouse gas emissions by 1 kg per day as part of the CFP establishment project. The CFP project is run mostly by governmental organizations: the Taiwan Environmental Protection Administration (TEPA) takes charge of the creation of the standards, as well as verification and promotion of the project; technical support is conducted by the Ministry of Economic Affairs (MOEA) and the Industrial Development Bureau (IDB); and the Taiwan Accreditation Foundation (TAF) has designed a scheme to approve CFP products. The organizations admitted by TEPA are required to approve CFP products following the existing Type III Environmental Declaration or an approved GHG scheme. TEPA has allowed 11 products from 10 companies to be authorized as CFP in 2010, and is scheduled to develop PCR in the future. In addition, brochures are distributed to citizens to promote the project. At this time, some LCD, LCD televisions, ADSL & routers, laptop computers, soft drinks and candies are approved as CFP. The Taiwan Electrical and Electronic Manufacturers' Association (TEEMA) is currently studying the CFP scheme for electronic components and electrical products.

Thailand drew up a national strategic plan related to greenhouse gas reduction under the Kyoto Protocol. As part of the efforts, the Thailand Greenhouse Gas Management Organization (TGO) and the National Metal and Materials Technology Center (MTEC) launched a pilot CFP project in 2009, aiming to increase the competitiveness of Thai industries in the global market and support the Thai industrial sector in implementing the low carbon advances. Thailand and Japan have similar aims for their CFP projects in that these projects promote lower greenhouse gas emissions from producers at each stage of a product's life cycle and provide criteria for the selection of carbon-labeled products for consumers. Since Thailand is not obliged to establish

About the Carbon Footprint of Products (CFP) in Asian countries

PCR so far, the CFP is individually authorized by organizations. Thailand is, however, scheduled to draw up a local PCR in the future. The CFP database of GHG emission factors was prepared by adding documentary-record data and IPCC data to the national database. As of October 2010, 25 entities were authorized as CFP producers with 63 products, including textile products, paper, metal cans, ceramic tiles, air conditioners, soft drinks, instant noodles, and tinned tuna. In the near future, CFP projects conducted by business associations involved with international supply chain management are expected in Thailand.

In Japan, disclosure of greenhouse gas emissions was defined under the Action Plan for Achieving a Low-carbon Society in July 2008, and the Guidelines for the Carbon Footprint System, particularly rules relating to the calculation of emissions and labeling, were developed in the same year. In 2009, the Ministry of Economy, Trade and Industry, the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of Environment jointly started a three-year project to develop the Carbon Footprint System. Mizuho Information & Research Institute, the Japan Environmental Management Association for Industry and other organizations were appointed as the secretariats of the project. In 2010, 842 CFP databases of GHG emission factors and CFP data verification criteria for GHG emission factors were released. Many materials, foods, daily products and other goods have been certificated as CFP in Japan, and CFP is introduced through the JCT Hosting Services, remote conference systems and other ways. The number of approved products based on the 45 PCR was 144 as of December 2010. Furthermore, the ideas of CFP are introduced in elementary, junior high and high schools, and CFP instructors are fostered with the aim of promoting CFP activities.

As described above, each country promotes the establishment of the CFP systems as national projects, focusing on the development of CFP databases and the construction of PCR schemes to increase the transparency of PCR. Progressing in the same direction across Asia is important to build collaborative relationships in the region while respecting each other's differences in approach toward the establishment of the CFP systems.

Takehisa Kabeya

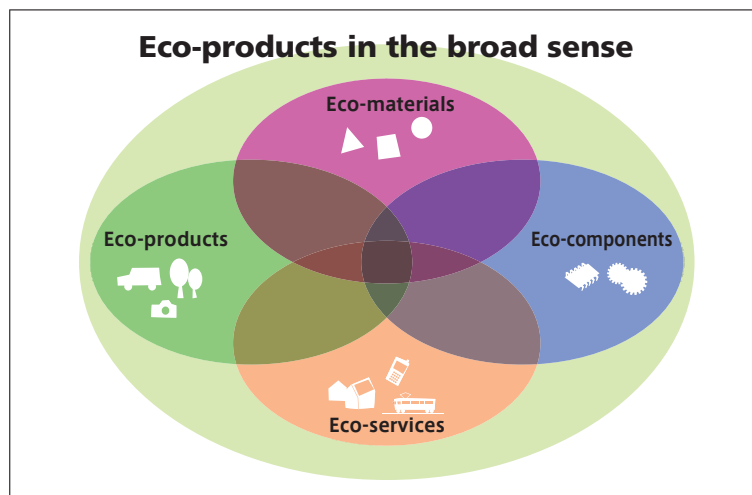
Center of Product and Environmental Aspects

Japan Environmental Management Association for Industry

Products and services listed in the *Eco-products Directory 2011*

About "eco-products"

"Eco-products" generally refer to environmentally friendly products, but there is no strict definition. In the *Eco-products Directory 2011*, they are defined as "products and services that comply with environmental regulations or are environment-friendly, reflecting manufacturers' voluntary efforts to care for the environment." It includes not only industrial products but also products and services in the areas of agriculture, tourism, and finance, as well as products and services aimed directly at environmental impact reduction (i.e., eco-businesses, such as the production of pollution control devices, waste disposal/recycling, and consulting). The *Eco-products Directory 2011*, is comprised of four main categories: materials, components, products, and services.



Products and services listed in this Directory

Many products and services come with environmental labels that state product features to inform and appeal to consumers. They certify that items are environmentally friendly according to standards independently set by countries, regions, organizations, and providers.

The International Organization for Standardization (ISO) classifies environmental labels into Type I, Type II, and Type III and environmental labels are then given based on compliance certification, producers' self-declaration of commitment to environmental preservation, and the verification and disclosure of quantitative environmental impact data. Additional environmental labels are awarded under standards and criteria of other bodies.

In addition to environmental labels, other initiatives are intended to raise consumers' environmental awareness, including the creation of databases where self-assessed products may be registered.

ISO environmental labels

Type I (ISO14020, ISO14024): Seal of approval-compliance approval

Description: Type I labels are managed in accordance with the standards and principles of the ISO. This system ensures that the use of the label is accepted by a third party based on an independent, multifaceted standard. The standard covers the entire product life (resource extraction, manufacturing, distribution, use, disposal, recycling). The submitted products are assessed for approval and if successful are awarded the Type I label.

Examples:



Type II (ISO14021): Single attribute-producers' self-declaration of commitment to the environment

Description: Product providers independently incorporate environment-related improvements in their products. There is no intervention by any third party.

Examples:



Type III (ISO14025): Report card-verification and disclosure of quantitative environmental impact data

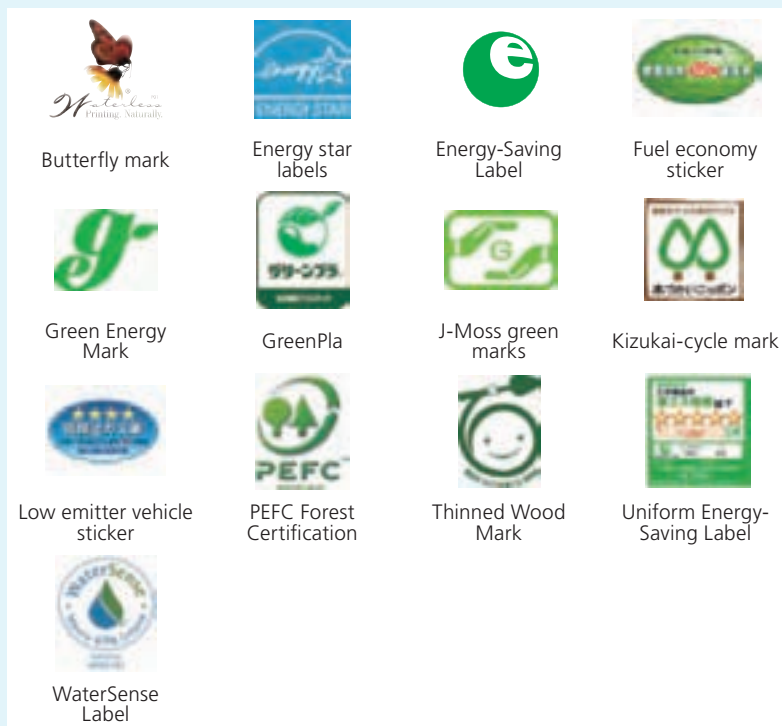
Description: Type III labels are managed in accordance with ISO14025 (environmental declarations). They use the life cycle assessment (LCA) method to show environmental information on products quantitatively from resource extraction to manufacturing/assembly, distribution, use, and discarding/recycling. Only the reliability of disclosed data is verified and product evaluation is left to consumers.

Examples:



Other environmental labels

There are other environmental labels apart from those of the ISO. Various environmental labels have been created in many areas including the consumer electronics industry and automotive industry.



Other initiatives to raise environmental awareness

Apart from the promotion of environmental labels, the Green Purchasing Network (GPN) in Japan formulated guidelines for purchasing environment-friendly products, together with important points to consider, in 17 categories including printing and communication paper, stationery and office products, and vehicles. In line with the guidelines, the GPN Database provides the public with environmental information on products. The information contained in the database is based on judgment by registrants, and in no way represents endorsement by the GPN for the products listed. The database is intended to catalogue products that comply with the GPN's Purchasing Guidelines and the Law on Promoting Green Purchasing and to provide environmental data on these products to enable comparisons by consumers making purchasing decisions.



Registered in
the GPN Database

The products and services in the *Eco-products Directory 2011* are listed if any of the above-mentioned environmental labels have been received or declared, or if they are registered in the GPN Database. For listed products that have not received environmental labels or been registered in the GPN Database, the *Eco-products Directory 2011* Working Group decided whether to include them based on related environmental performance information submitted by their producers. Please note that decisions by the Working Group are based solely on the environmental performance of products; listing in the Directory is in no way intended to represent a guarantee of their functions and safety.

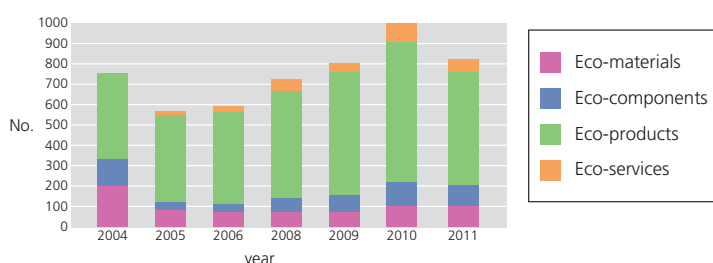
Properties of listed products and services during 2004-2011

1. Number of listed products and services in this Directory

- 1) The number of Eco-products has increased proportionally, accounting for 72% of the total number as compared to 67% for 2010.
- 2) The number of listed Eco-materials and Eco-components has remained at level, as compared to 2010, at 10% and 13 %, accordingly.

	2004	2005	2006	2008	2009	2010	2011
Eco-materials	199	80	71	70	73	105	101
Eco-components	134	39	39	73	83	131	105
Eco-products	421	432	453	526	604	670	557
Eco-services	N/A	16	28	56	44	94	55
Total	754	567	591	725	804	1,000	818

Figure 1. Number of listed products and services



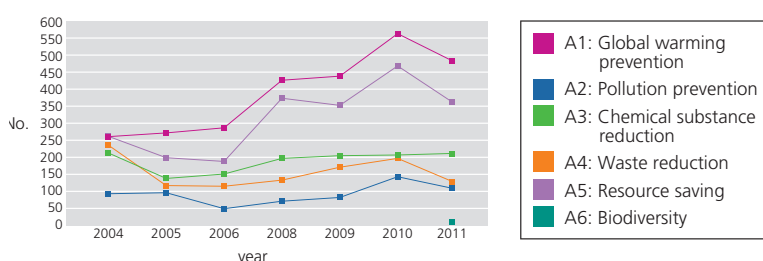
2. Number of listed products and services by category

Which environmental issues does the product or service intend to address?

- 1) A category for the protection of biodiversity has been newly added.
- 2) There continues to be a strong interest for products and services designed to contribute to global warming prevention.
- 3) Products and services intended to address the reduction of chemical substances has further increased.

	2004	2005	2006	2008	2009	2010	2011
A1: Global warming prevention	263	274	289	429	441	566	488
A2: Pollution prevention	95	98	51	73	84	145	110
A3: Chemical substance reduction	215	140	153	199	207	209	214
A4: Waste reduction	238	119	117	135	173	199	128
A5: Resource saving	264	201	190	376	355	471	361
A6: Biodiversity	N/A	N/A	N/A	N/A	N/A	N/A	7

Figure 2. Number of products and services categorized as A1-5



How does the product or service address environmental issues?

- 1) Energy saving, including energy recovery, appears to continually be a major approach for addressing environmental issues.
- 2) There is also a strong interest in attaining material and waste reduction through improving product quality and overall performance.

	2004	2005	2006	2008	2009	2010	2011
B1: Recyclability	214	110	84	85	116	136	110
B2: Long life	106	76	65	118	104	115	82
B3: Degradability	N/A	N/A	N/A	33	55	56	28
B4: High quality	243	198	179	228	230	321	330
B5: Energy saving	297	321	348	428	469	549	444
B6: Environmental clean-up products	135	74	107	75	83	125	123
B7: Using recycled materials	177	79	87	86	80	134	112

Figure 3. Number of products and services categorized as B1-7

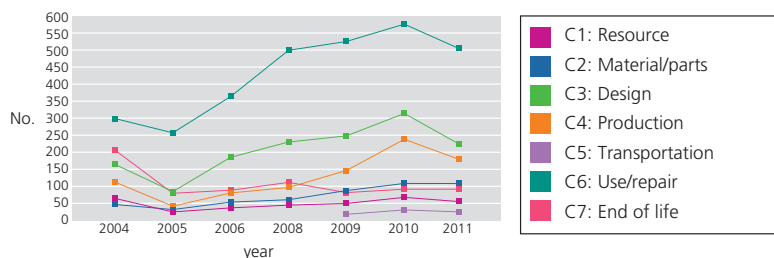


When and where in the product lifecycle does the product or service address environmental issues?

- 1) The top 3 stages during the lifecycle at which environmental issues are addressed is during Use/repair (C6), during Design (C3), and during Production (C4).
- 2) Consideration for the environment during the Material/parts (C2) stage has proportionally increased.

	2004	2005	2006	2008	2009	2010	2011
C1: Resource	63	23	35	43	48	66	55
C2: Material/parts	45	30	52	59	86	107	105
C3: Design	163	83	184	229	247	313	229
C4: Production	111	40	79	95	145	237	186
C5: Transportation	N/A	N/A	N/A	N/A	16	29	22
C6: Use/repair	298	256	363	499	525	576	509
C7: End of life	205	78	87	110	80	90	92

Figure 4. Number of products and services categorized as C1-7



6

Understanding of the listed products and services

To ensure an accurate understanding of the listed products and services, the following three categories were developed for the *Eco-products Directory 2011*:

Which

A: Which environmental issues does the product or service intend to address?

This category helps consumers understand which environmental issues are addressed by the listed products and services. The focus is on global warming and resource consumption. Issues related to pollution and contamination (air, water, and soil), which are serious problems in developing economies, and waste disposal, are also included. A total of five issues are therefore listed:



Global warming prevention

Helps reduce emissions of greenhouse gases such as carbon dioxide. This initiative includes the direct reduction of greenhouse gas emissions as well as energy saving and the reduction of deforestation.



Air/water/soil pollution prevention

Helps reduce emissions of substances contained in the air, water, and soil, such as photochemical oxidants (e.g., nitrogen oxides) and suspended particulate matter (e.g., sulfur oxides), which are substances restricted by environmental standards including air pollution control laws. This includes products that contribute to preventing ozone depletion and product oxidation. The clean-up of air/water/soil pollutants is also included.



Chemical substance reduction

Helps reduce and clean up eco-toxic chemical substances harmful to humans and the environment. These chemicals include substances specified by laws that identify the environmental impact created by emissions of specific chemical substances and that promote better management of such substances. This includes the reduction and purification of hazardous substances by recycling and reuse as well as products containing low levels of or no hazardous substances.



Waste reduction

Helps reduce the final disposal volumes by changing products, manufacturing processes, and packaging. This includes waste weight/volume reduction within the circulation system.



Resource saving

Helps reduce the consumption of resources, such as mineral, forest, and water resources. This includes resource saving by reuse and recycling as well as resource saving in products and the manufacturing process.



Biodiversity

The product/service contributes to the conservation of biological diversity, through a sustainable use of the components in the eco-system and promotes the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

How

B: How does the product or service address environmental issues?

This category explains how the listed products and services support environmental impact reduction in response to the five issues listed in A. The category is subdivided to provide comprehensive support for various environmental measures widely exercised at present. This clarifies whether resource saving is achieved through enhanced product performance, longer product life, or improved product recyclability.



Recyclability/reusability/refillability

Raw materials can be recovered, processed, and recycled for reuse. Alternatively, they can be recycled efficiently by using designs that are easily disassembled. Reusable and refillable designs may be used in packaging and products.



Long life

With long-life designs, enhanced durability, and continued performance with repairs and maintenance, product life can be prolonged, leading to the reduction of raw materials and waste.



Degradability/compostability

Products, packaging, and their components are biodegradable and produce substances that are relatively homogeneous and stable. They can also be degraded to a degree under certain conditions within a predetermined period of time.



High quality/performance

Product quality and performance improvements enable environmental impact reduction, subsequently leading to material and waste reduction.



Energy saving

Efficient process designs and product weight reduction enable energy saving. This initiative includes the use of energy recovered instead of disposal.



Environmental clean-up products

The use of hazardous chemical substances in product manufacturing is reduced through the development of alternative materials, etc.; or the use of the product helps clean up hazardous substances.



Using recycled materials

Recyclable materials (pre- and postconsumer) are recovered and recycled materials are used in the manufacturing process, either entirely or in high volumes.

When, Where

C: When and where in the product life cycle does the product or service address environmental issues?

This category helps determine when and where within the life cycle of the product or service environmental initiatives are reflected. The product life cycle is broken down into seven steps: material extraction, material and component production, design, manufacturing, transportation, product use, and disposal.



Extraction of materials (resources)

In this step, resources needed for product manufacturing are collected. Some equipment is used for environmental impact reduction in this stage.



Material and component production (materials/parts)

This is a stage where interim products including materials and components are manufactured. Such interim products and their designs are intended for environmental impact reduction.



Design and material selection (design)

In this step, designs and materials are carefully selected for product manufacturing, including environmentally compatible designs.



Product manufacturing (production)

Products are manufactured in this step using materials and components. This step includes products that help reduce environmental impact during the manufacturing process.



Transportation

In this step, materials, parts, and products are carefully transported to result in a low environmental burden. This step includes products for which modes of transportation have been changed and those with unique packaging.



Product use, maintenance, and repair (use/repair)

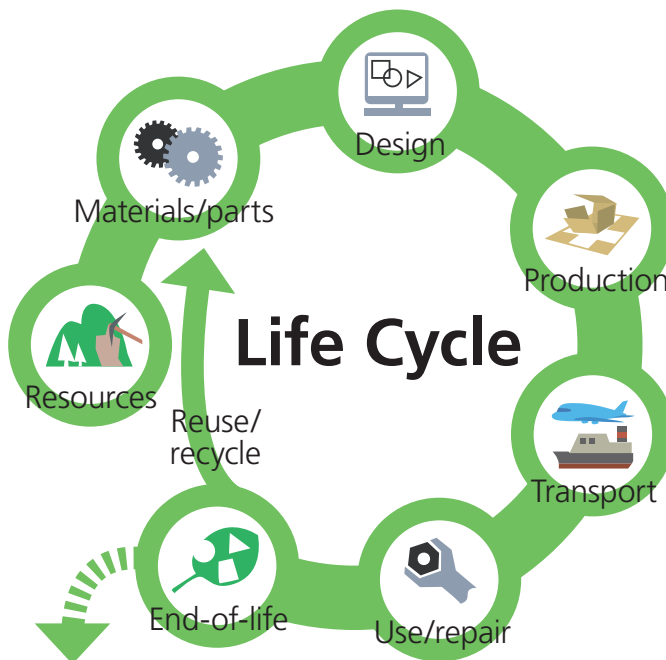
In this step, products are used by consumers and maintenance and repairs are carried out. This step includes consideration of energy saving and environmental clean-up as well as for prolonging product life by repairs and product life improvement.



End-of-life

In this step, products are disposed of and recycled. Included in this step are products that contribute to the reduction of final disposal volumes and can be disassembled, are easily reusable, easily recyclable, and compatible with well-established recycling systems.

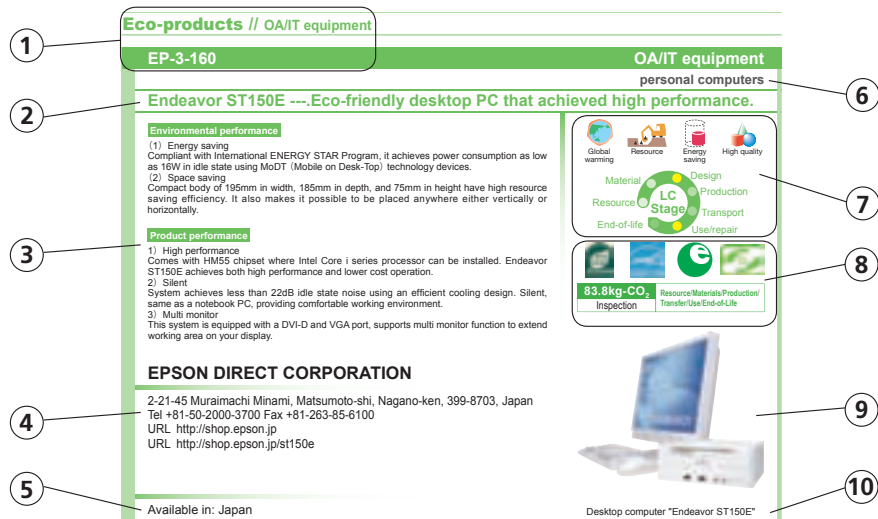
Product life cycle stage: Schematic diagram



7

Products data display in the *Eco-products Directory 2011*

To make it simple and easy to understand for all readers, the product data are sorted and arranged in the directory as shown below.



- | | |
|---|--|
| ① Product ID number | ⑥ Common product name |
| ② Title (product name and features) | ⑦ Categories |
| ③ Product description (environmental performance and product performance) | ⑧ Environmental labels and other information |
| ④ Company information | ⑨ Product photo |
| ⑤ Sales area | ⑩ Photo description |

① Product ID number

All product ID numbers are displayed as shown below:

EP-3-160

Classification1 Classification2 product item no.

(1) Classification 1

In the *Eco-products Directory 2011*, the information on each eco-product is provided in four categories: 1. Materials, 2. Components, 3. Products, and 4. Services. These categories are also distinguished by frames of different colors (1. pink, 2. blue, 3. green, and 4. orange).

Eco-materials	Eco-components
Eco-products	Eco-services

(2) Classification 2

Each main category is divided into sub-categories as shown below:

EM

- 1 Metals
- 2 Polymers
- 3 Natural materials
- 4 Foam
- 5 Ceramics and glass
- 6 Composites
- 7 Others

EC

- 1 Construction components
- 2 Electrical and electronic components
- 3 Semiconductor-related devices and components
- 4 Machine parts
- 5 Automobile parts
- 6 Packaging
- 7 Others

EP

- 1 Home electric appliances/lighting
- 2 Carriers/automobiles
- 3 OA/IT equipment
- 4 Office supplies/furniture
- 5 Apparel/textiles
- 6 Household goods and equipment
- 7 Building and civil engineering
- 8 Machines and equipment
- 9 Others

ES

- 1 Product-related services
(maintenance, upgrading, repair/reform)
- 2 Reuse and recycling services
(collection, etc.)
- 3 Outsourcing services
(waste disposal, control of hazardous items, chemical treatment, facility management)
- 4 Management-related services
(consulting, accreditation, analysis, evaluation, etc.)
- 5 Others
(e-commerce, eco-tourism, hotels, information transfer, etc.)

These sub-categories are shown the right side of the bar as follows:

Eco-materials // Metals

EM-1-001

Metals

Eco-components // Construction components

EC-1-001

Construction

Eco-products // Home electric appliances/lighting

EP-1-001

Home electric appliances/lighting

Eco-services // Product-related services (maintenance, upgrading, repair/reform)

ES-1-001

Product-related



(3) Product item number

Each sub-category lists product items in numerical order in accordance with the Japan Statistical Standard Industry Classification, the Standard Industrial Classification for Japan and the Commodity Classification for Census of Manufactures for Japan.

② Title (product name and features)

Brief description of how the product or service has been improved to contribute to environmental impact reduction.

③ Product description (environmental performance and product performance)

Detailed description of how the product or service has been improved to contribute to environmental impact reduction.

④ Company information

The contact details of the providers of the product or service, including respective URLs for the websites of providers, the listed product and provider's CSR report.

⑤ Sales area

The region or country where the product or service is available.
(Sales areas are not always stated, as this is a free-listing section.)

⑥ Common product name

The common name of the product or service
(e.g., camera, pencil, desk, etc.).

⑦ Categories

How the product or service reflect certain environmental initiatives, indicated graphically under the following three categories:

A: Which environmental issues does the product or service intend to address?

B: How does the product or service address environmental issues?

C: When and where in the product life cycle does the product or service address environmental issues?

The icons indicate items (maximum of two each) selected from Categories A (which) and B (how).

<Icons>

A: "Which"



Global warming



Air/Water/Soil



Chemical substances



Waste



Resource



Biodiversity

B: "How"



Recyclable



Long-life



Degradable



High quality



Energy saving



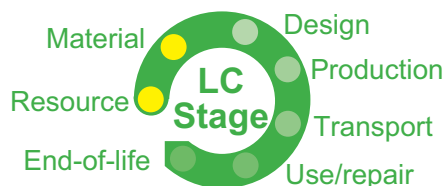
Purification



Recycled materials

C: "When" and "Where"

The yellow dots indicate items (maximum of two) selected from the LC Stage



⑧ Environmental labels and other information

Up to four environmental labels or other certification granted to the product or service are displayed based on applications from providers. For information on the types and names of these eco-labels, please refer to page 6-9 in 3. Products listed in the *Eco-products Directory 2011*.

As a new development, we asked providers to specify greenhouse gas (GHG) emissions per product (if available) and indicate respective CO₂ equivalents below the illustration of the environmental labels. Where such values are indicated, we also specify the scope of the life cycle stages included in the calculation of GHG emissions (i.e., resource extraction, production of materials/parts, product manufacturing, transportation, use, and disposal). As a further measure, we indicate whether such values were inspected by a third-party organization.

⑨ Product photo

One photo or a related image is inserted for each product.

⑩ Photo description

The caption provides a brief description, e.g., model name, of each product photo.

With the APO Eco-products Database, users can have a web-based, easy access to the environmentally friendly products and services listed in the Eco-products Directory. The Database can become an even more useful tool, by using the convenient web search function, which allows users to narrow down the search by indicating specific keywords or criteria.



Searching for Products or Services by pre-defined keywords and criteria

Users are able to search through the entire database indicating the requested pre-defined keywords or criteria by a check box.

If no specific keywords or criteria has been checked, then the system will perform a thorough search of the database for the particular area.

For example: If none of the boxes in the Labels area has been checked, the system will display all information which correspond to all three label types.

Using the free-word search function

Viewers are also able to search through the database using a specific keyword or phrase defined by the user, using the free-word function.

To do so, enter the specific keyword in the "Freeword search" box and click "Search." To search the database by using more than one keyword, separate each word with a space.

For example: If "eco" and "products" are entered, only the entries which contain both keywords will be shown.

Eco-materials

- 1 Metals**
- 2 Polymers**
- 3 Natural materials**
- 4 Foam**
- 5 Ceramics and glass**
- 6 Composites**
- 7 Others**

In the *Eco-products Directory 2011*, “eco-materials” refer to “materials (or material technologies) that possess excellent characteristics with good performance, which can be manufactured, used, and recycled or disposed of, while having only a low impact on the environment as well as being kind to humans.” Environment-friendly eco-materials come in a diverse range and include recyclable materials, materials free from hazardous substances, materials manufactured with low energy consumption and in clean conditions, materials that purify contaminated water and air, materials that are very efficient and resource-saving while still offering high performance, and much more.

Carefully assessing the impact on the environment within its life cycle from resource collection to the disposal stage is important in choosing eco-materials. Once this has been clarified, eco-materials can be used to create eco-products with a good balance between function and eco-efficiency. Based on this concept, eco-materials must meet the following six criteria:

- (1) They do not use scarce resources.
- (2) They have functions to clean and conserve the environment.
- (3) They create only low environmental impact when manufactured.
- (4) They do not contain any hazardous substances.
- (5) They provide high performance when used.
- (6) They are easy to recycle.

EM-1-001

Metals

steel pipes

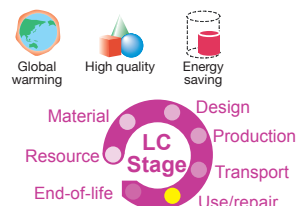
X-80 large-diameter welded steel pipe for gas pipelines

Environmental performance

X-80, large-diameter welded steel pipe, is used for super-high pressure transportation natural gas pipe lines to boost transportation efficiency. As a safe pipe that can prevent rupture in case of earthquakes, this product is helping to increase the use of natural gas reducing CO₂.

Product performance

In addition to increasing the level of purity in order to improve corrosion resistance, we have used our original component design and heat treatment technologies to create the X80 large-diameter welded steel pipe which further improves the strength of pipelines. As a safe pipe that can prevent rupture in case of earthquakes, this product is helping to increase the use of natural gas.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Line pipe

EM-1-002

Metals

steel pipes

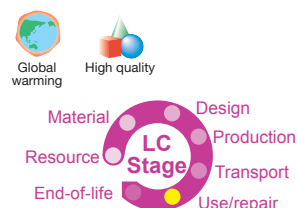
Super 13Cr steel pipe for pipelines

Environmental performance

Natural gas pipelines must be able to withstand harsh corrosive environments. This product is Super 13Cr pipeline steel with superior corrosion resistance. It is making a contribution to use of natural gas reducing CO₂.

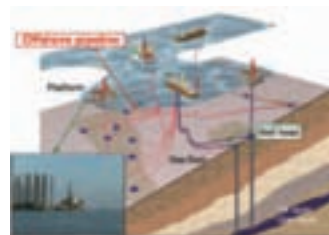
Product performance

This product is Super 13Cr steel pipe for natural gas pipelines. It has the superior corrosion resistance for withstanding harsh corrosive environments.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Model Diagram of Offshore Oil Well and Gas Well Development

EM-1-003

Metals

steel pipes

SM125S super high-strength corrosion-resistant steel OCTG (oil country tubular goods)

Environmental performance

SM125S are steel tubes with high strength and high corrosion resistance to extract natural gas, much of it exists in environments at great depths where highly corrosive hydrogen sulfide is present.

Product performance

SM125S create high strength (125 ksi) and high corrosion-resistant by applying a technology that envelops impurities in the steel with another impurity. This has made possible the previously impossible development of gas wells at depths of 4,000-6,000 meters or more.



Global warming



High quality



Natural gas development projects made possible by this product

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

EM-1-004

Metals

steel pipes

Stainless steel boiler tubes for ultra supercritical coal-fired thermal power generation

Environmental performance

At coal-fired power plants, improving power-generating efficiency by increasing the temperature and pressure (to the ultra supercritical state) of the steam generated by the boiler is a key issue for saving energy and reducing CO₂ emissions. By applying stainless steel boiler tubes for ultra supercritical coal-fired thermal power generation, the efficiency improved by 2% (up to 43%), CO₂ emissions decreased by 5% compared with conventional condition (supercritical state).

Product performance

This product has the excellent high-temperature strength, and high resistance to steam oxidation corrosion and high-temperature corrosion, that are needed for use in ultra supercritical applications. We developed the world's strongest 18% chrome steel for use as steel tubes, by working with 18% chrome steel and applying technology for creating smaller crystal grain using niobium (Nb) carbide, and by also applying copper supplementation. For use with high sulfur-content coal, we have also developed the world's first 25% chrome steel for use as boiler tubes.



Global warming



High quality



Energy saving



Boiler tubes

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

EM-1-005

Metals

steel pipes

Steam generator heat transfer (SG) tubes for new-model furnaces at nuclear power plants

Environmental performance

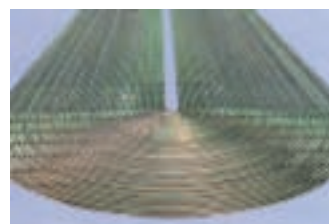
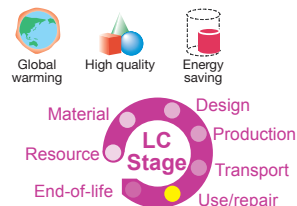
The SG tubes used in nuclear power plants contribute to reductions in CO₂ emissions. The SG tubes yield high level of safety and reliability for the nuclear power plants by its high quality. We are helping to increase the global supply of electricity and reduce CO₂ emissions, now and in future.

Product performance

The SG tubes used in nuclear power plants must be of high quality and are difficult to manufacture. The Sumitomo Metals SG tubes utilize an original manufacturing process known as "high-pressure drawing," which is characterized by its extremely small level of dimensional variation. This makes it possible to perform high-sensitivity detection of microscopic defects, allowing early detection of deterioration during use and yielding a high level of reliability.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Steam generator heat transfer (SG) tubes

EM-1-006

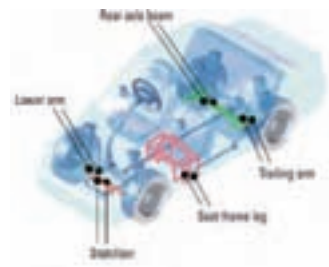
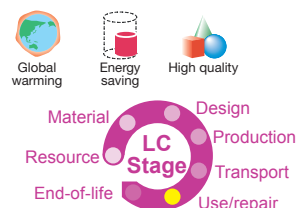
Metals

steel pipes

Automotive Steel Tubes

Environmental performance

High performance electric resistance welded steel tubes known as "HISTORY (high speed tube welding and optimum reducing technology) steel tubes" contribute to automotive weight reduction by realizing hollow tubes and properties of high strength and high formability.



JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan
Tel +81-3-3597-3111 Fax +81-3-3597-4860
URL <http://www.jfe-steel.co.jp/>

EM-1-007

Metals

sheet steel

The New S-TEN1, high corrosion resistance steel material

Environmental performance

Anti-corrosive properties to combat hydrochloric acid than conventional products.

Product performance

Demand for steel material with outstanding anti-corrosive properties is growing rapidly, especially from waste incinerating facilities exposed to corrosive hydrochloric acid from food and plastic waste. Nippon Steel developed the new S-TEN1, with dramatically increased anti-corrosive properties to combat hydrochloric acid than conventional products. It has been on the market on a fully-fledged basis since 2003. The new S-TEN1's ability to resist hydrochloric acid is around three times higher than that of conventional products. This makes the new S-TEN1 an ideal material for use in waste processing and chemical plants. It also leads to extended product life and a reduced frequency in maintenance requirements to benefit users, as well as an overall reduction in environmental loads on a societal level.

Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



EM-1-008

Metals

sheet steel

HTUFF (Super High HAZ (heat-affected zone) Toughness)

Environmental performance

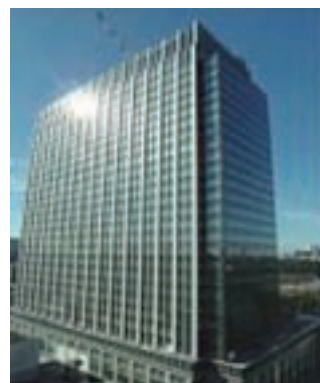
Welding efficiency should be ten times compared with the conventional way.

Product performance

The steel plates for ships, buildings and other large structures are prone to coarsening when exposed to the heat required during the welding process. Previously, a construction technique of performing welding on a gradual basis was used to ensure safety and reliability, rather than completing the welding process in one step. Nippon Steel's HTUFF super-tough and super-strong steel sheet eliminated the needed for repeated welding, since Nippon Steel radically reduced the size of metal particles in the welding-induced heat-affected areas of the HTUFF steel sheet through nanotechnology. Such miniaturization suppresses the deterioration of HTUFF's toughness, even when exposed to extreme temperatures. The HTUFF steel sheet drastically improved the welding efficiency of users and contributed toward energy savings.

Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



EM-1-009

Metals

sheet steel

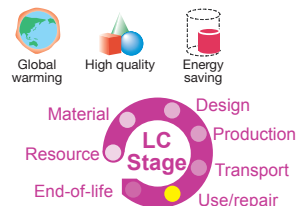
FCA-W steel plate, high-tensile-strength plate for improving the fatigue of welded joints

Environmental performance

FCA-W steel plate achieved weight reductions through the development of the innovative high-tensile-strength with preventing fatigue cracks from occurring at welded joints. It contributes to reducing CO₂ emission.

Product performance

By using this product, which not only controls the propagation of fatigue cracks, but also prevents fatigue cracks from occurring at welded joints in the first place, designers get free from design steps such as increasing plate thickness or adding reinforcement materials were used to prevent fatigue fracture of welded joints in steel structures.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>



Natural gas carrier ship and the parts where FCA-W is used (from a calculation model used for hull evaluation by Nippon Kaiji Kyokai)

Available in: Worldwide

EM-1-010

Metals

sheet steel

NAR-301L HS1 stainless steel plate for cylinder head gaskets

Environmental performance

NAR-301 HS1 is that Sumitomo Metals (Naoetsu) has applied its original component design and manufacturing conditions to develop an ultra-fine structure steel plate. This product is used for the cylinder head gasket, and contributing to technology aimed at reducing fuel consumption.

Product performance

The cylinder head gasket is a component that supports technology used to improve the combustion efficiency of an automobile engine and to improve fuel economy. It is important that this component have spring performance that can keep gaps closed while adapting to vibration and heat, as well as good fatigue-resistance characteristics. This product has more than 30% better fatigue-resistance characteristics, and has been very highly evaluated.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Gasket structure

EM-1-011

Metals

sheet steel

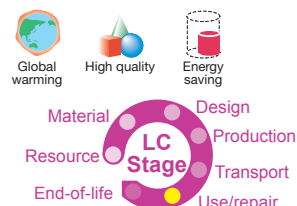
Non-oriented electromagnetic steel sheet for high-efficiency motors

Environmental performance

This product is non-oriented electromagnetic steel sheet used in hybrid vehicle drive motors and air conditioner compressors, an iron core with superior magnetic characteristics is needed to achieve lighter weight, smaller size, and higher performance in the high-efficiency motors.

Product performance

We have applied its original component design and heat treatment technologies to control the crystal orientation and develop a non-oriented electromagnetic steel sheet with lower electrical loss and improved electromagnetic characteristics. This product has been praised as a revolutionary new technology from many directions.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
 Tel +81-3-4416-6183 Fax +81-3-4416-6793
 E-mail chikyu-kan@sumitomometals.co.jp
 URL <http://www.sumitomometals.co.jp>



Example of high-efficiency motors using non-oriented electromagnetic steel sheet

Available in: Worldwide

EM-1-012

Metals

sheet steel

NAR-AH-4 high heat-resistance stainless steel

Environmental performance

NAR-AH-4 contributes to the conservation of resources by using less than half of the amount of the valuable resource nickel than conventional products. At the same time, this product retains the same or better high-temperature strength and excellent high-temperature oxidation resistance.

Product performance

NAR-AH-4 retains excellent high-temperature strength and high-temperature oxidation resistance. This product is used in automobile exhaust manifolds and other applications.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
 Tel +81-3-4416-6183 Fax +81-3-4416-6793
 E-mail chikyu-kan@sumitomometals.co.jp
 URL <http://www.sumitomometals.co.jp>



Examples of stainless steel use

Available in: Worldwide

EM-1-013

Metals

sheet steel

Chrome-free thin steel sheet

Environmental performance

Previously chrome compounds were used for the surface treatment of steel sheet to prevent corrosion. Sumitomo Metals is developing surface-treated steel sheet that uses no chrome compounds at all, designed for specific applications. And this product does not require cleaning the surface with organic solvents-substances that have a large impact on the environment.

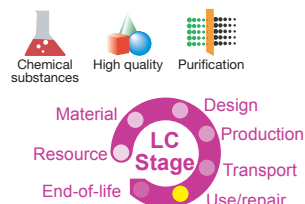
Product performance

Our products for use as motor covers are known for their excellent corrosion resistance, high resistance to surface peeling under harsh forming conditions, and the fact that they do not require cleaning with organic solvents-substances that have a large impact on the environment. For fuel tank applications, we are developing a material that can be used with highly corrosive bio-ethanol fuels.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Example of use (back panel for plasma TV)

EM-1-014

Metals

sheet steel

Stainless steel foil for bipolar plates of polymer electrolyte fuel cell

Environmental performance

This product, which was developed by Sumitomo Metals (Naoetsu) and Sumitomo Metals, is the stainless steel foil with high conductivity and highly corrosion resistant for bipolar plates of polymer electrolyte fuel cell. The bipolar plates are also called separators. The separator is one of main parts of fuel cells, which are expected to be the next-generation, eco-friendly, highly-efficient electrical power supply source, for practical application in automobiles and other diverse fields. It is a foil thicknesses of 0.2mm or less thin, achieved the separator of lightweight and high performance. For reducing CO₂, we expect this technology to make a large contribution for the fuel cell society.

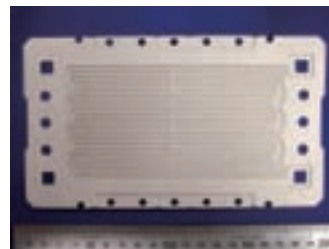
Product performance

This product is high electrically conductive and highly corrosion resistant stainless steel for fuel cell separator by making electrically conductive metallic inclusions in stainless steel. The developed material is highly suitable for mass production and features excellent formability, and makes possible low-cost production of fuel cell separators.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Separator

EM-1-015

Metals

sheet steel

GA-TRIP hot-dip galvanized sheet boasts high tensile strength

Environmental performance

Improving the collision safety of cars, vehicle weight and the balance between press formability and extended lifespan.

Product performance

Nippon Steel was the first company worldwide to successfully develop and commercialize alloy hot-dipped galvanized steel sheets for automobiles with tensile strength in the 60 and 80 kilogram classes, by overcoming the conventional notion that high tensile would be impossible without compromising the quality of galvanization. The new product was selected as a material for new car models introduced in 2003. It greatly improves the collision safety of cars, vehicle weight and the balance between press formability and extended lifespan.



Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
 Tel +81-3-6867-2566 Fax +81-3-6867-4999
 E-mail kankyo@nsc.co.jp
 URL <http://www.nsc.co.jp/en/eco/index.html>

EM-1-016

Metals

sheet steel

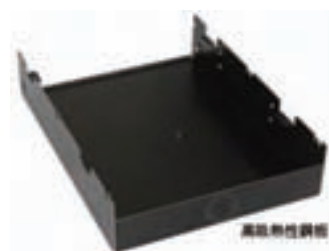
High-endothermic steel sheet

Environmental performance

High-endothermic steel sheets that release the heat generated inside electric appliances efficiently to the outside.

Product performance

In view of the trend toward higher performance, higher speed, and smaller size, it has become important for electric appliances to release internally generated heat efficiently to the outside. Nippon Steel, after the successful development of special organic film in 2002, has started to distribute high-endothermic steel sheets that release the heat generated inside electric appliances efficiently to the outside.



Nippon Steel Corporation

2-6-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
 Tel +81-3-6867-2566 Fax +81-3-6867-4999
 E-mail kankyo@nsc.co.jp
 URL <http://www.nsc.co.jp/en/eco/index.html>

EM-1-017

Metals

sheet steel

Flat rolled magnetic steel sheet/strip for high electrical efficiency

Environmental performance

High-tensile thin electrical steel sheets for ultra high-speed motors etc that can increase 1% of motor efficiency.

Product performance

Since motors are increasingly required to be highly efficient in terms of energy saving, thin high-efficiency electrical steel sheets have applications in a variety of fields, such as motors used for hard disc drive units, motors for electric vehicles, and power generators for microgas turbines. Nippon Steel developed high-tensile thin electrical steel sheets for ultra high-speed motors and high-torque, high-formability thin electrical steel sheets for hard disc drive units.

**Nippon Steel Corporation**

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
 Tel +81-3-6867-2566 Fax +81-3-6867-4999
 E-mail kankyo@nsc.co.jp
 URL <http://www.nsc.co.jp/en/eco/index.html>



EM-1-018

Metals

sheet steel

Lead-free steel sheet for car fuel tank

Environmental performance

Lead-free aluminum or tin-zinc coated steel sheet

Product performance

Conventionally, lead-coated steel sheets have been used for car fuel tanks. Nippon Steel is now supplying a newly developed lead-free aluminum or tin-zinc coated steel sheet (Silver Zinc-NT). This eliminates the problem of lead in shredder dust generated when cars are scrapped.

**Nippon Steel Corporation**

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
 Tel +81-3-6867-2566 Fax +81-3-6867-2566
 E-mail kankyo@nsc.co.jp
 URL <http://www.nsc.co.jp/en/eco/index.html>



EM-1-019

Metals

sheet steel

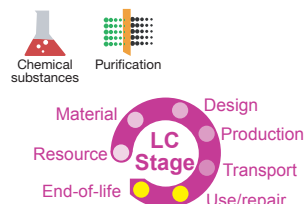
Steel sheet coated with chromate-free film

Environmental performance

An eco-friendly resin coating, free of chromic acid, that protects the surface zinc against oxidation.

Product performance

Conventionally, galvanized steel sheets are used in the manufacture of home electrical appliances such as refrigerators, washing machines, and air conditioners to prevent rust. However, the sheets are coated with a film containing trace amounts of chromic acid to prevent the zinc from being oxidized. Nippon Steel developed an eco-friendly resin coating, free of chromic acid, that protects the surface zinc against oxidation.



Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
 Tel +81-3-6867-2566 Fax +81-3-6867-4999
 E-mail kankyo@nsc.co.jp
 URL <http://www.nsc.co.jp/en/eco/index.html>



EM-1-020

Metals

sheet steel

ZINKOTE-BLACK

Environmental performance

Newly-developed water-soluble coating material that permits low-temperature drying, the film thickness of ZINKOTE- BLACK's coating can be reduced by 70 to 80%, compared to that of conventional coated steel sheets.

Also a reduction in CO₂ emissions during manufacturing at Nippon Steel, fewer organic components occurring during drying of the coating material, compared to similar coated sheets, make it possible to reduce CO₂ emissions to 1/100.

Product performance

ZINKOTE-BLACK is a new environmentally friendly product, using Nippon Steel's chromate-free electrogalvanized steel sheet, ZINKOTE21.



Nippon Steel Corporation

2-6-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
 Tel +81-3-6867-2566 Fax +81-3-6867-4999
 E-mail kankyo@nsc.co.jp
 URL <http://www.nsc.co.jp/en/eco/index.html>



Excellent formability

EM-1-021

Metals

sheet steel

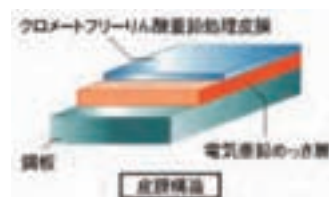
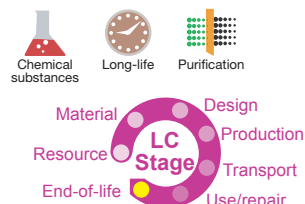
Chromate-free coated steel sheet

Environmental performance

Chromate-free coated steel sheet is an environment-friendly product, since it contains no chrome (VI). A uniquely designed composite film consisting of a special organic resin and inorganic substance secures as much corrosion resistance as conventional products. It is now used in internal panels of home electric appliances and vending machines, internal components of OA equipment, chassis of audiovisual equipment, and other parts.

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan
Tel +81-3-3597-3111 Fax +81-3-3597-4860
URL <http://www.jfe-steel.co.jp/>



EM-1-022

Metals

sheet steel

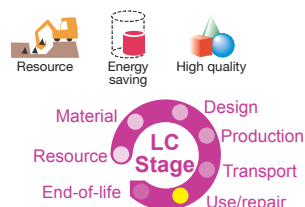
all-purpose stainless steel JFE443CT

Environmental performance

JFE443CT is all-purpose stainless steel which does not contain such rare resources as nickel or molybdenum but ensures high corrosion resistance equivalent to SUS304. When applied to cooking pans for induction heating (IH), it leads to substantial energy saving because of its properties of excellent heat transmission and magnetism.

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan
Tel +81-3-3597-3111 Fax +81-3-3597-4860
URL <http://www.jfe-steel.co.jp/>



EM-1-023

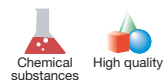
Metals

sheet steel

Highly Lubricant GA Steel Sheet: "JAZ" (JFE Advanced Zinc) "

Environmental performance

As an environment-friendly product, "JAZ" does not contain phosphate or heavy metal elements which used to be contained in conventional lubricated GA steel sheets. In this unique product, a surface reforming layer with nano-level thickness is formed on a zinc coated layer. JAZ has been adopted in automotive outer panels or inner panels which are otherwise difficult to form. More specifically, it is used in side panels, fenders, doors, and wheelhouses, etc.



JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan
Tel +81-3-3597-3111 Fax +81-3-3597-4860
URL <http://www.jfe-steel.co.jp/>



EM-1-024

Metals

sheet steel

High Tensile Steel

Environmental performance

Demand for high tensile steel sheets (HITEN) is growing as a material that enables both automobile body weight reduction and collision safety. Recently, demand has increased for higher tensile strength steel sheets (Ultra HITEN). The cold rolled 1180MPa, created with our proprietary WQ (Water Quenching) continuous annealing process, was employed for integrally molded door impact beams made with conventional press forming.



JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan
Tel +81-3-3597-3111 Fax +81-3-3597-4860
URL <http://www.jfe-steel.co.jp/>



EM-1-025

Metals

steel materials

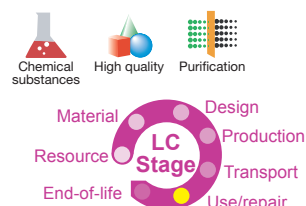
Smigreen CS™ low carbon lead-free free-cutting steel

Environmental performance

Previously, lead was used to improve the cutting performance of free-cutting steel. Smigreen CS™, low carbon steel that utilizes no lead at all thanks to an increase in the amount of sulfur compounds added, maintains good cutting machinability without including lead that have a large impact on the environment.

Product performance

Smigreen CS™ is low carbon steel that maintains good cutting machinability without including lead that have a large impact on the environment. This product has been adopted for use as printer shafts by a major office automation (OA) equipment manufacturer.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Example of use (printer shafts)

EM-1-026

Metals

steel materials

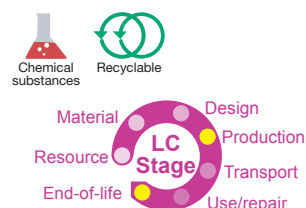
Lead-free free-cutting steel (steel bars)

Environmental performance

Steel bars, which does not contain lead and any other material that is harmful to the environment has the excellent character of free-cutting and recyclability.

Product performance

The shapes of crankshafts used in automobiles, among others, are very complicated. Manufacturers demand superior free-cutting capabilities in steel to guarantee ease of manufacturability in machine processing. They have other rigid requirements, including its effect on the life of tools, and demand that the materials they purchase address all aspects of manufacturing comprehensively. In order to meet their needs, Nippon Steel came up with free-cutting steel products free of environmentally negative lead. A range of products to meet the needs of automakers has been developed and offered by Nippon Steel.



Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



EM-1-027

Metals

shape steel

SMart BEAM™ lightweight welded H-beam**Environmental performance**

Sumitomo Metals is developing technologies that will allow the SMart BEAM™ H-beam, which is produced continuously by welding of a hot-rolled coil, to be used for a range of applications. It helps conserve natural resources, and is 20-30% lighter than a conventional rolled H-beam with the same performance, and is being used in industrialized home-building and other construction.

Product performance

Reducing the weight of construction materials is an important issue not only for cutting costs, but also for helping conserve natural resources. It can also be used as beams in wooden houses in order to reduce warpage of the floor and improve durability.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
 Tel +81-3-4416-6183 Fax +81-3-4416-6793
 E-mail chikyu-kan@sumitomometals.co.jp
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



SMart BEAM

EM-1-028

Metals

tool steel

Advanced Plastic Mold Steel For General Purposes, "HPM-MAGIC®"**Environmental performance**

Because "HPM-MAGIC®" has high toughness, breakage and chipping would be reduced, and we would expect longer die life. Furthermore, because of good machinability, we can expect longer tool life and shorter working time in mold processing. Therefore "HPM-MAGIC®" can provide opportunities to save resource and energy.

**Hitachi Metals, Ltd.**

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan
 Tel 81-3-5765-4410
 E-mail hmcc@hitachi-metals.co.jp
 URL <http://www.hitachi-metals.co.jp/e/index.html>
 URL <http://www.hitachi-metals.co.jp/e/prod/prod19/prod19.html>
 URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html

Available in: Worldwide



HPM-MAGIC®

EM-1-029

Metals

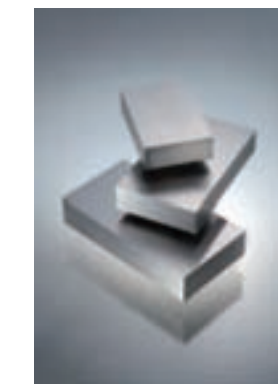
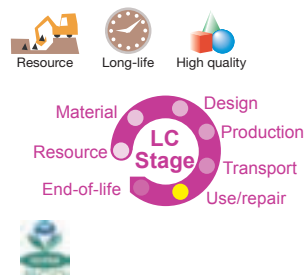
tool steel

High Performance Cold Working Tool Steel "SLD-MAGIC[®]"

Environmental performance

SLD-MAGIC[®], newly developed Cold Working Die Steel, is showing good reputation for wear resistance and machinability along with achieving excellent characteristics of lower heat treatment distortion, versatilities for surface treatments, toughness and weldability.

"SLD-MAGIC[®]" can also improve the lifespan and fabricability of die molds compared to currently used die materials. Therefore, "SLD-MAGIC[®]" can provide opportunities to save energy and resources to be used and fabrication time for making various molds for automobile industries, and other industrial fields where molds are necessary.

SLD-MAGIC[®]

Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan
Tel 81-3-5765-4410
E-mail hmcc@hitachi-metals.co.jp
URL <http://www.hitachi-metals.co.jp/e/index.html>
URL <http://www.hitachi-metals.co.jp/e/prod/prod19/prod19.html>
URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html

Available in: Worldwide

EM-1-030

Metals

construction method

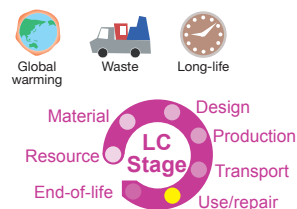
Construction method using thin-sheet steel

Environmental performance

Using galvanized thin-sheet steel for the frame of two-by-four system buildings can reduce the electric power for air conditioning. Approximately 4tons of CO₂ can be saved.

Product performance

Nippon Steel Corporation developed a new construction method called "Nittetsu super frame" using thin-sheet steel for low rise residential buildings. Offering extra durability, it involves the use of galvanized thin-sheet steel for the frame of wooden buildings constructed using the two-by-four system. The method involves adiabatic construction which involves packing the outside walls of the building with heat insulator. This provides more efficient heating and air-conditioning and saves energy. In addition, the use of recyclable steel products helps to conserve forest resources.



Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>

EM-1-031

Metals

regenerated pig copper and copper alloys

ECO BRASS (High-Performance Lead-free Copper Alloy)

Environmental performance

ECO BRASS is a lead-free brass and environmentally friendly brass material. Instead of using heavy metal harmful to the human body, a precipitating metallic compound in the metal structure realizes good machinability.

Key Features:

- 1) Lead-free
- 2) High strength equivalent to stainless steel
- 3) Good machinability nearly equal to brass rod containing 1% lead
- 4) Excellent machined surface, de-zincification corrosion resistance, stress corrosion cracking resistance, warm brittleness cracking resistance, and hot forgeability
- 5) Easily accepts soldering and brazing
- 6) Good castability

Applications:

- 1) Water supply devices such as faucets, valves, fittings, etc.
- 2) Precision parts as a substitute for stainless steel such as shafts, screws, bearings
- 3) Electrical parts and connectors
- 4) Automobile parts: lead-free requirements
- 5) Medical devices



Machined products using ECO BRASS rods

Mitsubishi Shindoh Co., LTD

374, 8-cho, Sambo-cho, Sakai-ku, Sakai-shi, Osaka, 590-0906, Japan
 Tel +81-72-233-1161 Fax +81-72-227-6590
 URL <http://www.mitsubishi-shindoh.com/global/index.html>
 URL <http://www.ecobrass.com/>

EM-1-032

Metals

aluminum and aluminum alloy die castings

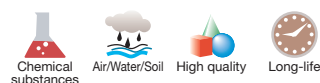
Chromium-free new surface treatment technique

Environmental performance

Chromium-free new surface treatment technique ("Super-Ecoat"TM) is an environment-friendly surface treatment for aluminum, since it contains no chromium and other poisonous substance.

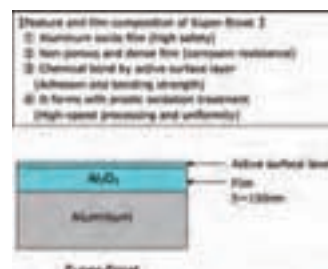
Product performance

In this newly developed surface treatment product, non-porous, dense and thin aluminum oxide film with active surface layer is formed on aluminum. Corrosion resistance, adhesion and bonding strength more than equal to that of conventional chromate treatment are obtained. It is now widely used in home electric appliances, electronic parts, beverage and food containers, etc.



Mitsubishi Aluminum Co., Ltd.

2-3-3, Shiba, Minato-ku, Tokyo, 105-8546, Japan
 Tel +81-3-3769-0111 Fax +81-3-3769-0180
 URL <http://www.malco.co.jp/english/index.html>



EM-1-033

Metals

alloy materials

Pure titanium sheet for aircraft / Titanium alloy rods for aircraft engines

Environmental performance

Titanium is being increasingly used in larger aircraft as a means of reducing weight in order to lower CO₂ emissions and reduce noise.

Product performance

Sumitomo Metals (Naoetsu) has been highly praised for its advanced quality management and delivery management, and is the exclusive supplier to Airbus of the pure titanium sheet used in the pylons that connect the wings and engines and in the piping. In addition, the titanium alloy rods produced by Sumitomo Metals were the first such Japanese products to be certified by Rolls Royce, and will be used in aircraft engine wing components and other parts. The titanium products of the Sumitomo Metals Group have been certified by Nadcap, the global aerospace standard inspection and certification program, and are approved for use by the airline industry around the world.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

Airbus A380



EM-1-034

Metals

painting work

Elite Series,

Environmental performance

Meets the min SR & SRI requirement set by Energy Star programme and Green Building Index (GBI). Thus, qualifies as an energy efficient product and contributes points to various green rating systems eg.USA's LEED, Malaysia's GBI. Colourcoil's pre-painted metals are 100% recyclable. Colourcoil's brand slogan is as it is already called "high performance pre-painted steel". Our paint coatings are mercury and lead-free, which will make it an ideal and safe material when collecting rainwater, ie. for rainwater harvesting purposes. Natural-looking woodgrain effects can be designed on the metal, hence appreciating nature without having to sacrifice our forests. Our high performance pre-painted steel are durable and come with a warranty of up to 20 years against colour fading, chalking and delamination and up to 25 years against corrosion.

Product performance

ELITE Series TM coating system is the most innovative and advanced ceramic super-durable polyester technology designed to provide superb durability in colour retention. When applied over ALZ55 (55% aluminum-zinc coated steel), this high performance pre-painted steel will exceed the service life of any regular polyester coating systems.

Colourcoil Industries Sdn Bhd

KM 25, Off Tuaran Road, Telipok, 88450 Kota Kinabalu, Sabah P.O.Box 21918, 88777 Luyang, Kota Kinabalu, Sabah., 88450, Malaysia
Tel +6088-496222 Fax +6088-499918
E-mail info@colourcoil.com
URL www.colourcoil.com



EM-1-035

Metals

painting work

PVF2 Series,

Environmental performance

Meets the min SR & SRI requirement set by Energy Star programme and Green Building Index (GBI). Thus, qualifies as an energy efficient product and contributes points to various green rating systems eg.USA's LEED, Malaysia's GBI. Colourcoil's pre-painted metals are 100% recyclable. Colourcoil's brand slogan is as it is already called "high performance pre-painted steel". Our paint coatings are mercury and lead-free, which will make it an ideal and safe material when collecting rainwater, ie. for rainwater harvesting purposes. Natural-looking woodgrain effects can be designed on the metal, hence appreciating nature without having to sacrifice our forests. Our high performance pre-painted steel are durable and come with a warranty of up to 20 years against colour fading, chalking and delamination and up to 25 years against corrosion.

Product performance

PVF2 Series TM is a custom formulated fluorocarbon solar reflective paint system designed for ultimate colour and gloss retention providing lasting outdoor performance. Applied over ALZ55 (55% aluminum-zinc coated steel), this high performance pre-painted steel will exceed the service life of any other coating systems.

Colourcoil Industries Sdn Bhd

KM 25, Off Tuaran Road, Telipok, 88450 Kota Kinabalu, Sabah P.O.Box
21918, 88777 Luyang, Kota Kinabalu, Sabah., 88450, Malaysia
Tel +6088-496222 Fax +6088-499918
E-mail info@colourcoil.com
URL www.colourcoil.com



EM-1-036

Metals

painting work

Metallic PVF2 Series

Environmental performance

Meets the min SR & SRI requirement set by Energy Star programme and Green Building Index (GBI). Thus, qualifies as an energy efficient product and contributes points to various green rating systems eg.USA's LEED, Malaysia's GBI. Colourcoil's pre-painted metals are 100% recyclable. Colourcoil's brand slogan is as it is already called "high performance pre-painted steel". Our paint coatings are mercury and lead-free, which will make it an ideal and safe material when collecting rainwater, ie. for rainwater harvesting purposes. Natural-looking woodgrain effects can be designed on the metal, hence appreciating nature without having to sacrifice our forests. Our high performance pre-painted steel are durable and come with a warranty of up to 20 years against colour fading, chalking and delamination and up to 25 years against corrosion.

Product performance

METALLIC PVF2 Series TM with a pearlescent / metallic finish is a custom formulated fluorocarbon solar-reflective paint system for ultimate colour and gloss retention providing lasting outdoor performance. Applied over ALZ55 (55% aluminum-zinc coated steel), this high performance pre-painted steel will exceed the service life of any other coating systems.

Colourcoil Industries Sdn Bhd

KM 25, Off Tuaran Road, Telipok, 88450 Kota Kinabalu, Sabah P.O.Box
21918, 88777 Luyang, Kota Kinabalu, Sabah., 88450, Malaysia
Tel +6088-496222 Fax +6088-499918
E-mail info@colourcoil.com
URL www.colourcoil.com



EM-1-037

Metals

painting work

Duotone PVF2 Series

Environmental performance

Meets the min SR & SRI requirement set by Energy Star programme and Green Building Index (GBI). Thus, qualifies as an energy efficient product and contributes points to various green rating systems eg.USA's LEED, Malaysia's GBI. Colourcoil's pre-painted metals are 100% recyclable. Colourcoil's brand slogan is as it is already called "high performance pre-painted steel". Our paint coatings are mercury and lead-free, which will make it an ideal and safe material when collecting rainwater, ie. for rainwater harvesting purposes. Natural-looking woodgrain effects can be designed on the metal, hence appreciating nature without having to sacrifice our forests. Our high performance pre-painted steel are durable and come with a warranty of up to 20 years against colour fading, chalking and delamination and up to 25 years against corrosion.

Product performance

DUOTONE Series TM represents the latest in paint technology where pearlescent metallic colours shift across the whole spectrum from one colour to another (i.e. colour 1 to colour 2). Depending upon pigment type and viewing angle, different wavelengths of light are reflected back, resulting in an ever-changing colour gradient with amazing highlights.

Global warming

Resource

Recyclable

High quality

Material

Design

Production

Transport

Use/repair

End-of-life

Resource

LC Stage

Colourcoil Industries Sdn Bhd

KM 25, Off Tuaran Road, Telipok, 88450 Kota Kinabalu, Sabah P.O.Box 21918, 88777 Luyang, Kota Kinabalu, Sabah., 88450, Malaysia
Tel +6088-496222 Fax +6088-499918
E-mail info@colourcoil.com
URL www.colourcoil.com



EM-2-001

Polymers

bio-material

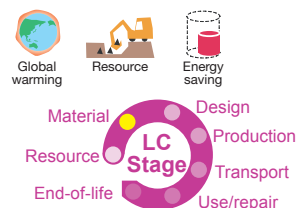
Biomass-based polyester fiber : PLANTPET™

Environmental performance

PLANTPET™ is 30% bio-based PET fiber, with EG, one of the components of PET, derived from biomass. Its bio-content can be verified by using "Radiocarbon dating".

Product performance

- * Characteristics are the same as the oil-based PET.
- * Functionality and sensitivity can be given to PLANTPET™.



Teijin Fibers Limited

6-7, Minami-hommachi 1-chome, Chuo-ku, Osaka, 541-8587, Japan
 Tel 0088-22-0175
 E-mail tfj0604@teijin.co.jp
 URL <http://www.teijinfiber.com/>



EM-2-002

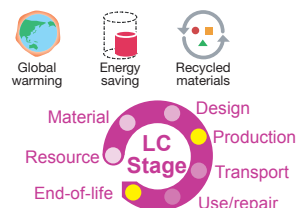
Polymers

recycled fibers

Recycled Polyester Fibers : ECOCIRCLE™ FIBERS, ECOPET®

Environmental performance

The recycled polyester fiber made from the used polyester products is developed.



Teijin Fibers Limited

6-7, Minami-hommachi 1-chome, Chuo-ku, Osaka, 541-8587, Japan
 Tel 0088-22-0175
 E-mail tfj0604@teijin.co.jp
 URL <http://www.teijinfiber.com/>



ECOCIRCLE™ and ECOPET® are the trademarks of Teijin Fiber Ltd.

EM-2-003

Polymers

recycled fibers

100% Polyester Recycle Fiber (Raw White Filament)

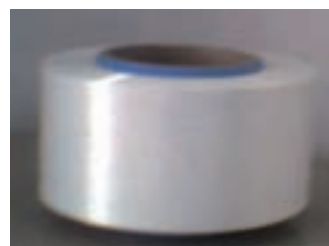
Environmental performance

TOPGREEN™ which is made of used PET bottle, is a recycled fiber. It's manufacturing process as follow: collect used pet bottles, after multiple process of sorting, cleaning, crushing, de-polymerization, re-polymerization, melting, spinning to recycled fiber.



Far Eastern New Century Corporation

369, Ya-Tung Sec. Wen Shan Road, 3Lin, Wen Shan Lii, Hsinpu Hsinchu / Taiwan / R.O.C, 305, Republic of China
 Tel 03-5882511 Fax 03-5882511
 E-mail lds@cfp.fenc.com
 URL <http://www.fenc.com/>
 URL http://www.fenc.com/en/business/fiber_product.aspx?c=22
 URL http://www.fenc.com/en/profile/ir_report.aspx



100% Polyester Recycle Fiber (Raw White Filament)

EM-2-004

Polymers

recycled fibers

100% Polyester Recycle Fiber (Raw White staple)

Environmental performance

The components utilized to make ECOLON fiber is a Regenerated raw material. It is a new environmental friendly and ecological product, Recycling from the PET bottles.



Far Eastern New Century Corporation

369, Ya-Tung Sec. Wen Shan Road, 3Lin, Wen Shan Lii, Hsinpu Hsinchu / Taiwan / R.O.C, 305, Republic of China
 Tel 03-5882511 Fax 03-5882511
 E-mail lds@cfp.fenc.com
 URL <http://www.fenc.com/>
 URL http://www.fenc.com/en/business/fiber_product.aspx?c=20&p=49
 URL http://www.fenc.com/en/profile/ir_report.aspx



100% Polyester Recycle Fiber (Raw White staple)

EM-2-005

Polymers

recycled fibers

100% Polyester Recycle Fiber (staple)

Environmental performance

The components utilized to make ECOLON fiber is a Regenerated raw material. It is a new environmental friendly and ecological product, Recycling from the PET bottles.



Far Eastern New Century Corporation

369, Ya-Tung Sec. Wen Shan Road, 3Lin, Wen Shan Lii, Hsinpu Hsinchu / Taiwan / R.O.C, 305, Republic of China
 Tel 03-5882511 Fax 03-5882511
 E-mail lds@cfp.fenc.com
 URL <http://www.fenc.com/>
 URL http://www.fenc.com/en/business/fiber_product.aspx?c=20&p=49
 URL http://www.fenc.com/en/profile/ir_report.aspx



100% Polyester Recycle Fiber (staple)

EM-2-006

Polymers

recycled fibers

100% Polyester Recycle Fiber (Raw White Filament)

Environmental performance

TOPGREEN™ which is made of used PET bottle, is a recycled fiber. It's manufacturing process as follow: collect used pet bottles, after multiple process of sorting, cleaning, crushing, de-polymerization, re-polymerization, melting, spinning to recycled fiber.



Far Eastern New Century Corporation

369, Ya-Tung Sec. Wen Shan Road, 3Lin, Wen Shan Lii, Hsinpu Hsinchu / Taiwan / R.O.C, 305, Republic of China
 Tel 03-5882511 Fax 03-5882511
 E-mail lds@cfp.fenc.com
 URL <http://www.fenc.com/>
 URL http://www.fenc.com/en/business/fiber_product.aspx?c=22
 URL http://www.fenc.com/en/profile/ir_report.aspx



100% Polyester Recycle Fiber (Black Filament)

EM-2-007

Polymers

printing on non-paper

Aqualux-waterbased wood coating

Environmental performance

First of all, our Aqualux-water-based series wood coatings in the health, environmental protection, safety performance is better than solvent based paint, such as the toxicity is concerned, with ultra-low VOC content and also we fulfilled requirements which is TVOC (1200 microgram/m³ (48hrs) and confirmed absence of toxic VOC after 48 hrs. Our product is the real high-tech non-toxic tasteless green products, and solvent based paint to add the organic solvent, the product contains benzene, toluene, xylene and its derivatives, with significant toxicity and extremely hazardous substances. Our product is inflammable to that uses water instead of solvent in the Aqualux water based paints, the product has the safety features of non-combustible, greatly reducing the production, circulation of the risk factors and problems, and solvent-based paint containing highly flammable substances, the stimulus in terms of odour, water-based wood coatings using water instead of organic solvents, the products in the brush, it does not produce any irritating smell.. In addition, our Aqualux water-based wood coating paint brush all over with a few small, quick-drying, easy to apply the advantages of not after the time limit with paint, coating finished that can move, and solvent-based paint because of its organic solvents are volatile in the process of drying out the harmful gas, so using solvent paint decorated house, should not normally be admitted directly coated finished, need to wait for a period of segregation. It also contain a large number of oil paint solvent, brushing and drying in the process of evaporation into the air to directly stimulate the body's sensory organs.

Product performance

According to the category A3, our product -Aqualux waterbased wood oil series has been meet the function as chemical substance reduction where it is reduce the hazardous chemicals that are ecotoxic to humans and the environment and also preserve the wood as main function of it. The use of hazardous chemical substances in our Aqualux product manufacturing is reduced through the development of alternative materials.

ADORA PAINTS (M) SDN BHD

NO. 7, LOT 14396, JALAN PERUSAHAAN 2, KG.IDAMAN PANDAMARAN ,
PORT KLANG, SELANGOR, 42000, Malaysia
Tel 603-3-3167-6800 Fax 603-3-3167-6889
E-mail swkee@adorapaints.com
URL [http:// www.adorapaints.com](http://www.adorapaints.com)

Available in: Worldwide



EM-2-008

Polymers

pla products

100% PLA (Poly Lactic Acid) sheet

Environmental performance

Resource saving, Degradability/compostability

Product performance

PLA (Poly Lactic Acid) is made from plants, not oil. Plant starches are extracted from plants through the fermentation process and then are polymerized during the manufacturing process.



WEI MON INDUSTRY CO., LTD

2F, No. 57, Singhong Rd., Neihu District, Taipei City, Taiwan, 11494, Republic of China
Tel +886-2-27953131 Fax +886-2-27919966
E-mail hmr@weimon.com.tw
URL www.weimon.com.tw
URL www.plandpaper.com.tw



PLA vacuum molding products

EM-2-009

Polymers

pla products

Pland Paper (100% PLA (Poly Lactic Acid) coated paper)

Environmental performance

Resource saving, Degradability/compostability

Product performance

PLA (Poly Lactic Acid) is made from plants, not oil. Plant starches are extracted from plants through the fermentation process and then are polymerized during the manufacturing process.



100% PLA coated paper

WEI MON INDUSTRY CO., LTD

2F, No. 57, Singjhong Rd., Neihs District, Taipei City, Taiwan, 11494, Republic of China
Tel +886-2-27953131 Fax +886-2-27919966
E-mail hmr@weimon.com.tw
URL www.weimon.com.tw
URL www.plandpaper.com.tw

EM-2-010

Polymers

chemicals and allied products

"Eco-Friendly Biodegradable Resin (EcolGreen Bio-Polymer) "

Environmental performance

Our company manufactures biodegradable material that is environmentally friendly.
As a biodegradable material and the complete biodegradability test
Detecting whether the test substances have also been certified by completing the green mark.
For more information, our company's website (www.ecolgreen.com) to Please visit

Product performance

Our company's products are environmentally friendly biodegradable material.
The level of synthetic resin material is a substitute.
Heat-resistant, synthetic resin, the level of intensity and complement existing Was.
For more information, our company's website (www.ecolgreen.com) to Please visit



ROK EcolBioTech.Co.,Ltd

691-1, Gojan-dong, Namdong-gu, Incheon, Korea, 405-820, Republic of Korea
Tel +82-32-813-5023 Fax +82-32-813-5025
E-mail kih3495@yahoo.co.kr
URL http://www.ecolgreen.com

Available in: Worldwide, Republic of Korea

EM-2-011

Polymers

compounding plastic materials

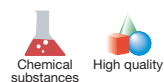
SUMIKON EME

Environmental performance

Sumitomo Bakelite has developed an epoxy resin molding material for semiconductor sealing that is free of bromine- and antimony-based flame retardants, which have a negative impact on the environment, is free of substances for which there is concern about their environmental impact, and conforms with global environmental standards as a molding material that can be used in lead-free solder mounting. The company has developed and marketed the new SUMIKON EME G700 series for applications that require high reliability and the new SUMIKON EME G600 series for ordinary semiconductor package applications, all of which use an epoxy resin with superior fire retardant capabilities. We have also launched the SUMIKON EME E series for discrete applications.

Sumitomo Bakelite Co., Ltd.

2-5-8, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Tel +81-3-5462-3479 Fax +81-3-5462-4873
URL <http://www.sumibe.co.jp>



EM-2-012

Polymers

compounding plastic materials

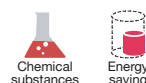
SUMIRESIN EXCEL CRC

Environmental performance

To respond to narrowing circuit widths required due to the sharp increase in semiconductor memory capacity as well as higher speeds and to satisfy strict demands for reliability, Sumitomo Bakelite has developed and marketed the SUMIRESIN EXCEL CRC 8000 series of positive photosensitive wafer coating resins. This enables semiconductor manufacturers to use alkaline water as a developing fluid and pure water as a rinsing solution, rendering special solvents unnecessary. In addition, with certain wafer level packages, it can be used in place of conventional plastic-based sealants for rewiring, reducing the length of processing and thus conserving resources and energy.

Sumitomo Bakelite Co., Ltd.

Tennosu Parkside Bldg., 2-5-8, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Tel +81-3-5462-3479 Fax +81-3-5462-4873
URL <http://www.sumibe.co.jp>



EM-2-013

Polymers

compounding plastic materials

SUMIKON PM

Environmental performance

In order to save weight of automotive mechanical parts with metal replacement, SUMITOMO BAKELITE CO., LTD. develops and commercializes excellent phenolic molding compounds which has high strength, high rigidity, good dimensional stability and high reliability by unique formulation of various additives and fillers with phenolic resin which has high heat resistance and excellent chemical resistance. The SUMIKON PM series is widely used as automotive mechanical parts, such as FEAD pulleys, disc brake pistons and water pump covers.



Sumitomo Bakelite Co., Ltd.

2-5-8, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Tel +81-3-5462-3479 Fax +81-3-5462-4873
URL <http://www.sumibe.co.jp>



EM-2-014

Polymers

plastic

ECOLA

Environmental performance

Kao has integrated the quality of ECOLA, its polylactic acid resin product, to save cycle time within the production process which contributes to the reduction of environmental burden.

- Has realized injection molding that saves time to nearly the same extent as molding widely-used resin.
Conventional molding condition : 110°C X 10min.
New molding condition (with ECOLA) : 80°C X 30sec at most.
- Has realized extrusion molding of transparent and soft materials such as sheet-shaped products.

Product performance

Kao contributes to a more easier use of eco-friendly biomass-based polymer.

In addition to the plasticity control technology that has improved the softness of molded products, our unique nano-crystal control technology has realized the products' transparency.

These technologies have made it possible to expand the wide use of polylactic acid resin to plastic products.

Extrusion-molding-targeted ECOLA enables molding of sheet-shaped or film-shaped products such as transparent folders, which resemble products made of PP.

On the other hand, injection-molding-targeted ECOLA saves the molding time to nearly the same extent as molding such commonly-used resins as ABS or PP without losing the impact resistance or heat resistance after molding.



Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan
URL <http://chemical.kao.com/index.html>
URL http://www.kao.com/jp/en/corp_csr/pdf_reports.html



Available in: Japan, China

ECOLA

EM-2-015

Polymers

plastic

PET DTY (Drow Textured Yarn)

Environmental performance

Made from recycled used PET bottles to reduce landfill waste and lesson consumption of petro chemicals.

Product performance

PET DTY, like silk, can be used to produce fabric by knitting or weaving.

**TAINAN SPINNING CO.,LTD**

No.419, Sec 3, Jhongjheng Rd., Rende Township, Tainan County, Taiwan, 717, Republic of China
Tel +88662724421 Fax +88662719673
E-mail tainan.hicool@msa.hinet.net
URL www.tainanspin.com.tw

Available in: Asia, Taiwan (Rep. of China)

EM-2-016

Polymers

plastic

PET PSF (Polyester Staple Fibre)

Environmental performance

Made from recycled used PET bottle to reduce landfill waste and lesson consumption of petrochemical.

Product performance

PET PSF, like natural cotton, can be span to be yarn and become a kind of fabric or nonwoven material.

**TAINAN SPINNING CO.,LTD**

No.419, Sec 3, Jhongjheng Rd., Rende Township, Tainan County, Taiwan, 717, Republic of China
Tel +88662724421 Fax +88662719673
E-mail tainan.hicool@msa.hinet.net
URL www.tainanspin.com.tw

Available in: Worldwide, Asia, Taiwan (Rep. of China)

EM-2-017

Polymers

plastic

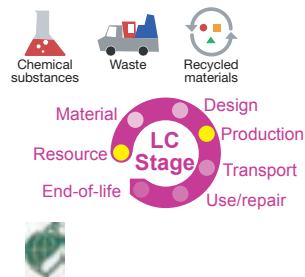
PET POY (Partially Oriented yarn)

Environmental performance

Made from recycled used PET bottles to reduce landfill waste and lesson consumption of petro chemicals

Product performance

PET POY can be used to produce chemical fiber Such as recycled PET DTY.



TAINAN SPINNING CO.,LTD

No.419, Sec 3, Jhongjheng Rd., Rende Township, Tainan County, Taiwan, 717, Republic of China
Tel +88662724421 Fax +88662719673
E-mail tainan.hicool@msa.hinet.net
URL www.tainanspin.com.tw



Available in: Asia, Taiwan (Rep. of China)

EM-2-018

Polymers

plastic

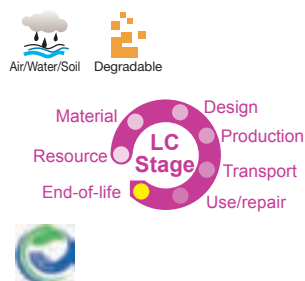
BIO RESIN

Environmental performance

Using PLA material extracted from starch, developed by compounding with other eco-friendly resins to produce products through coating/film/thermoforming or injection molding process, biodegradable in natural process (but, a dry device is necessary for use due to its sensitivity to moisture).

Product performance

Manufactured for coating, envelopes and injection molding/ excellent in productivity and processability/ excellent in biodegradation by microorganisms



Hanchang Paper Co., Ltd.

EXCON VENTURE BLDG., 15-24, YEOUIDO-DONG, YOUNGDEUNGPO-GU, SEOUL, KOREA, 150-969, Republic of Korea
Tel +82-2-3774-5484 Fax +82-2-3774-5487
E-mail wonchoong@gmail.com
URL www.hanchangpaper.co.kr
URL www.greenus-eco.com

Available in: Worldwide

EM-2-019	Polymers
	plastic
PLA COATED PAPER/ BOARD	
<div>Environmental performance</div> <p>This coated paper is biodegradable due to its utilization of PLA extracted from starch, and can be used for food packaging or printing.</p> <div>Product performance</div> <p>Excellent in productivity and processability/ cups, trays and boxes can be manufactured/ Available of thermal adhesives/ excellent in biodegradation by microorganisms</p>	<div><div><div><div><div></div><div>Air/Water/Soil</div></div><div><div></div><div>Degradable</div></div></div></div><div><div><div>Material</div><div>Resource</div><div>End-of-life</div></div><div><div>Design</div><div>Production</div><div>Transport</div><div>Use/repair</div></div></div><div><div>LC Stage</div><div></div></div></div> <div></div>
<div><div><div><div><div>Hanchang Paper Co., Ltd.</div><div>EXCON VENTURE BLDG., 15-24, YEOUIDO-DONG, YOUNGDEUNGPO-GU, SEOUL, KOREA, 150-969, Republic of Korea</div><div>Tel +82-2-3774-5484 Fax +82-2-3774-5487</div><div>E-mail wonchoong@gmail.com</div><div>URL www.hanchangpaper.co.kr</div><div>URL www.greenus-eco.com</div></div></div><div>Available in: Worldwide</div></div></div>	

EM-3-001

Natural materials

synthetic fiber

Crafts from Banana Fiber

Environmental performance

Fiber extracted from Banana sheath is bio-degradable as well have long life. Banana fiber is extracted from the waste part of banana tree. It gives employmen to pportunity for the poor.

Product performance

Crafts made from Banana fiber is soft in nature. Any kind of craft materials could be made from Banana Fiber. Even sarees are incorporating Banana fiber which give cool effect to the body.



A basket made from banana fiber - easy to handle and at affordable cost.

Mother Theresa Development Research Institute

No.4/3B, Freeman Street, Kottapattu, Golden Rock Post, Ponmalaipatti, Trichy, 620004, India
Tel +91-431-2491671
E-mail mtdri2000@gmail.com
URL <http://www.freewebs.com/mtdri>

Available in: Worldwide

EM-3-002

Natural materials

heat-resistant polylactic acid

BIOFRONT[®], heat resistant polylactic acid

Environmental performance

BIOFRONT[®] offers significantly higher heat-resistance and crystallization rate than conventional bioplastics.

Product performance

BIOFRONT[®] is a stereocomplex PLA that has a melting point of 210°C, or 40°C higher than conventional PLA. Teijin has successfully upgraded BIOFRONT[®] with substantially improved hydrolytic resistance. These meet practical requirements in industrial markets such as automotive, office equipment and electronics.

*Stereocomplex PLA

The unique crystal structure composed of L-molecule and its optical isomer D-molecule are behind the new physical properties that include high heat-resistant characteristics

Teijin Limited

2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-8585, Japan
Tel +81-3-3506-4096
E-mail biofront@teijin.co.jp
URL <http://www.teijin.co.jp/english/index.html>



EM-3-003

Natural materials

mixed yarn, including yarn waste

"BREVANO ECO": Anti-flaming, antistatic fabric of ecology-specs**Environmental performance**

Fabric made from blending of excellent flameproof acrylic fiber and unused cotton generated during spinning process accounting for 10% of total material.
- Designated "EcoMark certified product", Japan's environmental label.

Product performance

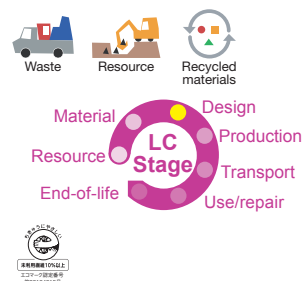
- Having excellent anti-flaming property coupled with self-extinguishing property. LOI* (limited oxygen index) 29 to 32.
- Excellent in non-fusibility, compared with 100% general synthetic fibers. Safe as it would not stick to skin.
- Having superior antistatic property (complying with JIS T 8118: friction static electrical charge less than $7 \mu\text{C}/\text{m}^2$)
- Refreshing and easy-to wear, due to their excellent sweat absorption.
- Will not pill.
- Good coloring, good color fastness.

*Note: LOI is a measure to show the degree of flammability. The less flammable, the higher the figure is. Generally, anti-flammable materials show the figure of 26 or higher.

KURABO INDUSTRIES LTD.

4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan
Tel +81-6-6266-5295 Fax +81-6-6266-5539
E-mail uniform_sect@kurabo.co.jp
URL <http://www.kurabo.co.jp/>

Available in: Japan, Worldwide



Combustion test

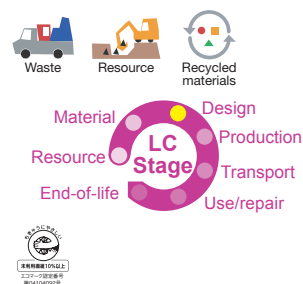
EM-3-004

Natural materials

mixed yarn, including yarn waste

"Return Cotton": An eco-friendly material for a sound recycling society**Environmental performance**

Return Cotton is produced using our unique technology by recycling various unused fibers such as waste cotton generated in the cotton-spinning process. This is an eco-friendly material aimed at helping to achieve a sound recycling society. (Designated "Eco Mark certified product", Japan's environment label.)

**KURABO INDUSTRIES LTD.**

4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan
Tel +81-6-6266-5295 Fax +81-6-6266-5539
E-mail uniform_sect@kurabo.co.jp
URL <http://www.kurabo.co.jp/>

Available in: Japan, Worldwide

EM-3-005

Natural materials

mixed yarn, including yarn waste

"BioNature": Eco-oriented soil-returnable fabric**Environmental performance**

Bionature is a fabric made from natural fiber and eco-friendly polyester of DUPONT™.

Bionature collapses in the compost with which environment was ready.

The reduction of its weight and the loss of its molecular weight show the decomposition of Bionature in the compost.

Safety is identified from the composts obtained in the decomposition process that have no impact on the earthworm reproduction and plants growth.

Product performance

The physical properties are strengthened without spoiling the biodegradation of natural materials, such as cotton and wool.

KURABO INDUSTRIES LTD.

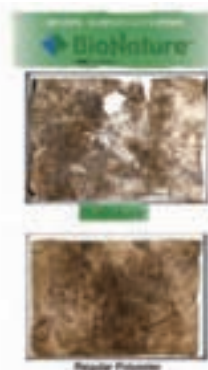
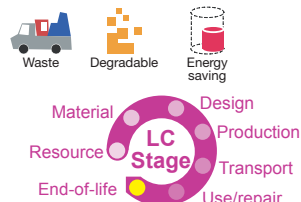
4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan

Tel +81-6-6266-5295 Fax +81-6-6266-5539

E-mail uniform_sect@kurabo.co.jp

URL <http://www.kurabo.co.jp/>

Available in: Japan, Worldwide



Fabrics buried in the ground for 10 months

EM-3-006

Natural materials

mixed yarn, including yarn waste

"EARTHDENIM": New feel denim born from our Eco-oriented research.**Environmental performance**

EARTHDENIM makes effective reuse of waste from each stage of production.

- EARTHDENIM is made by recycling denim production waste.
- A pair of jeans made of EARTHDENIM reduces CO₂ in a quantity equivalent to the quantity absorbed by about 180 four-leafed-clovers a year.

Product performance

It makes possible a super dark blue color as unmatched by normal dyeing. And it contributes to reduction of CO₂.

- Super dark blue and White core

KURABO INDUSTRIES LTD.

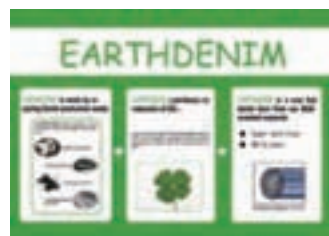
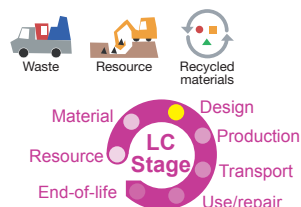
4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan

Tel +81-6-6266-5324 Fax +81-6-6266-5204

E-mail casual_sect@kurabo.co.jp

URL <http://www.kurabo.co.jp/>

Available in: Japan, Worldwide



EM-3-007

Natural materials

mixed spun wool yarn

"ECO · WASH": Eco-friendly shrink-resistant wool**Environmental performance**

Conventional chlorination treatment applied for shrink-proofing of wool fiber causes environmental contamination.

This is because residual chlorine in industrial waste water drained into rivers reacts with organic matter and turns into a carcinogen (AOX=Absorbable Halogens), a harmful substance to humans and the environment.

In ECO-WASH's case, ozone is used instead of chlorine, which is non-AOX and greatly reduces the burden of contamination to the environment, and further, it has much less damaging effects to wool fiber than done by the conventional chlorine treatment for shrink-proofing.

Product performance

ECO-WASH is the world first shrink-resistant wool by ozone treatment.

- Smooth and neat surface look, fluffiness
- Natural stretchability
- Excellent shrink-resistance
- Water repellency is retained (together with moisture releasing property of wool makes ECO-WASH comfortable)

KURABO INDUSTRIES LTD.

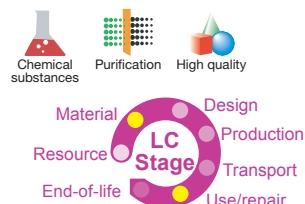
4-31, 2-Chome, Kyutaro-machi, Chuo-ku, Osaka, 541-8581, Japan

Tel +81-6-6266-5408 Fax +81-6-6266-5119

E-mail takaharu_nakayama@kurabo.co.jp

URL <http://www.kurabo.co.jp>

Available in: Japan, Worldwide



Water Repellent Test of Various Wool Fibers

EM-3-008

Natural materials

common plywood

KIKORIN-PLYWOOD: An environmentally sound plywood**Environmental performance**

KIKORIN-PLYWOOD offers not only high quality as plywood, but also a comprehensive approach to environmental sensitivity. KIKORIN-PLYWOOD is plywood containing at least 50% timber harvested from forests certified by FSC^{*1} or PEFC^{*2}, or from plantation forests that are sustainably managed.

A portion of the revenues from KIKORIN-PLYWOOD is invested in plantation forestry operations. In this fiscal year, investments were made in plantation forestry operations in Indonesia, where Sumitomo Forestry is endeavoring to revitalize degraded forests and bring back the forests.

*1...FSC is a third-party organization that provides a global forest certification system.

*2...PEFC is a forest certification program that promotes sustainable forest management by offering certification from third parties independent of stakeholders.

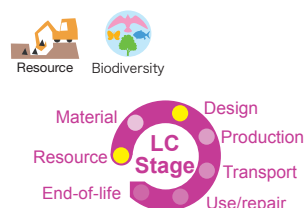
SUMITOMO FORESTRY CO.,LTD.

Keidanren Kaikan, 1-3-2 OTEMACHI, CHIYODA-KU, TOKYO, 100-8270, JAPAN

Tel +81-3-3214-2220

URL <http://sfc.jp/english/>

Available in: Japan



KIKORIN-PLYWOOD

EM-3-009

Natural materials

particle board

Labeling Particle Board Products with Carbon Footprint Mark

Environmental performance

In October 2009, P.T. Rimba Partikel Indonesia (RPI), an Indonesian affiliate of Sumitomo Forestry Co., Ltd. engaged in the manufacture and sale of wood building materials, began labeling its particle board (PB) products with a carbon footprint (CFP) mark and became the first Indonesian firm to use CFP labeling.

The PB manufactured by RPI are eco-friendly in that they effectively utilize wood leftover from logging and sawdust together with timber from company - owned plantations. PRI adopted wood biomass power generation technologies in 2008. That shift enabled it to begin producing its PB through manufacturing processes using clean energy with low CO₂-emission.

Although the labeling practice is voluntary, the company plans to devote study to the idea of utilizing the CFP framework now being advocated for future market entrants.

※The number of CFP explains its CO₂ emissions per m³ of PB.

PT. Rimba Partikel Indonesia

P.O.Box. 127 KENDAL Desa. Mororejo, Kaliwungu, Kendal, Jawa Tengah,
51372, Indonesia
Tel +62-248662990 Fax +62-248662988
URL <http://www.rpi.co.id/>
URL <http://sfc.jp/english/pdf/20090929.pdf>

Available in: Indonesia, China



Global warming



Energy saving



176.4kg-CO₂
not Inspection

Resource/Materials/Production/
Transfer/Use/End-of-Life



2010 Carbon Footprint Mark for RPI PB Products

EM-3-010

Natural materials

straw-mats and mat bases

"Kanryoso®" stronger skin rush

Environmental performance

Rush is widely known as a material of "tatami" in Japanese housing. The features of "tatami" are not only the fragrance and strength, but also humidity control. In addition, it has been lately found that rush has a function of adsorbing chemical substances and of deodorizing. (Ex. NH₃ 99.3% CH₃COOH 95.6%) The "Kanryoso®" rush has stronger skin compared with the previous rush, (ref., the photograph of electron-microscopy). This is a result of cultivation in which the intrinsic activity of rush has been fully leveraged. Every piece of the rush is thick and uniform.

Product performance

Because of its strength the life of products made from "Kanryoso®" is long. Rush is a plant that grows by taking CO₂ into its body. Namely, the long-life "Kanryoso®" product fixes CO₂ for a longer period than conventional products. We are therefore contributing to the fixation of CO₂ by raising young rushes.

IKEHIKO CORPORATION Co.,Ltd.

1052 Miyamatsu, Ooki-machi, Mizuma-gun, Fukuoka, 830-0424, Japan
Tel +81-944-32-1203 Fax +81-944-33-1059
URL <http://www.ikehiko.com>

Available in: Japan



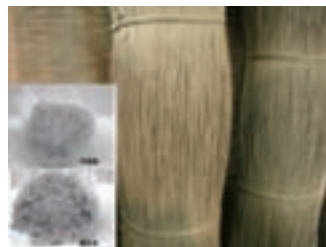
Chemical substances



Long-life



Purification



KANRYOUSO®

EM-4-001

Foam

rigid foamed plastic plates

Freon-gas-free sophisticated high-performance phenolic foam insulation

Environmental performance

The use of combustible hydrocarbon gas as a blowing agent and flame resistant property of the product are both accomplished by its unique foaming technology. It contributes to the prevention of the ozone layer and the mitigation of global warming by not using Freon gases. Furthermore, we realized high heat insulation performance, which is well over that of the conventional products (by 1.5-2 times). It is the product with long-lasting thermal resistance, significantly administering to high athermalize (energy-saving) of the structures.



ASAHI KASEI CONSTRUCTION MATERIALS CORPORATION

1-105 Kanda Jinbocho, Chiyoda-ku, Tokyo, 101-8101, Japan
Tel +81-3-3296-3529 Fax +81-3-3296-3535
URL <http://www.asahikasei-kenzai.com>



Available in: Japan

EM-4-002

Foam

rigid foamed plastic plates

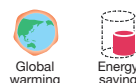
Non-fluorocarbon Urethane insulation

Environmental performance

Bridgestone commercialized insulation material by applying non-Freon foaming technology and foam-on-spot spray technique. Rigid Urethane foam "everlight NFNR" is non-Freon with high insulation property, contributes to energy save by improving efficiency of air-condition. Comparison of LCA assessment between Freon and non-Freon insulation indicates non-Freon has less impact on global warm than Freon insulation 50 years after house built even Freon remained in it has been recycled and decomposed. Bridgestone won Environment Minister Prize of The 8th Ozon Preservation and Global Warm Prevention Prize in 2005 by this technique and LCA assessment.

Product performance

- * environment friendly non-Freon product (zero Ozon-depleting substance/global warm control)
- * on-the-spot spray by existing foaming machine all seasons
- * JIS class 3 flame retardant product
- * low thermal conductivity/stable thermal insulation property



Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan
Tel +81-3-5202-6830 Fax +81-3-5202-6833
URL <http://www.bridgestone.co.jp/english/index.html>



Non-fluorocarbon Urethane insulation

EM-4-003

Foam

foamed plastic products, rigid

SOFTYCELL-ONE**Environmental performance**

Fluoro Carbon-free Rigid polyurethane foam for Spraying system
energy-saving products with Heat Insulation in houses

**KURABO INDUSTRIES LTD.**

4-31, 2-chome, kyutaro-machi, chuo-ku, osaka, Japan
URL <http://www.kurabo.co.jp>



Available in: Japan

EM-5-001

Ceramics and glass

civil engineering work

Tow Sheet, maintenance and reinforcement material for concrete structures

Environmental performance

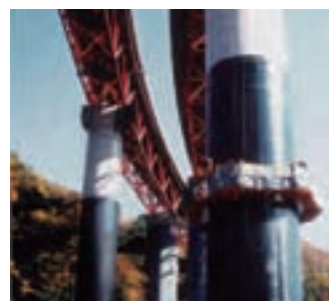
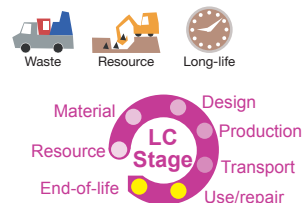
Carbon-fiber sheet is affixed over the surface of concrete with resin adhesive. This work is easy and resists rust, thus contributing to the extended life of facilities and buildings.

Product performance

As many highways are increasingly aged, maintenance and repairing work are in great demand to expand or extend the life of structures. The "Tow Sheet Method" supplied by Nippon Steel and Nippon Steel Composite is widely used in repairing and reinforcement work where "Tow Sheet" formed into sheet of carbon-fiber is affixed over the surface of concrete with resin adhesive. "Tow Sheet" work is easy and resists rust, thus contributing to the extended life of facilities and buildings. Nippon Steel looks forward to reducing the amount of construction waste and further to global environmental preservation through the promoted use of its "Tow Sheet".

Nippon Steel Corporation

2-6-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



EM-5-002

Ceramics and glass

hydraulic cement

Granulated Blast-Furnace Slag, Superior alternate material for clinker and cement

Environmental performance

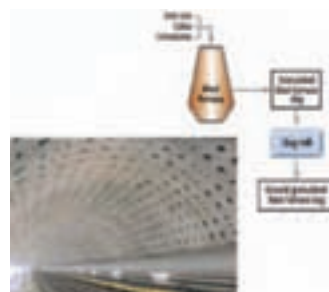
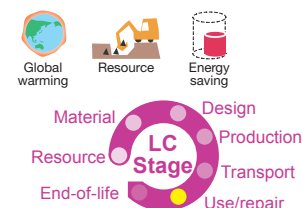
Reducing CO₂ emission about 40% compared with the ordinary cement producing.

Product performance

The Granulated Blast-Furnace Slag ("GBFS") is produced by rapid granulation of molten slag that is obtained during the iron making process. GBFS primarily consists of CaO and SiO₂ together with minor chemical components. GBFS can be used as an alternate of clinker that is the raw material of cement. Especially, GBFS shows excellent hydration character when it is further ground, which is called Ground Granulated Blast-Furnace Slag ("GGBFS"). The character of GBFS or GGBFS has been widely known as an excellent alternate of clinker or cement. GBFS and GGBFS contributes to reduce CO₂ emission amount equal to 700Kg per each metric ton of GBFS or GGBFS through energy and natural resource saving during clinker burning process and cement production once GBFS or GGBFS are used instead of clinker and cement.

Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



Segments (GBFS,GGBFS are blended)
of Trans Tokyo Bay Highway

EM-5-003

Ceramics and glass

glass and its products

Lead and arsenic-free optical glass (Eco-glass)

Environmental performance

There are more than 100 types of optical glass, and in the past, generally, lead and arsenic have been used in most of them as constituents. However these two elements have high risks to cause the environment pollution.

So, Nikon has developed nearly full types of optical glass not containing these two elements, and has applied them to Nikon's optical products wholly.

Product performance

Optical glass has, in general, high transmission, high homogeneity and optical constants, and is used for lenses or prisms of various types of optical products, for example, cameras, microscopes, etc.

In Nikon, optical glasses have been developed under cooperation with optical design division, and Nikon has established production technologies and mass-production structure based on Nikon's own glass production equipments. And, high quality of optical glasses produced by them have contributed to high performances of Nikon's products.

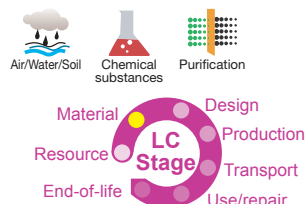
NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
Tel +81-3-3214-5311

URL <http://www.nikon.com/>

URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Lenses and prisms made of Eco-glass

EM-5-004

Ceramics and glass

scientific and industrial fine ceramics

Long Life, High Reliability and Anticorrosion Minimize Environmental Impacts

Environmental performance

- Mitigation of climate change: Reduction in the rotational energy loss of ball bearings.
- Efficient use of resources: Resource saving as a result of longer ball bearing life (5 times longer compared to steel bearing). Reduction in the waste of worn-out bearings because our ceramic bearings do not require frequent replacement.
- Management of chemicals: Environmentally beneficial reduction in the amount of bearing grease required.

Product performance

- Maintenance saving: Easy maintenance thanks to a highly durable and reliable generator bearing system which is substantially free from electric corrosion because of its ceramic balls' good insulation property.

Toshiba Materials Co., Ltd.

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
Tel +81-3-3457-4875 Fax +81-3-5444-9235

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba-tmat.co.jp/tmat/corp/env.htm>



Ceramic balls for windmill power generator bearings

EM-5-005

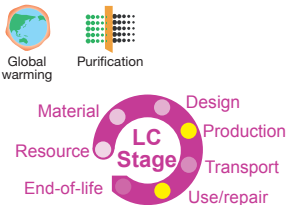
Ceramics and glass

steel materials

Marine Block

Environmental performance

JFE has been developing restoration technologies for marine environments by utilizing steel slag, which is a byproduct of manufacturing. Porous Marine Block, which is JFE's block product made from steel slag and CO₂ through a solidification reaction, has been adopted for coral reef restoration works in Sekisaishoko on a trial basis. So far, good results have been observed. Marine Block has also been used in rejuvenation experiments for seaweed reefs close to Japan because of its excellent performance as an implantation base for seaweed.



JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100-0011, Japan
Tel +81-3-3597-3111 Fax +81-3-3597-4860
URL <http://www.jfe-steel.co.jp/>



EM-6-001

Composites

rubber-reforming material

Sulfron® improves fuel consumption and enhances the durability of tires**Environmental performance**

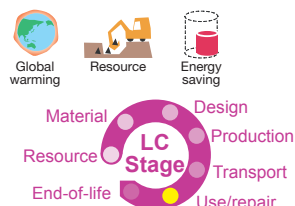
Sulfron® contributes to automobiles CO₂ reduction by a 5% improvement in fuel consumption.

Product performance

Sulfron®, a modified aramid derived from Twaron®, is a unique rubber ingredient that has been chemically processed from cut fiber. When absorbed by the tread of a tire, it disperses inside the rubber and as it conforms to the rubber, the tire becomes more durable. It also reduces rolling resistance, which improves fuel efficiency.

Performance of Sulfron:

- 1.Improves fuel consumption by 5%
- 2.Increases tire durability by suppressing heating while moving
- 3.Prevents tire tread cracking

**Teijin Aramid BV**

Westervoortsedijk 73 P.O.Box 9600 6800 TC Arnhem, The Netherlands, 100-8585, Japan
 Tel +31-26-366-4396 Fax +31-26-366-4110
 E-mail k.kashiwagi@teijin.co.jp
 URL <http://www.teijinaramid.com/>

Sulfron®

EM-6-002

Composites

printing on non-paper

Recycled wood (Toppan Material Wood)**Environmental performance**

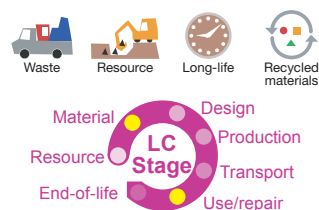
Toppan Material Wood is a recycled industrial material made entirely from waste and waste plastic. This industrial material can be re-crushed and recycled time and time again with no change in its original form and function.

Product performance

High processability
 Steady strength
 High strength
 Anti-bacillus corrosion
 Water-proofing, weather resistant
 "TOPPAN MATERIAL WOOD" is a product sold by Toppan Cosmo, Inc. that employs ECO-M-WOOD, a product for which ECOWOOD Co. Ltd. has acquired an Ecomark authorization number.

TOPPAN COSMO, INC.

Toppan Shibaura Building, 26-19-3, Shibaura, Minato-ku, Tokyo, 108-8536, Japan
 Tel +81-3-5418-3500 Fax +81-3-5418-3704
 E-mail eco@toppan.co.jp
 URL http://www.toppan.co.jp/english/products_service/business/industrial/index.html
 URL <http://www.toppan.co.jp/english/csr/>



Toppan Material Wood has high processability because it is made by extrusion.

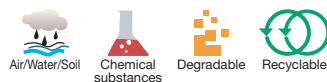
EM-6-003

Composites

adhesives

Water-based emulsion adhesive products with various foams "AH sheet"**Environmental performance**

Ever-light AH sheet is a kind of product combined with flexible urethane foam technique and the latest adhesion technique. It is a flexible high performance polyurethane sheet with adhesive on it. By using this sheet, it becomes easier to adhere requested foam with other substances. Conventional organic solvent product may cause air pollution and result in sickhouse syndrome. Instead of organic solvent, water is used to make AH sheet a water-based emulsion adhesive which is unharmed. Removable Ever-light AH sheet for industrial use has been developed as well for the purpose of reuse of parts and release or separate of unnecessary parts.

**Bridgestone Corporation**

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan
 Tel +81-3-5202-6830 Fax +81-3-5202-6833
 URL <http://www.bridgestone.co.jp/english/index.html>



Water-based Emulsion adhesive products with various foams "AH sheet"

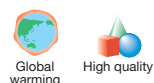
EM-6-004

Composites

cement

APO MASONRY CEMENT**Environmental performance**

APO MASONRY CEMENT is a Type M masonry cement that earns its name as the sustainable alternative to other types of cement in masonry applications. It effectively minimizes the carbon footprint of regular Portland cement by as much as 32% thus, APO MASONRY CEMENT is considered as an environment-friendly type of cement. Through XD 100 nanotechnology, it allows better moisture retention and adhesion strength

**CEMEX Philippines**

9th Floor Petron Mega Plaza 358 Sen. Gil J. Puyat Ave. Makati City, Philippines 1200, Philippines
 Tel (+632) 8493553 Fax (+632) 8493739
 E-mail darwin.mariano@cemex.com
 URL www.cemexphilippines.com



EM-6-005

Composites

cement

RIZAL MASONRY CEMENT

Environmental performance

RIZAL MASONRY CEMENT is a Type M masonry cement that earns its name as the sustainable alternative to other types of cement in masonry applications. It effectively minimizes the carbon footprint of regular Portland cement by as much as 32% thus; RIZAL MASONRY CEMENT is considered an environment-friendly type of cement. Through XD 100 nanotechnology, it allows better moisture retention and adhesion strength.



Global warming



High quality



CEMEX Philippines

9th Floor Petron Mega Plaza 358 Sen. Gil J. Puyat Ave. Makati City, Philippines 1200, Philippines
Tel (+632) 8493553 Fax (+632) 8493739
E-mail darwin.mariano@cemex.com
URL www.cemexphilippines.com

EM-6-006

Composites

surface coatings

Ecogard V-Deck 1000SS

Environmental performance

Ecogard V-Deck 1000SS is an environmental-friendly 1mm thick solventless epoxy coating with silica quartz non-slip finish.

Other available thicknesses:
500microns, 1mm, 2mm, 3mm, 5mm

Product performance

- Varying degrees of texture (non-slip, orange peel etc)
- Solventless
- Excellent abrasion resistance
- Excellent chemical resistance (i.e. dustproofing and protection against oil, grease penetration and contamination)
- Good skid resistance for hard cornering areas, slopes and ramps
- Good impact resistance
- Easy cleaning and maintenance
- Improved brightness, reducing lighting requirements and energy costs
- Enhanced aesthetics
- Compressive strength = 8500psi (ASTM C-579)
- Bond strength > 400psi

Suitable for light to medium duty applications at vehicular parking deck areas, general traffic areas, traffic ramps, traffic aisles and vehicle workshops.



Chemical substances



Air/Water/Soil



High quality



Long-life



Polymer International Pte Ltd

289 Kaki Bukit Avenue 1, Shun Li Industrial Park, Singapore 416079.
Tel (65) 6749 3113 Fax (65) 6749 3990
E-mail sales@polymer-international.com
URL www.polymer-international.com



Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China

EM-6-007

Composites

surface coatings

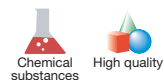
Ecogard V-Deck 2000W

Environmental performance

Ecogard V-Deck 2000W is an environmental-friendly, low VOC water-borne epoxy vehicular deck coating system.

Product performance

- "Breathable" system
- Can be applied on green concrete or areas subjected to rising dampness.
- Suitable for medium-duty applications at vehicular parking deck areas, general traffic areas, traffic ramps, traffic aisles and vehicle workshops.



Polymer International Pte Ltd

289 Kaki Bukit Avenue 1, Shun Li Industrial Park, Singapore 416079
 Tel (65) 6749 3113 Fax (65) 6749 3990
 E-mail sales@polymer-international.com
 URL www.polymer-international.com

Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China

EM-6-008

Composites

surface coatings

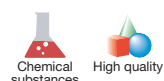
Ecogard WEC 6100

Environmental performance

Ecogard WEC 6100 is an environmental-friendly 2 coats water-borne polyamide epoxy floor coating.

Product performance

- Dry film thickness: 100 microns
- Semi-gloss finish
- Abrasion resistance = 110mg max weight loss @ 1000g loading (ASTM D-4060, CS-17 wheel)
- Bond strength > 400psi
- Quick installation, excellent for quick turnaround jobs.
- Can be applied on green concrete, and walls.
- Suitable for light duty applications in all industries as a general purpose floor coating and for refinishing existing Polygard epoxy coating systems.



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289 Kaki Bukit Avenue 1, Shun Li Industrial Park, Singapore 416079.
 Tel (65) 6749 3113 Fax (65) 6749 3990
 E-mail sales@polymer-international.com
 URL www.polymer-international.com

Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China

EM-6-009

Composites

surface coatings

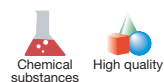
Ecogard WEC 6150

Environmental performance

Ecogard WEC 6150 is an environmental-friendly 3 coats water-borne polyamide epoxy floor coating.

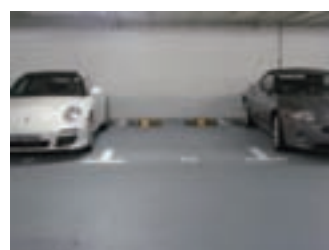
Product performance

- Dry film thickness = 150 microns
- Semi-gloss finish
- Can be applied on green concrete and walls
- Quick application, suitable for quick turnaround jobs
- Suitable for light-duty applications in all industries as a general purpose coating system and for refinishing existing Polygard epoxy floor systems



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Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China

EM-6-010

Composites

surface coatings

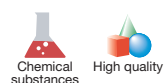
Ecogard WSL 2020

Environmental performance

Ecogard WSL 2020 is an environmental-friendly, low VOC, medium duty, water-borne self-leveling epoxy coating system for floors.

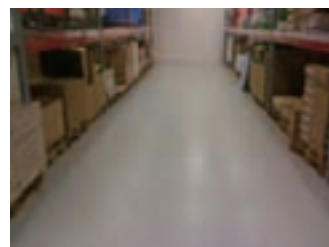
Product performance

- Suitable for application over green concrete and on concrete floor affected by rising dampness.
- Typical installation includes light and clean manufacturing in all industries and carpark.



Polymer International Pte Ltd

289 Kaki Bukit Avenue 1, Shun Li Industrial Park, Singapore 416079.
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E-mail sales@polymer-international.com
URL www.polymer-international.com



Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China

WSL 2020

EM-6-011

Composites

surface coatings

Ecogard WSL 2081

Environmental performance

Ecogard WSL 2081 is an environmental-friendly, low VOC, 2mm thick medium duty, water-borne self-leveling epoxy coating system with broadcast (non-slip) finish for floors.

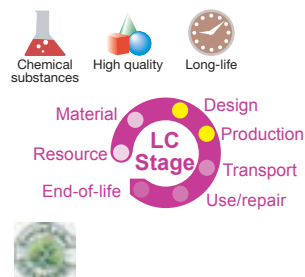
Product performance

- Suitable for application over green concrete and on concrete floor affected by rising dampness.
- Typical installation includes light and clean manufacturing in all industries and carpark.

Polymer International Pte Ltd

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URL www.polymer-international.com

Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China



EM-6-012

Composites

surface coatings

Ecogard SLT 1020

Environmental performance

Ecogard SLT 1020 is an environmental-friendly 1mm thick, medium-duty epoxy floor system finished smooth.

Other available thickness:
1mm, 2mm, 3mm

Product performance

- Solventless system
- Good chemical resistance
- High gloss hygienic finish
- Can be finished non-slip for added safety feature
- Compressive strength = 9000psi (ASTM C-579)
- Hardness = 84 (Shore D)

Suitable for medium duty applications in all industries in clean rooms, laboratories, packing areas, assembly areas and light manufacturing areas in pharmaceutical plants, dry food manufacturing plants, wafer fabrication plants, electronics and computer manufacturing.

Polymer International Pte Ltd

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E-mail sales@polymer-international.com
URL www.polymer-international.com

Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China



EM-6-013

Composites

surface coatings

Ecogard SLT 1021

Environmental performance

Ecogard SLT 1021 is an environmental-friendly 1mm thick, medium-duty epoxy floor system finished non-slip.

Other available thicknesses:
1mm, 2mm, 3mm

Product performance

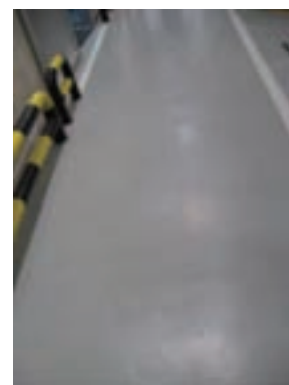
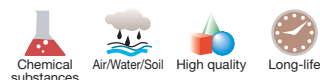
- Solventless system
- Good chemical resistance
- High gloss hygienic finish
- Can be finished non-slip for added safety feature
- Compressive strength = 9000psi (ASTM C-579)
- Hardness = 84 (Shore D)

Suitable for medium duty applications in all industries in clean rooms, laboratories, packing areas, assembly areas and light manufacturing areas in pharmaceutical plants, dry food manufacturing plants, wafer fabrication plants, electronics and computer manufacturing.

Polymer International Pte Ltd

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URL www.polymer-international.com

Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China



EM-6-014

Composites

surface coatings

Ecogard MTX 5020

Environmental performance

Ecogard MTX 5020 is an environmental-friendly, low VOC, 5mm thick, heavy-duty solventless epoxy mortar topping for floors.

Other available thickness:
5mm, 6mm

Product performance

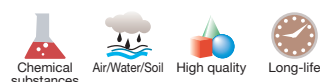
- Excellent chemical resistance
- Excellent impact and abrasion resistance (0.1g max weight loss @ 1000g loading - ASTM D-4060, CS-17 Wheel)
- High gloss hygienic finish
- Good hardness (87 - Shore D)
- Bond strength (>400psi)

Suitable for heavy-duty applications in all industries; e.g. vehicular decks, work platforms, ramps, traffic aisles, chemical processing plants, printing and packaging, pulp and paper mills etc.

Polymer International Pte Ltd

289 Kaki Bukit Avenue 1, Shun Li Industrial Park, Singapore 416079.
Tel (65) 6749 3113 Fax (65) 6749 3990
E-mail sales@polymer-international.com
URL www.polymer-international.com

Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China



EM-6-015

Composites

surface coatings

Ecogard MTX 5021

Environmental performance

Ecogard MTX 5021 is an environmental-friendly, low VOC, 5mm thick heavy-duty epoxy mortar topping for floors; finished non-slip for added safety feature.

Other available thickness:
5mm, 6mm

Product performance

- Excellent chemical resistance
- Excellent impact and abrasion resistance (0.1g max weight loss @ 1000g loading - ASTM D-4060, CS-17 Wheel)
- Compressive strength (9800psi)
- High gloss hygienic finish
- Good hardness (87 - Shore D)
- Bond strength (>400psi)
- Available in smooth finish

Suitable for heavy-duty applications in all industries; e.g. vehicular decks, work platforms, ramps, traffic aisles, chemical processing plants, printing and packaging, pulp and paper mills etc.

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URL www.polymer-international.com

Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China



EM-6-016

Composites

surface coatings

Ecogard MTX 5022

Environmental performance

Ecogard MTX 5022 is an environmental-friendly, low VOC, 5mm thick, heavy-duty epoxy mortar topping system with a self-leveling smooth finish.

Other available thicknesses:
5mm, 6mm

Product performance

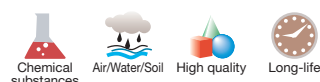
- Excellent chemical resistance
- Excellent impact and abrasion resistance (0.1g max weight loss @ 1000g loading - ASTM D-4060, CS-17 Wheel)
- High gloss hygienic finish
- Good hardness (87 - Shore D)
- Compressive strength = 9800psi (ASTM C-579)
- Bond strength (>400psi)

Suitable for heavy-duty applications in all industries; e.g. vehicular decks, work platforms, ramps, traffic aisles, chemical processing plants, printing and packaging, pulp and paper mills etc.

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Available in: Asia, Southeast Asia, ASEAN, Indonesia, Singapore, Thailand, Philippines, Malaysia, China



EM-6-017

Composites

manufacturing products

e-wood (Eco-friendly deck materials and WPC)**Environmental performance**

- Wood plastic composite decking materials are made of waste wood fibers and PP/PE material
- WPC materials taking advantage of merits of polymer resins and wood by combining olefin polymer resins and wood fiber through high-temperature and high-pressure compression molding.
- Use of wood fiber and plastic waste reduce the demand of natural wood materials and industrial wastes
- 100% recyclable, produce no waste or pollutants in the manufacturing process
- No hazardous heavy metals residues including Copper and Chrom found.
- The evaluation result on the emission rate of indoor air pollutants conducted by the Japan Construction Material Test Center showed the emission rate of construction materials emitting formaldehyde was lower than the standard of LOD less than 0.005 mg/m²h regulated by the revised Building Standards Law Enforcement Ordinance.

Product performance

- Weather-resistant, no color change
- No toxic gas generation, available in various size and design

E-WOOD KOREA Co., Ltd.

148-2 Daejang-ri, Soi-myeon, Eumseong-gun, Chungcheongbuk-do, 369-872,
 Republic of Korea
 Tel +82-2-466-0347 Fax +82-2-466-0361
 E-mail lkunsig@hanmail.net
 URL <http://www.ewood.co.kr/>

Available in: Worldwide



e-wood (Eco-friendly deck materials and WPC)

EM-7-001

Others

non-ferrous metals by primary smelting and refining

Polycrystalline Silicon (Materials for solar power systems)**Environmental performance**

Global warming is an urgent issue not only for human beings but also any lives on the globe now. We are contributing to preservation and restoration of the natural environment on the earth by supplying polycrystalline silicon.

Product performance

We are producing polycrystalline silicon for semiconductor and solar cell from metallurgical silicon by siemens process.

The polycrystalline silicon for solar cells is a major raw material for photovoltaic industry and the energy generated from solar cells is clean without any generation of CO₂.

**Mitsubishi Materials Corporation (Yokkaichi Plant)**

5 Mita-cho, Yokkaichi, Mie, 510-0841, Japan

Tel +81-59-345-5191 Fax +81-59-346-5815

E-mail toishii@mmc.co.jp

URL <http://www.mmc.co.jp/corporate/en/index.html>

URL <http://www.mmc.co.jp/corporate/en/product/electronics/1001.html>

URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>



Available in: Japan, Europe, Southeast Asia, U.S.A, China

Polycrystalline silicon

EM-7-002

Others

regenerated non-ferrous pig metals and non-ferrous alloys

Columnar-crystal large-diameter silicon for solar cell and silicon parts**Environmental performance**

From the view-point of the global environmental problems, the product contributes to energy saving and CO₂ emission reduction as solar cells. Our product is superior in the efficiency of component manufacturing owing to its large diameter (square type: 1050 × 1050mm, circular type: Φ 1050). This reveals an environmentally low-load manufacturing process.

Product performance

The product is excellent in machining characteristics, mechanical strength, and chemical resistance, compared with the poly-crystal products prepared by other methods. Moreover, it has the performance at almost the same level as that of single crystal. It is therefore expected as a substitute in the field where the single crystal has been used. Since a large-diameter product can be made, the demand for columnar silicon crystal is rapidly increasing in fields where SiC, quartz and carbon have been used.

**Mitsubishi Materials Electronic Chemicals Co.,Ltd.**

3-1-6 Barajima, Akita City, Akita, 010-8585, Japan

Tel +81-18-864-6011 Fax +81-18-864-4002

URL <http://www.mmc.co.jp/corporate/en/product/electronics/1012.html>



Available in: Worldwide

Columnar Crystal Silicon of plate type

EM-7-003

Others

demisters

P.P MESH DEMISTER

Environmental performance

1. High collection efficiencies of up to 99% at the velocity of a moving fluid of 1 to 8 m/sec
2. Provides free area of up to 98% for operation and low pressure drop (0.1" ~ 1.0" W/G)
3. A variety of materials in accordance with temperature and corrosion resistance
4. Easy to install by using M/H
5. Usable without any restriction and interchangeable with existing facilities
6. Designed for self-cleaning (semi-permanent and economical)



DAE SHIN DEMISTER CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX (45BLOCK 6LOT) , 435-6 NON-HYUN DONG, NAM-DONG GU, IN CHEON, 405-848, KOREA
 Tel +82-32-814-0211 Fax +82-32-814-0213
 E-mail dsdemister@naver.com
 URL www.dsdemister.com



EM-7-004

Others

industries unable to classify

lining or application (NK series)

Environmental performance

1. Product's recycled content shall be at least 50%.
2. Product shall not contain any toxic substance promulgated by EPA.
3. Dyed products shall meet the test standards set forth in the attached table.

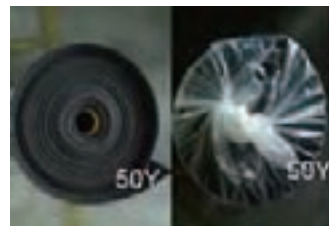
Product performance

The product reduces the consumption of resources such as minerals, forest resources, and water; in addition to the reduction of resource consumption during the manufacturing process, this subcategory also includes reduction of resource consumption through reuse and recycling.



HSINNJY INDUSTRIAL CO.,LTD

(No.3industrial (S) 6rd. Nantou City) , 540, Republic of China
 Tel 886-49-2256871 Fax 886-49-2257064
 E-mail simon@mail.nonwoven.com.tw
 URL http://www.nonwoven.com.tw
 URL http://hsinnjy.nonwoven.com.tw/custpage.aspx?PID=203



lining or application (NK series)

EM-7-005

Others

industries unable to classify

lining or application (NK_A series)

Environmental performance

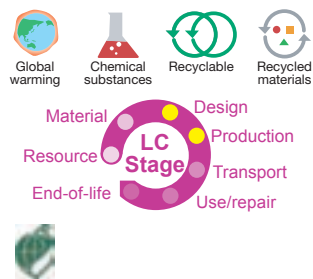
1. Product's recycled content shall be at least 50%.
2. Product shall not contain any toxic substance promulgated by EPA.
3. Dyed products shall meet the test standards set forth in the attached table.

Product performance

The product reduces the consumption of resources such as minerals, forest resources, and water; in addition to the reduction of resource consumption during the manufacturing process, this subcategory also includes reduction of resource consumption through reuse and recycling.

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(No.3industrial (S) 6rd. Nantou City) , 540, Republic of China
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 URL <http://www.nonwoven.com.tw>
 URL <http://hsinnjy.nonwoven.com.tw/custpage.aspx?PID=203>



lining or application (NK_A series)

EM-7-006

Others

industries unable to classify

lining or application (AD series)

Environmental performance

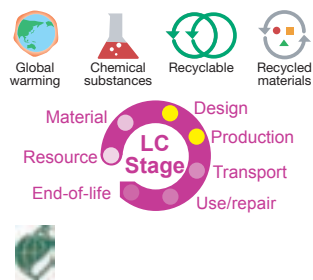
1. Product's recycled content shall be at least 50%.
2. Product shall not contain any toxic substance promulgated by EPA.
3. Dyed products shall meet the test standards set forth in the attached table.

Product performance

The product reduces the consumption of resources such as minerals, forest resources, and water; in addition to the reduction of resource consumption during the manufacturing process, this subcategory also includes reduction of resource consumption through reuse and recycling.

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 URL <http://hsinnjy.nonwoven.com.tw/custpage.aspx?PID=203>



lining or application (AD series)

EM-7-007

Others

industries unable to classify

RGNK Series

Environmental performance

1. Product's recycled content shall be at least 50%.
2. Product shall not contain any toxic substance promulgated by EPA.
3. Dyed products shall meet the test standards set forth in the attached table.

Product performance

The product reduces the consumption of resources such as minerals, forest resources, and water; in addition to the reduction of resource consumption during the manufacturing process, this subcategory also includes reduction of resource consumption through reuse and recycling.



RGNK Series

HSINNJO INDUSTRIAL CO.,LTD

(No.3 industrial (S) 6rd. Nantou City) , 540, Republic of China
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 URL <http://www.nonwoven.com.tw>
 URL <http://hsinnjo.nonwoven.com.tw/custpage.aspx?PID=203>

EM-7-008

Others

industries unable to classify

Tree-planting bags material (SJ series)

Environmental performance

1. Product's recycled content shall be at least 50%.
2. Product shall not contain any toxic substance promulgated by EPA.
3. Dyed products shall meet the test standards set forth in the attached table.

Product performance

The product reduces the consumption of resources such as minerals, forest resources, and water; in addition to the reduction of resource consumption during the manufacturing process, this subcategory also includes reduction of resource consumption through reuse and recycling.



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 URL <http://hsinnjo.nonwoven.com.tw/custpage.aspx?PID=203>

Tree-planting bags material (SJ series)

EM-7-009

Others

industries unable to classify

Tree-planting bags material (SJ_H series)

Environmental performance

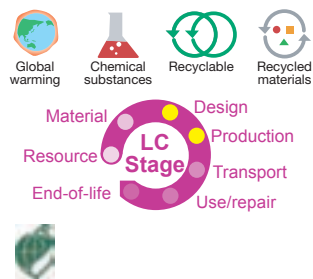
1. Product's recycled content shall be at least 50%.
2. Product shall not contain any toxic substance promulgated by EPA.
3. Dyed products shall meet the test standards set forth in the attached table.

Product performance

The product reduces the consumption of resources such as minerals, forest resources, and water; in addition to the reduction of resource consumption during the manufacturing process, this subcategory also includes reduction of resource consumption through reuse and recycling.

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(No.3 industrial (S) 6rd. Nantou City) , 540, Republic of China
 Tel 886-49-2256871 Fax 886-49-2257064
 E-mail simon@mail.nonwoven.com.tw
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 URL <http://hsinnjy.nonwoven.com.tw/custpage.aspx?PID=203>



Tree-planting bags material (SJ_H series)

EM-7-010

Others

industries unable to classify

Shoe-Insole (RGI series)

Environmental performance

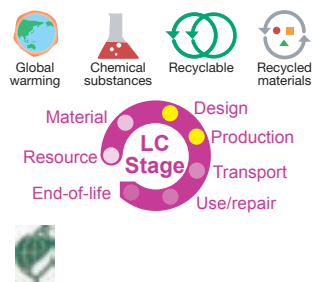
1. Product's recycled content shall be at least 50%.
2. Product shall not contain any toxic substance promulgated by EPA.
3. Dyed products shall meet the test standards set forth in the attached table.

Product performance

The product reduces the consumption of resources such as minerals, forest resources, and water; in addition to the reduction of resource consumption during the manufacturing process, this subcategory also includes reduction of resource consumption through reuse and recycling.

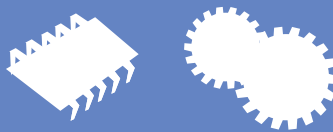
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Shoe-Insole (RGI series)

Eco-components



- 1 Construction components**
- 2 Electrical and electronic components**
- 3 Semiconductor-related devices and components**
- 4 Machine parts**
- 5 Automobile parts**
- 6 Packaging**
- 7 Others**

In the *Eco-products Directory 2011*, “eco-components” refer to “environment-friendly components and functional parts assembled using such components.” Eco-components include components that have only low environmental impact when manufactured and components that enable finished (assembled) products to help reduce environmental impact. For example, vacuum insulation materials can be used in refrigerators to achieve energy savings. Components are often called “half-finished products” relative to “finished products,” i.e., many are used in finished products.

As for eco-materials, environmental impact reduction throughout the life cycle is a key point for eco-components. Hence, the six criteria under the definition of eco-materials (see the page titled “Eco-materials” in the directory) also partly apply to eco-components. For example, when eco-components can provide “high performance when used,” they can increase the energy saved by finished products. The reuse of components as functional parts is a good example of “high recyclability.” It should be noted, however, that various requirements must be met prior to the reuse of used components, e.g., in terms of long life, quality, and reliability.

EC-1-001

Construction

straw-mats and mat bases

"Air-nice," a Plastered Wall Material using Rush and Natural Materials**Environmental performance**

Rush is used in Japanese housing as "tatami," which is known to help with humidity control. In general, until the completed "tatami" mat is woven up, one-third of the rush is emitted as waste. Recently, it has been proven that "tatami" adsorbs chemical substances such as NO₂ and HCHO. (Ex.NO₂99.5% absorb) With this in mind, we pulverized the waste, of rush mixed with natural materials and made a plastered wall material as a commercial product. Completed was a wall material that gives a warm atmosphere which is not felt from usual plaster and diatomaceous earth.

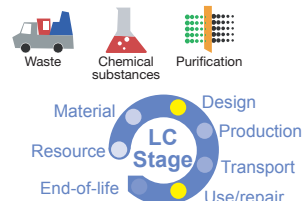
Product performance

The new product regulates the indoor environment by humidity control and adsorption, and restrains the emission of CO₂ by preventing the incineration of waste. As for air-tight houses, the influence of chemical substances on the human body is a serious matter. By using the rush wall-material, we can improve living conditions.

IKEHIKO CORPORATION Co.,Ltd.

1052 Miyamatsu, Ooki-machi, Mizuma-gun, Fukuoka, 830-0424, Japan
Tel +81-944-32-1203 Fax +81-944-33-1059
URL <http://www.ikehiko.com>

Available in: Japan



RushFiberWallMaterial "KUUKIYOI"

EC-1-002

Construction

coating

Soltex**Environmental performance**

SOLTEX (VP) which based on vinyl-emulsion resin is a water-borne, low-odor coatings.

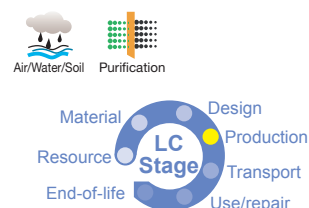
Soltex (VP) has soft, beautiful dry films that can create a luxurious mood. Because it has excellent stain resistance, it is possible for films to remain clean and has fungi resistance. SOLTEX (VP) has excellent leveling, appearance and soft workability and is a luxurious interior coating. This product contains low VOCs and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water-borne interior top coatings for concrete

Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jykwak@jebi.co.kr
URL <http://www.jebi.co.kr>



EC-1-003

Construction

coating

Pureunsol Plus

Environmental performance

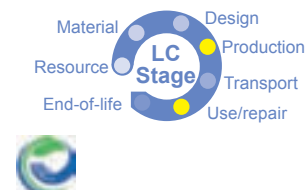
PURUENSOL PLUS is a eco-friendly, waterborn interior coatings without a little coalescent solvent and antifreeze solution that are included other waterborn coatings, thus environmental pollution and odor cause by VOCS are not caused. Because PURUENSOL PLUS has excellent hiding power and workability, you can apply easily for finish construction and maintenance by only 1~2 times painting. PURUENSOL PLUS has no ill effects on the human body because heavy metals and endocrine disruptors are not included. This product contains low VOCS and odor and obtained Eco-mark and HB-mark for eco-friendly construction materials.

Product performance

Water-borne interior top coatings for concrete

Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>



EC-1-004

Construction

coating

SA Polymertex Interior

Environmental performance

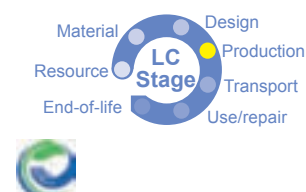
SA POLYMERTEX which based on water-soluble acrylic emulsion resin is certified KS (Korean Standard) by Korean Industrial Standard and has beautiful color appearance and excellent hiding power, alkali-resistance, adhesion. SA POLYMERTEX has excellent weather resistance and long color retention and is Eco-friendly, water-borne coatings to device free of heavy metal. Because of excellent workability, it is possible for anyone to apply easily for finish construction and maintenance at home. This product contains low VOCS and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water-borne interior top coatings for concrete

Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>



EC-1-005

Construction

coating

Cleanwall W

Environmental performance

CLEAN WALL W which based Latex acrylic emulsion resin is water-borne, stain/fungi-resistant, coatings. CLEAN WALL W has excellent hiding power, leveling, weather resistance and has Excellent Deodorization that removes unpleasure odor from the air. It is possible to creat a transparent, clean image which is applied on part needed for stain/fungi-resistance. This product contains low VOCS and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water-borne top coatings for concrete



Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>

EC-1-006

Construction

coating

A Glorytex

Environmental performance

A GLORYTEX which based on water-soluble, acrylic emulsion resin is water-borne, gloss exterior/interior coatings. As A GLORYTEX has excellent high-glossy, stain resistance, workability, it is possible to apply on part need for glossy and interior texture top coatings and has excellent rheology and leveling. It is possible to apply for finish construction and maintance. It forms elastic films which effectively prevent delicated crack in deteriorated buildings. This product contains low VOCS and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water-borne gloss top coatings for concrete



Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>

EC-1-007

Construction

coating

KCI Aquawood

Environmental performance

KCI AQUAWOOD which based on water-soluble copolymer resin is eco-friendly, water-borne, exterior wood-coatings. KCI AQUAWOOD includes KCI AQUAWOOD STAIN and KCI AQUAWOOD VARNISH and has quick dry time and excellent weather resistance, flexibility, distinctness of color, fungi-resistance. This product contains low VOCs and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water-borne exterior top coatings for wooden materials



Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>

EC-1-008

Construction

coating

A Waterlac

Environmental performance

A WATERLAC which based on non-yellowing, special acrylic-urethane is eco-friendly, water-borne, multi-purpose exterior/interior wood-coatings. A WATERLAC includes colored and transparent type and has excellent adhesion, scratch resistance, water resistance, appearance. A WATERLAC is heavy metal-free type which is possible to apply on Playing Facilities, toy, children's supplies which is applied on part needed for low-toxicity. This product contains low VOCs and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water-borne top coatings for wooden materials



Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
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E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>

EC-1-009

Construction

coating

Polysilcoat Super W Clear

Environmental performance

POLYSILCOAT Super W Clear which based on water-soluble silicone resin and water without using VOCs is eco-friendly, water-borne, water-repellent paint. There isn't fire risk and human toxicity and has excellent penetration, initial water-repellent, permeability. To block water-permeability from outside prevents blushing. POLYSILCOAT W clear has excellent alkali resistance, weather resistance, chemical resistance. coatings has ivory white color but dry films are colorless and transparent that keep objects to be painted. This product contains low VOCS and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water repellent and efflorescence-preventing exterior top coating for concrete

Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>



EC-1-010

Construction

coating

Epon F

Environmental performance

EPON F which based on water-soluble epoxy resin and water-soluble hardener is 2-component, air-drying, eco-friendly, water-borne floor-coatings. EPON F has excellent mechanical property (impact /abrasion resistance etc.) and chemical property (chemical/water/solvent resistance) and has excellent adhesion and durability and low-odor. This product contains low VOCS and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Dual liquid type water-soluble epoxy floor coating for floors (concrete)

Kunsul Chemical Industrial Co., Ltd

#284, Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea, 435-732, Republic of Korea
Tel +82-31-428-842 Fax +82-31-458-2521
E-mail jkwak@jebi.co.kr
URL <http://www.jebi.co.kr>



EC-1-011

Construction

coating

Polymertex Exterior

Environmental performance

KS POLYMERTEX which based on water-soluble acrylic emulsion resin is certified KS (Korean Standard) by Korean Industrial Standard and has beautiful color appearance and excellent hiding power, alkali-resistance, adhesion. KS POLYMERTEX has excellent weather resistance and long color retention and is Eco-friendly, water-borne coatings to device free of heavy metal. Because of excellent workability, it is possible for anyone to apply easily for finish construction and maintenance at home. This product contains low VOCS and odor and obtained Eco-mark for eco-friendly construction materials.

Product performance

Water-borne exterior top coatings for concrete

Kunsul Chemical Industrial Co., Ltd

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EC-1-012

Construction

manufacturing products

Water-borne air-purifying paint "Morning of the Forest"

Environmental performance

World first invented water-based environmental-friendly paint best-fits interior finish coating for wall. By painting on the wall, air-negative ions are emitted by reacting with moisture in the air without electrical energy. This air-negative ions help freshen and purify indoor air by deodorizing formaldehyde.

* Made ion density measurement (9-Apr-10, No10-0430) in Japan Association of Ion Research and Application (JAIRA) according to JIS B 9929 regulation, which certified as air-negative emission density is 3 grade.

Product performance

- Eco-friendly functional water-borne paints manufactured by environmental-friendly materials. This premium paint best fits for the interior finish coating on cement mortar surfaces, plaster, gypsum boards, wallpapers and MDF.
- Air purifying function by releasing air-negative ions.
- Improve blood circulation and enhance physical performance due to air-negative ion emission
- Far infrared radiation emission, anti-fungal, antimicrobial and formaldehyde-deodorant function
- Aesthetically pleasing appearance with odor-free function
- Minimize VOCs and not detected Pb, Cd, Cr6+, Hg
- Harmless to human body, harmless to live in just right after painting

Morning of the Forest

6B2L 615-1 Namchon-dong, Namdong-gu, Incheon, Republic of Korea
Tel +82-32-822-8274 Fax +82-32-881-0906
URL www.vitaair.co.kr



Available in: Republic of Korea

EC-1-013

Construction

heat-insulating films

Reftel[®], Highly Transparent, Heat Insulating Film

Environmental performance

Reftel[®] contributes to the energy conservation of air conditioning by intercepting the heat rays entering indoors from windows.

Product performance

Reftel[®] is the world's first highly transparent and heat reflective insulating film developed by Teijin.

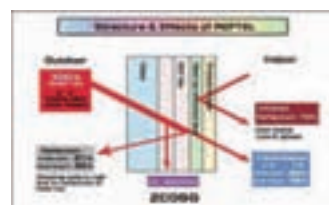
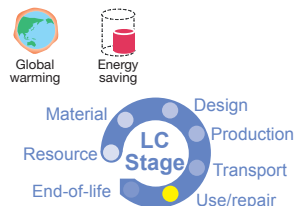
It is made by coating Teijin's polyester (PET) film with ultra thin metal layers using a sputtering method. It has a selective heat and light transmittance, and gives higher transparency, higher heat shielding and better durability compared with aluminum vapor deposited films, colored films or IR (Infrared) absorbing films. It is hardly noticeable when it is installed on a glass window because it has a 60 to 80% transmittance of visible light.

There are a variety of grades which have different solar energy transmittance to meet any requirement. It has high infrared reflectivity and thus yields high energy saving effectiveness.

*Reftel[®] is a registered trademark of Teijin DuPont Films Japan Ltd.

N.I. TEIJIN SHOJI CO.,LTD.

Sumitomo Fudosan Shibadaimon Bldg, 5-5, Shibadaimon 2-chome, Minato-ku, Tokyo, 105-0012, Japan
Tel +81-3-6402-7006 Fax +81-3-6402-7071
E-mail tshinguu11134@ni-teijinshoji.co.jp
URL <http://www.teijin.co.jp/english/index.html>
URL <http://www.teijin.co.jp/english/about/reftel/>



Structure and effect of Reftel[®] (Type ZC05G)

EC-1-014

Construction

fiber materials

Shagarl, eco-friendly material made of dope-dyed plastic-bottle-derived fibers

Environmental performance

*Eco Mark certificate number 05104041 (95% Recycled PET Fiber)

*100% recycled plastic bottle material

*No formaldehyde

*A 50m roll is comprised of 800 half-liter PET bottles

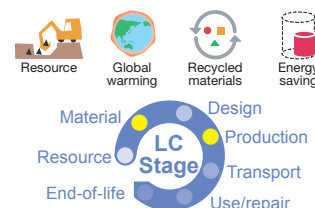
*Excellent in energy conservation (Air-conditioning electricity bills are reduced by 70% with external sun-shading)

Product performance

*Fireproof (authorized by the Japan Fire Retardant Association [JFRA] as Flame-retardant product): Flame retardant product

*Excellent weather resistance (solution-dyeing fibers are used)

*Waterproof property (resistance to 1000mm of water pressure)



N.I. TEIJIN SHOJI CO.,LTD.

Teijin Bldg., 6-7, Minami-hommachi 1-chome, Chuo-ku, Osaka, Japan
Tel +81-6-6266-8116 Fax +81-6-6244-1980
E-mail knoda24113@ni-teijinshoji.co.jp
URL <http://www2.ni-teijinshoji.co.jp>
URL <http://tent.teijin.co.jp>
URL <http://www.teijin.co.jp>

Available in: Japan

Shagarl for awning

EC-2-001

Electrical and electronic

wires

Self-lubrication enameled wire "KOMAKI®" for higher space factor

Environmental performance

"KOMAKI®Series" of enameled wires provide a coil with high space factor, and so meets the demand for high-efficiency compact motors while conserving energy.

"KOMAKI" wires deliver much stronger bonding strength with impregnating vanish compared to existing self-lubricated enameled wires.

* KOMAKI® is registered trademark of Hitachi Cable, Ltd. in Japan.



Global warming



Energy saving



Stator of high efficiency motor that used "KOMAKI®"

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan

Tel 81-294-25-3835 Fax 81-294-43-3852

E-mail taketani.noriaki@hitachi-cable.co.jp

URL <http://www.hitachi-cable.co.jp/en/index.html>

URL <http://www.hitachi-cable.co.jp/en/products/cable/magnetwire/index.html>

URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>

Available in: Worldwide

EC-2-002

Electrical and electronic

wires

Inverter surge resistant enameled wire "KMKED"

Environmental performance

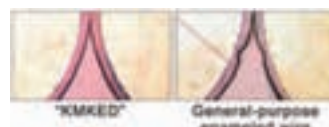
- "KMKED" has an insulation film that is hardly eroded by inverter surges.
- "KMKED" also provides much higher mechanical strength than existing products.
- These features contributes to the longer life of motors.



Global warming



Energy saving



Cross section of wire after voltage endurance test (1.1kVp-11.2h)

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan

Tel 81-294-25-3835 Fax 81-294-43-3852

E-mail taketani.noriaki@hitachi-cable.co.jp

URL <http://www.hitachi-cable.co.jp/en/index.html>

URL <http://www.hitachi-cable.co.jp/en/products/cable/magnetwire/index.html>

URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>

EC-2-003

Electrical and electronic

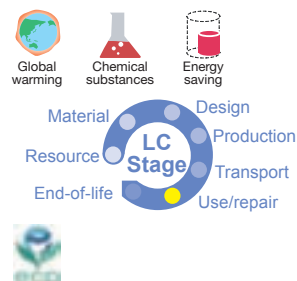
wires

Solder Coated Copper Wire for Solar Cells

Environmental performance

- Lead Free and comply with RoHS* directive.
- Contribution to energy conservation by offering various conductors specific to usages and needs.
- Stress caused by connection has been decreased using soft annealing copper wire that is suitable for thin type Si cells.

* RoHS: Restriction of the use of certain hazardous substances



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan
 Tel 81-294-25-3835 Fax 81-294-43-3852
 E-mail taketani.noriaki@hitachi-cable.co.jp
 URL <http://www.hitachi-cable.co.jp/en/index.html>
 URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>



Solder coated copper wire for solar cells

EC-2-004

Electrical and electronic

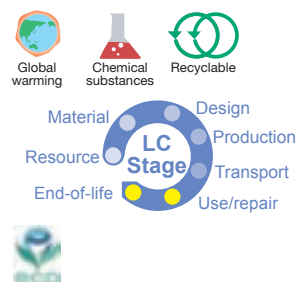
wires

ECOGREEN® Environment-conscious type

Environmental performance

A recycling system of waste electric wires is established. There is no dioxin emission when incinerating and no harmful substance when buried underground. The amount of material used is reduced and the amount of waste is also small. Halogen gas is not generated and less smoking occurs in case of fire.

* ECOGREEN® is registered trademark of Hitachi Cable, Ltd.



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan
 Tel 81-294-25-3835 Fax 81-294-43-3852
 E-mail taketani.noriaki@hitachi-cable.co.jp
 URL <http://www.hitachi-cable.co.jp/en/index.html>
 URL <http://www.hitachi-cable.co.jp/en/products/cable/index.html>
 URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>



ECOGREEN® Environment-conscious type

EC-2-005

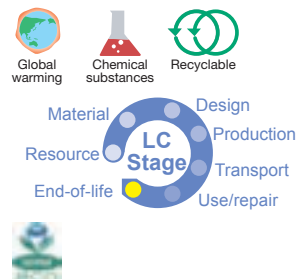
Electrical and electronic

wiring devices

Modified II Tin Plating FFC (Flexible Flat Cable)

Environmental performance

Lead-free and complies with EU RoHS* directive.
Mitigate Whisker (Crystallization of thin needles) from tin plated conductor surface without gold plating, which prevents resource depletion.
* RoHS: Restriction of the use of certain hazardous substances



Modified II tin plating FFC (Flexible Flat Cable)

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan
Tel 81-294-25-3835 Fax 81-294-43-3852
E-mail taketani.noriaki@hitachi-cable.co.jp
URL <http://www.hitachi-cable.co.jp/en/index.html>
URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>

EC-2-006

Electrical and electronic

capacitors

Electric Double Layer Capacitor, DLCAP™

Environmental performance

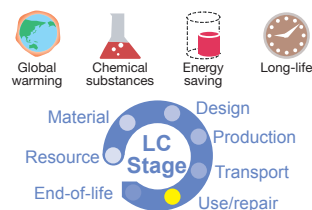
Nippon Chemi-Con's electric double layer capacitor, DLCAP™, is possible to charge-discharge large current, having longer cycle life compared to ordinary secondary batteries. It is expected to be used for vehicle hybrid system, regarding energy saving.

- Characteristics-
- With low degradation, multimillion cycles of charge-discharge is possible.
- With a high power density, rapid (high current) charge-discharge is possible.
- With a high charge-discharge efficiency, an output efficiency of over 95% at 1kW/kg is obtained.
- Environmentally friendly without using heavy metal for its structure material.
- High in safety during abnormal time, and no malfunction occurs due to short circulation.

Product performance

- Capacitance: 350 to 3,200F
- Low Internal Resistance: from 0.8mOhm
- Temperature Performance : -25°C to 60°C

*-40°C to 85°C is under development



Electric Double Layer Capacitor, "DLCAP™"

Nippon Chemi-Con Corporation

5-6-4, Osaki, Shinagawa-ku, Tokyo, 151-8604, Japan
Tel +81-3-5436-7836 Fax +81-3-5436-7864
URL <http://www.chemi-con.co.jp/e/index.html>
URL <http://www.chemi-con.co.jp/e/catalog/index.html>
URL <http://www.chemi-con.co.jp/e/env/index.html>

Available in: Worldwide

EC-2-007

Electrical and electronic

composite parts

The industry's smallest size "EDS Suppressor Array"

Environmental performance

Our company has a selection of "ESD suppressors *1" which achieves excellent quality of transmission with low capacitance.

The industry's smallest size "ESD Suppressor Array" with 4 built-in ESD suppressors is commercialized this time.

Due to this, it contributes reduction in the number of parts for the countermeasure against static electricity of high-speed signal line and improvement of the mounting efficiency.

*1 Electrostatic Discharge Suppressor:

(Device suppressing overvoltage generated from electrostatic discharge)

Product performance

The type of this product is with 4 built-in ESD protecting circuits and is suitable for ESD suppression part for the high-speed transmission line. The features are as follow.

- (1) Low capacitance (0.25pF)
- (2) Good ESD suppression characteristics
- (3) Good ESD withstanding

Panasonic Electronic Devices Co.,Ltd.

1006 Kadoma Kadoma City Osaka, 571-8506, Japan

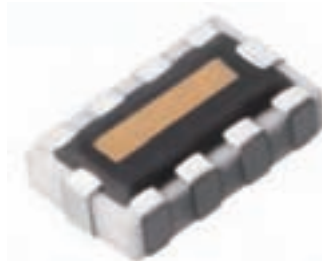
Tel +81-6-6907-4781 Fax +81-6-6907-4799

URL <http://panasonic.co.jp/ped/>

URL <http://panasonic.co.jp/ped/products/index.html>

URL <http://panasonic.co.jp/ped/environment/index.html>

Available in: Japan, Europe, North America, Malaysia



ESD Suppressor Array

EC-2-008

Electrical and electronic

magnetic parts

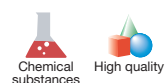
EMC Noise Reduction Products

Environmental performance

While IT and electronics devices continue to become smaller and achieve greater performance as well as increased functionality, EMC regulations are becoming even more stringent. In this situation, electronics manufacturers require materials and components with high EMC noise suppression capabilities. Hitachi Metals offers its "FINEMET®" series" of nanocrystalline soft magnetic materials for high-performance EMC noise reduction. These products are lead-free and RoHS* compliant.

EMC: Electro-Magnetic Compatibility

* RoHS: Restriction of the use of certain hazardous substances



EMC Noise Reduction Products

Hitachi Metals Singapore Pte. Ltd.

12 Gul Avenue, 629656, Singapore

Tel 65-6861-7711

E-mail hmcc@hitachi-metals.co.jp

URL <http://www.hitachi-metals.co.jp/e/index.html>

URL http://www.hitachi-metals.co.jp/e/prod/prod02/p02_22.html

URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html

Available in: Worldwide

EC-2-009

Electrical and electronic

electronic parts, devices and electronic circuit

Environment-friendly cadmium-free electric contact

Environmental performance

(Features)

This product is a high-reliability cadmium-free electric contact, which is excellent in welding resistance and consumption resistance. These electric contacts provide relays and switches with longer life and higher capacity, also making them much smaller in size. This product complies with the EU RoHS directive.

Product performance

(Uses)

They have been widely used in relays, switches, magnetic contactors, circuit breakers and circuit protectors in on-vehicle electrical components, home appliances, power distribution apparatus, switchboards and others. They are also widely adopted in hybrid cars making them suitable for high voltage power systems.

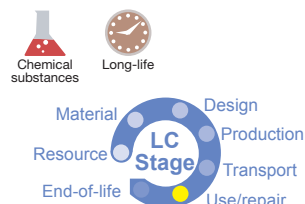
Mitsubishi Materials C.M.I. Corporation

46-1 Sempuku, Susono City, Shizuoka, 410-1116, Japan

Tel +81-55-992-6111 Fax +81-55-992-6137

URL <http://group.mmc.co.jp/cmi/en/index.html>

URL <http://group.mmc.co.jp/cmi/en/0102.html>



Cadmium-free electric contacts

EC-2-010

Electrical and electronic

electronic parts, devices and electronic circuit

COMPACT GREEN LASER MODULE "BEAM MATE®" <RoHS Compliant>

Environmental performance

Small green laser modules are now attracting more attention from industries as a light source for laser line markers and projectors. Shimadzu has developed the green laser module "BEAM MATE®" for built-in applications. It is compact in size and has low power consumption. "BEAM MATE®" is a compact green laser module that is competitively priced. Because it works with high accuracy over a wide operating temperature range, from -10°C to +50°C, it can be used outdoors.

- (1) High-quality beam characteristics thanks to our specially-designed microchip laser module technologies
- (2) Wide operating temperature range from -10°C to +50°C
- (3) Compact body with built-in control PCB in the laser head
- (4) High efficiency and Low power consumption
- (5) Low operating voltage of 2.4 V to 3.3 V
- (6) Polarization extinction ratio is 50 : 1 min.

SHIMADZU CORPORATION

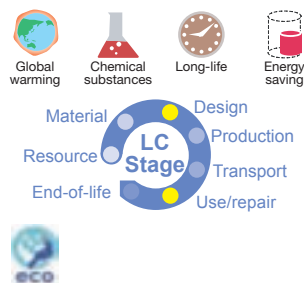
1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan

Tel +81-75-823-1113 Fax +81-75-823-2062

URL <http://www.shimadzu.com/index.html>

URL <http://www.shimadzu.com/products/opt/laser/index.html>

URL <http://www.shimadzu.com/about/environmental/index.html>



Available in: Worldwide

Compact Green Laser Module [BEAM MATE®]

EC-2-011

Electrical and electronic

electronic parts, devices and electronic circuit

LUMICUBE FREQUENCY DOUBLED DIODE LASER (RoHS Compliant)

Environmental performance

LUMICUBE is a frequency doubled diode laser for built-in applications that covers the 480 nm to 530 nm optical wavelength range of an argon ion laser.

It incorporates Shimadzu's QPM component to offer high optical conversion efficiency and high reliability.

Its compact size, single power-supply operation (+12 V DC), low power consumption, and low heat generation make LUMICUBE ideal for installation in products.

Shimadzu's unique self-tuning and auto power control functions maintain excellent beam quality over a wide temperature range from 15 to 45 degrees.

- (1) Unique QPM (quasi-phase-matching) component achieves high beam quality.
- (2) Shimadzu digital control technology achieves superb power stability over a wide temperature range from 15 to 45 degrees.
- (3) Compact and highly reliable laser head
- (4) Low power consumption and low heat generation
- (5) Covers various wavelength ranges.

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan

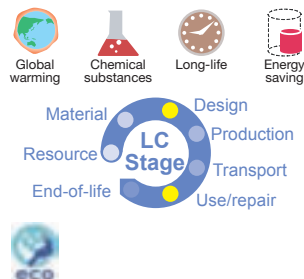
Tel +81-75-823-1113 Fax +81-75-823-2062

URL <http://www.shimadzu.com/index.html>

URL <http://www.shimadzu.com/products/opt/index.html>

URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



EC-2-012

Electrical and electronic

primary batteries

Zero Mercury and Zero Lead Added Silver Oxide Battery

Environmental performance

Zero mercury and zero lead added.

Conventional Silver Oxide batteries have a small but non-negligible amount of mercury and lead added to the anodal zinc to prevent emission of gasses.

Through the development of original zinc corrosion prevention technologies, Maxell has eliminated the use of mercury and lead. This initiative to reduce environmental impact has drawn enthusiastic acclaim from outside the company.

Product performance

Indemnified against leakage due to its Excellent Leakage Resistance.

Superior performance than LR Button Battery.

Hitachi Maxell, Ltd.

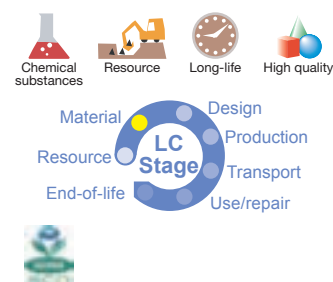
1-1-88, Ushitora, Ibaraki-shi, Osaka, 567-8567, Japan

Tel 81-072-623-8250 Fax 81-072-623-9014

E-mail hiroshi-higashi@maxell.co.jp

URL <http://www.maxell.co.jp/>

Available in: Worldwide



Silver Oxide Battery SR626SW, SR621SW, SR44 etc.

EC-2-013

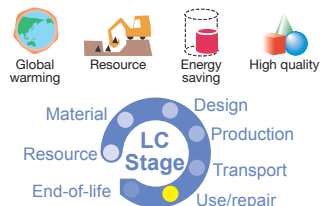
Electrical and electronic

secondary batteries

NAS battery systems

Environmental performance

The NAS battery is an energy storage battery that uses sodium in the negative electrode, sulfur in the positive electrode, and solid electrolyte made from beta-alumina ceramics. It is a clean battery that has high energy density, high efficiency, and long life compared to a lead-acid battery. This technology is primarily being introduced into factories, office buildings and sewage treatment facilities that wish to economize their energy cost through load leveling, and into semiconductor plants and customers that need high-quality and highly reliable electric power.



Tokyo Electric Power Company

1-1-3 Uchisaiwai-cho, Chiyoda-ku, Tokyo, 100-8560, Japan
 Tel +81-3-6373-1111 Fax +81-3-3596-8520
 URL <http://www.tepco.co.jp/>
 URL <http://www.tepco-switch.com/biz/system/battery/index-j.html>
 URL <http://www.tepco.co.jp/csr/tools/download-j.html>



Available in: Japan

NAS battery system

EC-2-014

Electrical and electronic

secondary batteries

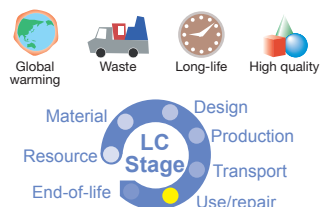
Innovative rechargeable battery with a long life of 6,000 charge-discharge cycles and rechargeable in 5 minutes.

Environmental performance

- Mitigation of climate change: Battery for eco products, such as electric bicycles, electric motor bikes, and HEV (Hybrid Electric Vehicle).
- Efficient use of resources: A long life of 6,000 charge-discharge cycles leads to a reduction of waste.

Product performance

- Safety: Excellent safety thanks to a structure resistant to internal short circuiting and thermal runaway.
- Long life: Capacity loss after 6,000 charge-discharge cycles is less than 10% at cell level.
- Rapid charging: Rapid charging in 5 minutes (up to 90%) at cell level.



TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.scib.jp/en/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Available in: Japan

SCiB™, Rechargeable Battery TBP series and FP series (battery module)

EC-2-015

Electrical and electronic

medical X-ray equipment

17-inch direct-conversion FPD (for general radiography systems)

Environmental performance

The 17-inch direct-conversion FPD is a flatpanel detector that directly converts incident X-rays to electrical signals. To significantly reduce power consumption to 79% that of previous Shimadzu FPDs, Shimadzu has developed a new power supply and integrated-circuit amplifier to read the charge accumulated on each sensor pixel.



SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan
 Tel +81-75-823-1113 Fax +81-75-823-2062
 URL <http://www.shimadzu.com/>
 URL <http://www.shimadzu.com/products/medical/index.html>
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



17-inch direct-conversion FPD
(for general radiography systems)

EC-2-016

Electrical and electronic

industrial X-ray equipment

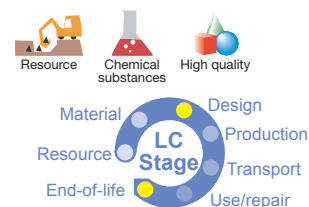
X-ray output power 4 times greater than that of a conventional tube. Reduced investigation time for X-ray fluorescent spectroscopy

Environmental performance

- Mitigation of climate change: 20.6 kg reduction in CO₂ emissions compared with a conventional X-ray tube as a result of the reduced use of materials.
- Efficient use of resources: 3.9 kg reduction in the product weight compared with a conventional X-ray tube as a result of the reduced use of materials.
- Management of chemicals: Reduced environmental risks during use and disposal because of the elimination of the use of insulation oil, which is not readily biodegradable.

Product performance

- Quick investigation: 4 times greater throughput thanks to enhanced X-ray output power.
- Compact: As compact as a conventional unit despite high performance.



Toshiba Electron Tubes & Devices Co.,Ltd

1385, Shimoishigami, Otawara-shi, Tochigi, 324-8550, Japan
 Fax +81-287-26-6059
 URL http://www.toshiba-tetd.co.jp/tetd/index_j.htm
 URL <http://www.toshiba-tetd.co.jp/tetd/eng/company/env.htm>



Oil-free X-ray Tube Assembly for Industrial
Use AFX-200RA-Pd

EC-2-017

Electrical and electronic

Industrial X-ray equipment

Lightweight, Energy-saving soft X-ray nano-focus X-ray tubes

Environmental performance

- Downsized sealed off tube using an electro-static focusing gun. (conventional type: electromagnetic focusing, Weight ratio: 1 / 24)
- Elimination of vacuum pumps and insulation oil.

Product performance

- High brightness, high-precision, ultra-high vacuum
- 0.2 μ m of focused spot size at 15kV operation
- Observation of organic small samples



Toshiba Electron Tubes & Devices Co.,Ltd

1385, Shimoishigami, Otawara-shi, Tochigi, 324-8550, Japan

Fax +81-287-26-6059

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba-tetd.co.jp/tetd/eng/company/env.htm>



Soft X-ray nano-focus X-ray tubes

EC-2-018

Electrical and electronic

Electronic equipment

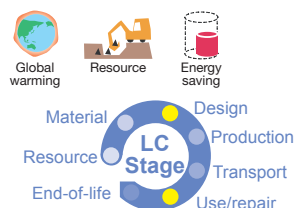
Lightweight, Compact, Energy-saving CCD Camera System

Environmental performance

- Mitigation of climate change: Power consumption 9% lower than for the previous model.
- Efficient use of resources: Compact system thanks to about 50% reduction in weight and about 60% reduction in volume compared with the previous model.
- Management of chemicals: Compliant with regulations covering the use of specific hazardous substances.

Product performance

- High brightness: Advanced technology miniaturizes columnar crystals with optical fiber structure.
- Low noise: The high-contrast, high-brightness image is virtually defect-free. Newly developed processing technology greatly reduces structural noise.



Toshiba Electron Tubes & Devices Co.,Ltd

1385, Shimoishigami, Otawara-shi, Tochigi, 324-8550, Japan

Fax +81-287-26-6059

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba-tetd.co.jp/tetd/eng/company/env.htm>



CCD camera system for X-ray image intensifier VP-34019

EC-2-019

Electrical and electronic

permanent magnets

Neodymium-Iron-Boron Permanent Magnets "NEOMAX®"

Environmental performance

High-performance neodymium-iron-boron (Nd-Fe-B) magnets have the most powerful magnetic properties available today. These products are suitable for use in such high temperature circumstance such as alternators and drive motors of hybrid/electric vehicles (HEVs), which contribute to reduced automobile fuel consumption. "NEOMAX®" magnets are also used in electric applications such as refrigerators and air conditioners as well as in wind-powered electricity generation, thereby significantly contributing to the prevention of global warming.

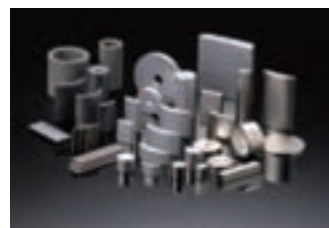


Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan
 Tel 81-3-5765-4202
 E-mail hmcc@hitachi-metals.co.jp
 URL <http://www.hitachi-metals.co.jp/e/index.html>
 URL <http://www.hitachi-metals.co.jp/e/prod/prod03/prod03.html>
 URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html

Available in: Worldwide

NEOMAX®



EC-2-020

Electrical and electronic

permanent magnets

Ferrite Magnet "NMF-12 Series"

Environmental performance

Hitachi Metals' new ferrite magnet "NMF-12 series" is greatly superior to its conventional product. Among ferrite magnets, it provides the industry best magnetic properties as mass production.

These products significantly contributing to the prevention of global warming by being used in motors for electrical components such as starters, anti-lock brake systems, electric power steering, engine cooling fans as well as in home appliances such as air-conditioner compressors, refrigerator compressors, and washing machines.

Product performance

Temperature coefficient of intrinsic coercive force is 2/3 that of La-Co substitute Sr ferrite magnets, which means little demagnetization even at a low temperature and high resistance against temperature fluctuation.



Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan
 Tel 81-3-5765-4202
 E-mail hmcc@hitachi-metals.co.jp
 URL <http://www.hitachi-metals.co.jp/e/index.html>
 URL <http://www.hitachi-metals.co.jp/e/prod/prod03/prod03.html>
 URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html

Available in: Worldwide

Ferrite Magnet "NMF-12 Series"



EC-2-021

Electrical and electronic

electrical machinery, equipment and supplies

AC Servo Motor

Environmental performance

The servo motor is used together with the servo driver.

Resource saving : Adoption of high energy gained magnet and reduction of losses by the new MINAS method could lose weight of the motor.

The weight of our new product is 4.11kg. It is 20% lighter than our previous product (5.12kg).

Hazardous chemical substance : These products conform to EU RoHS Directive.

Product performance

The improvement of the motor performance by the control algorithm and the reduction of energy consumption and thermal loss through the thermal analysis achieved the servo system with small size and high performance.

Panasonic Corporation, Home Appliances Company

7-1-1 Morofuku, Daito City, Osaka, 574-0044, Japan

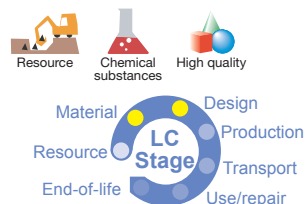
Tel +81-72-871-1212 Fax +81-72-870-3120

URL <http://panasonic.net/>

URL http://industrial.panasonic.com/ww/i_e/25000/motor_fa_e/motor_fa_e.html

URL <http://panasonic.net/csr/>

Available in: Worldwide



EC-2-022

Electrical and electronic

electrical machinery, equipment and supplies

AC Servo Driver

Environmental performance

The servo driver is used together with the servo motor.

Resource saving : We could design the heat sink and frames lighter than our previous model through the thermal analysis simulation and load inspection.

The weight of this product is 1.68kg. It is 7% lighter than our previous products (1.8kg).

Hazardous chemical substance : These products conform to EU RoHS Directive.

Product performance

The improvement of the motor performance by the control algorithm and the reduction of energy consumption and thermal loss through the thermal analysis achieved the servo system with small size and high performance.

Panasonic Corporation, Home Appliances Company

7-1-1 Morofuku, Daito City, Osaka, 574-0044, Japan

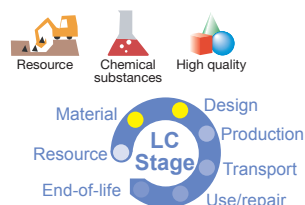
Tel +81-72-871-1212 Fax +81-72-870-3120

URL <http://panasonic.net/>

URL http://industrial.panasonic.com/jp/i/25000/motor_fa/motor_fa.html

URL <http://panasonic.net/csr/>

Available in: Worldwide



EC-2-023

Electrical and electronic

communication related products

Environmentally Resistant Wide-Area Optical Ethernet Switch "MELNET-ES1100"

Environmental performance

-----<< Material / Resource saving >>-----

- A redesigned heat dissipation mechanism lowers the parts count and reduces weight by 30% compared with conventional models.

-----<< Energy saving >>-----

Allow power consumption LSI has reduced power consumption by 14% compared with conventional models.

-----<< Toxicity / Chemical substances reduction >>-----

No lead used in surface treatment of boards and mounting solder.

Product performance

- MELNET-ES1100 is ideal for network configurations requiring environmental resistance and large capacity, such as onsite facility surveillance of roads, rivers, dams, erosion control hotspots, ports and harbors, railways, toll roads and other infrastructure, as well as CCTV video coverage equipment.
- Long-distance transmission up to 80 kilometers.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

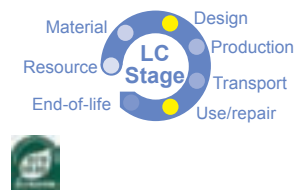
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Environmentally Resistant Wide-Area Optical Ethernet Switch MELNET-ES1100

EC-2-024

Electrical and electronic

manufacturing products

Thin-Film Photovoltaic Module (NA-F135GJ)

Environmental performance

- (1) Highly efficient energy creation using unlimited sunlight.
- (2) Because thin-film silicon solar cells can be fabricated using low-temperature processes at less than 200 degrees celsius and because there are fewer steps in the production process, they can be manufactured using less energy than conventional crystalline silicon solar cells.
- (3) This module includes photovoltaic thin-film silicon with a thickness of 2 micrometer (1/100 comparing with crystalline silicon photovoltaic), which was developed by latest nanotechnology.

Product performance

Thin-film photovoltaic cells have superior thermal characteristics* and suffer only a small amount of reduction in output with increase in temperature.

*Photovoltaic cells have characteristics that their output declines with increase in temperature.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

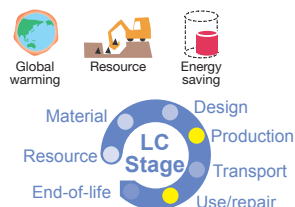
Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp

URL <http://sharp-world.com/>

URL <http://sharp-world.com/corporate/eco/>

Available in: Japan



NA-F135GJ

EC-2-025

Electrical and electronic
manufacturing products**Multi-crystalline Photovoltaic Module (ND-163AW)****Environmental performance**

Highly efficient energy creation using unlimited sunlight.

Product performance

We achieved high cell efficiency through application of high efficiency solar cell and low reflectivity glass.

- High efficiency solar cell : We enlarged cell surface exposed to light by thinning the electrodes, and reduction of energy collection loss by using 3 main grid electrodes.
- Low reflectivity glass : We increased light absorption efficiency of our module.



Global warming



Energy saving



ND-163AW

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL <http://sharp-world.com/corporate/eco/>

Available in: Japan

EC-3-001

Semiconductor-related

parts of semiconductor manufacturing equipment

PureBeta

Environmental performance

Along with strong research and development program, Bridgestone has produced a high-purity silicon carbide powder created through the combination of high-level polymer technology. It is manufactured on a very clean production line by sintering, processing and cleaning. Because of its excellent resistance against wet cleaning, those SiC sintering products can be used repeatably which is also good for the environment. Further, SiC single crystal wafer is one of the promising candidates for electronic devices used for hybrid vehicle, low loss invertors and LEDs which has high expectation on global energy saving and CO₂ emission reduction. This product has yielded an integrated production flow from the raw materials to the fabrication.



Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan
 Tel +81-3-5202-8243 Fax +81-3-5202-6842
 E-mail pbinfo@group.bridgestone.co.jp
 URL <http://www.bridgestone.co.jp/english/index.html>
 URL <http://www.purebeta.com/global/>



Pure Beta

EC-3-002

Semiconductor-related

IC

achieved to make miniaturization and the product highly effective. IPD for LED-lighting

Environmental performance

MIP553 is the best device for the drive of the set with large current such as LED illuminators of 30W or less.

LED current can drive in a fixed current corresponding to the input voltage of world wide, and the miniaturization and making the LED lighting circuit highly effective are achieved.

The circuit configuration is possible by a little number of parts of non-insulations.

In addition, moment of force has achieved 0.9 or more only by adding one resistance.

Product performance

Possible to correspond to the LED illuminator up to the output about 30W by the world wide input.

With built-in LED short-circuit protection function.

Input voltage detecting function is used, and the protection at a low input voltage is possible.

Light is adjusted by the PWM method, and it is possible for the triac light dimmer.



Semiconductor Company, Panasonic Corporation

1 Kotari-yakemachi, Nagaokakyo, Kyoto, 617-8520, Japan
 Tel +81-75-951-8151 Fax +81-75-953-0411
 URL <http://panasonic.co.jp/sc>



Available in: Japan, Europe, North America, Malaysia

This is external sample of IPD.

EC-3-003

Semiconductor-related

IC

achieved to make miniaturization and the product highly effective. IPD for LED-lighting

Environmental performance

MIP554 is the best device for the drive of LED lightings of small sets of the lamp and the down light etc. of 10W or less.

Region of the AC100V/120V fraction input, the LED current can drive in a fixed current, and the miniaturization and making the LED lighting circuit highly effective are achieved.

The circuit configuration is possible by a little number of parts of non-insulations.

In addition, moment of force has achieved 0.9 or more only by adding one resistance.

Product performance

It corresponds to the output for 10W.

On resistance can be decreased to 3.7Ohm by adjusting the resisting pressure to 400V.

The stability operation that suppresses the flicker in the triac light dimmer is possible.

Light is adjusted by the PWM method, and it is possible for the triac light dimmer.

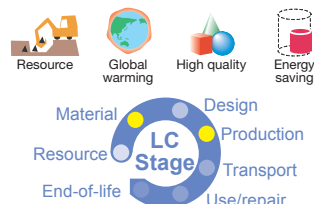
Semiconductor Company, Panasonic Corporation

1 Kotari-yakemachi, Nagaokakyo, Kyoto, 617-8520, Japan

Tel +81-75-951-8151 Fax +81-75-953-0411

URL <http://panasonic.co.jp/sc>

Available in: Japan, Asia, Asia and Oceania, Southeast Asia, Indonesia, Singapore, Thailand, Philippines, Malaysia, Republic of Korea, Taiwan (Rep. of China), China



This is external sample of IPD.

EC-3-004

Semiconductor-related

rigid printed boards

High-reliability Al circuits substrate (DBA substrate) for motor-drive of eco-cars

Environmental performance

Al circuits substrate (DBA substrate) with high reliability for power modules have been mounted on the hybrid vehicles of above one million since the beginning of our mass-production. At present, AlN insulator is the main stream, but we promote also the practical use of various ceramics including silicon nitride and others for DBA substrates.

Product performance

As the parts for the automobile field, it is required that peeling-off and cracking at the junction portion do not occur by the thermal cycling test (-40 ~ 125°C, more than 3,000 cycles).

Compared to the conventional substrates, our company's product satisfied such severe requirements, and has been used as an important part in the mobile application which needs high reliability. For example, it is used as a part of the inverter for motor drive of the eco-cars such as hybrid vehicles and electric automobiles.

Mitsubishi Materials Corporation (Sanda Plant Shizuoka DBA Center)

1400 Suganuma, Oyamacho, Suntogun, Shizuoka, 410-1312, Japan

Tel +81-550-76-3106 Fax +81-550-76-3107

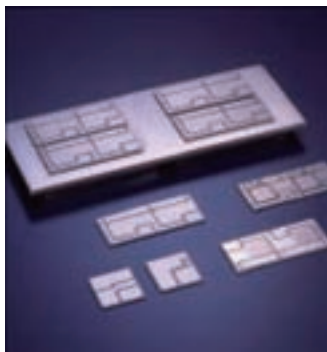
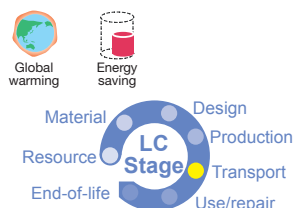
E-mail suzukiss@mmc.co.jp

URL <http://www.mmc.co.jp/corporate/en/index.html>

URL <http://www.mmc.co.jp/corporate/en/product/auto/0602.html>

URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan, Europe, U.S.A



DBA (Direct Brazed Aluminum) Substrates

EC-3-005

Semiconductor-related

semiconductor and IC measuring instruments

Intelligent Power Module

Environmental performance

Transfer mold IPM, a powerful component which is widely employed from white home appliances to industrial machinery for its outstanding performance in energy-saving and miniaturization.

-----<< Material / Resource consumption reduction >>-----

The thermal resistance, and there by the temperature rise of power chip junction is remarkably reduced by adopting high heat-dispersion insulation structure, in virtue of which the package of the module is miniaturized and the mounting area on the PWB is decreased by about 40% compared to conventional products.

-----<< Energy saving >>-----

Energy consumption reduction is achieved owing to adoption of the full-gate CSTBT, the chip size of which is shrunk by 40%.

*CSTBT™ (Carrier Stored Trench Gate Bipolar Transistor) : New generation of IGBT originated at Mitsubishi, utilizing the carrier storage effect.

-----<< Toxicity / Chemical substances elimination >>-----

Lead-free soldering process for power chips. In addition to lead-free soldering tin of outer terminals, realizes fully lead-free products (RoHS compliant), while ensuring the reliability.

*Awarded the 52nd Okochi Prize (Production award)

Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

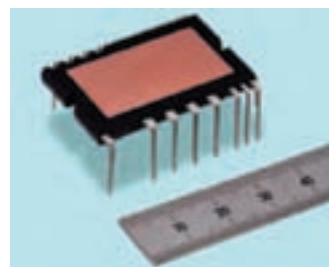
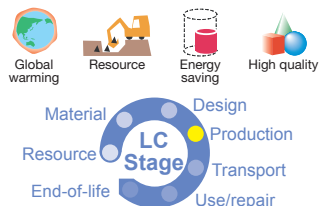
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



DIPIM™
(Dual-in-line Package Intelligent Power Module)

EC-3-006

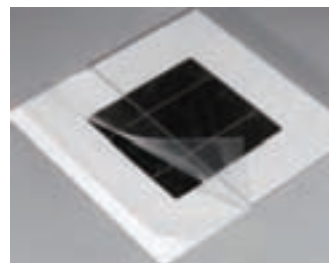
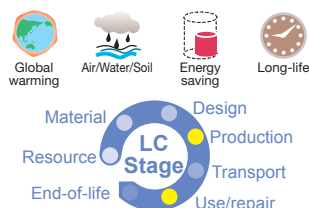
Semiconductor-related

electrical machinery, equipment and supplies

EVA film for a solar cell

Environmental performance

A solar cell is a kind of clean system which does not emit CO₂ and other hazardous substances during use. It has become more and more important recent years by the viewpoint of earth environment protection. Bridgestone is manufacturing and selling EVA film of EVASKY brand which is used as a seal material for Silicon cell. EVASKY has been highly evaluated by customers due to its high efficiency, high productivity and high durability.



EVA film for a solar cell

Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan

Tel +81-3-5202-6907 Fax +81-3-5202-6842

URL <http://www.bridgestone.co.jp/english/index.html>

EC-3-007

Semiconductor-related

sd memory card

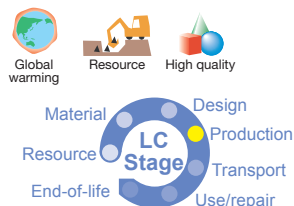
Reliable Memory - Suitable for Mass-storage Devices and Numerous Applications

Environmental performance

- Mitigation of climate change: At our advanced semiconductor plant, energy consumption has been greatly reduced by a novel air conditioning system and the use of waste heat.
- Efficient use of resources: Use of materials per bit is cut by advanced processing technology and multi-level cell technology.

Product performance

- Large capacity: 2,000 times greater capacity than a memory of the same size introduced in 2000



TOSHIBA CORPORATION Semiconductor Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 Tel +81-3-3457-3375 Fax +81-3-5444-9342
 URL <http://www.semicon.toshiba.co.jp/eng/index.html>
 URL <http://www.toshiba.co.jp/p-media/wwwsite/index.htm>
 URL <http://www.semicon.toshiba.co.jp/eng/profile/environment/>



SD-E064GUA: This name of product is used in Japan

EC-4-001

Machine parts

railway wheels

High-speed railway wheels and axles

Environmental performance

As a modal shift, high-speed railway lines are being planned all over the world. Sumitomo Metals controls a 100% share of the market for the wheels and axles that are used in the famous Japanese "bullet trains," and also control a 30% share of the world market for high-speed railway wheels. High-speed railway wheels and axles contribute to reducing CO₂ emissions that takes place in the transport sector.

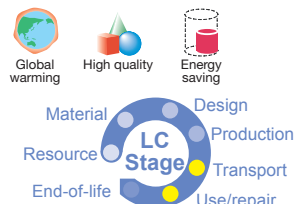
Product performance

Sumitomo Metals controls a 100% share of the market for the wheels and axles that are used in the famous Japanese "bullet trains," as well as a high market share of the brake discs and driving systems. We also control a 30% share of the world market for high-speed railway wheels, and have earned a high level of trust. We have recently concluded a long-term, three-year contract for high-speed railway replacement wheels with the German railway company Deutsche Bundesbahn, and are meeting the growing demand from high-speed railways.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Wheels and axles

EC-4-002

Machine parts

heat transfer tubes

High Performance Heat Transfer Tube

Environmental performance

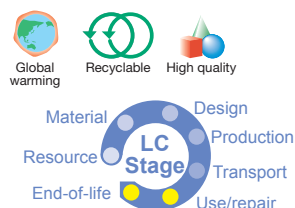
Features of high performance heat transfer tube for CO₂ heat pump system. Spiral grooves keep the flow of the refrigerant unsteady, which increases the heat transfer rate in a way more efficient than increasing the inner surface area.

More increase in the heat transfer rate than that of pressure loss is acquired in comparison with smooth tube.

Achieved the industry top heat transfer rate for CO₂ heat pump system (as of July 2008).

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan
Tel 81-294-25-3835 Fax 81-294-43-3852
E-mail taketani.noriaki@hitachi-cable.co.jp
URL <http://www.hitachi-cable.co.jp/en/index.html>
URL <http://www.hitachi-cable.co.jp/en/products/copper/index.html>
URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>



Inner-grooved tube

EC-4-003

Machine parts

tool

Super Radius Mill ASR* Multi-flutes type

Environmental performance

Recently growing environmental awareness has resulted to change the type of cutting method along with other drastic modification. In effort to improve the method and life of cutting tools, Hitachi Tool Engineering developed" ASR Multi-flutes type with JX coating ".This tool with new small inserts geometry shows extremely high cutting performance under high feed operation. New indexable tool were made multi-flute with small inserts. In addition, JX coating make long tool life because of coating characteristics has greatly improved in their lubricant, hardness, heat-resistance and chipping resistance.

*ASR=Alpha Super Rodius Mill

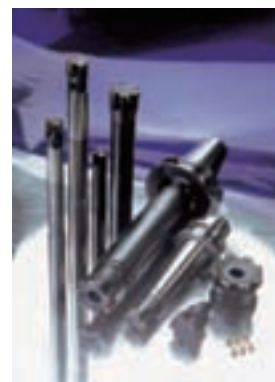
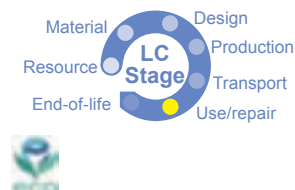
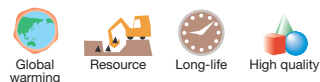
Product performance

Small inserts, breakage resistance has been greatly improved,so that use at the maximum feed rate of the latest machining equipment is recommended.

Hitachi Tool Engineering, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-0023, Japan
Tel +81-3-6858-2204 Fax +81-3-6858-2229
URL <http://www.hitachi-tool.co.jp/e/index.html>
URL http://www.hitachi-tool.co.jp/j/products/products_index_e.html
URL <http://www.hitachi-tool.co.jp/e/environment/index.html>

Available in: Worldwide



Products with ASR Multi-flutes type and JX coated inserts

EC-4-004

Machine parts

tool

Epoch Mirus series

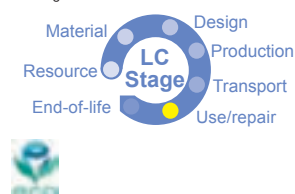
Environmental performance

Recently, development of ECO production tend to improve tool life, efficiency and cutting method. This is a revolutionary tool developed for improving efficiency, and made unprecedented high efficiency possible. There are two features of figures. One is Unequal phase to reduce cutting vibration. The other one is Double gash guarantees to remove thick chip smoothly. In addition, this tool is adopted TH coating which further improved hardness and oxidation resistance. It will achieve stable cutting in a high cutting temperature, can dry cutting without coolant, shorten operating time of M/C, and save energy.

Hitachi Tool Engineering, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-0023, Japan
Tel 81-3-6858-2204 Fax 81-3-6858-2229
URL <http://www.hitachi-tool.co.jp/e/index.html>
URL http://www.hitachi-tool.co.jp/j/products/new/mirus/mirus_e.html
URL <http://www.hitachi-tool.co.jp/e/environment/index.html>

Available in: Worldwide



TypeR: EMXR4080-TH TypeN: EMXN4080-TH

EC-4-005

Machine parts

vacuum pumps

TURBO MORECULAR PUMP WITH INTEGRATED POWER SUPPLY: TMP-V1704/V2304/V2804/V3304LM SERIES

Environmental performance

- RoHS compliant products
- Category B5 (energy saving)
- Energy savings achieved by adopting improved power factor circuitry
- Miniaturization and weight savings achieved thanks to optimal rotor design

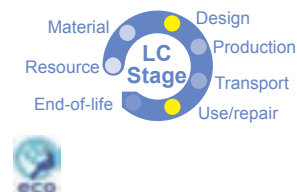
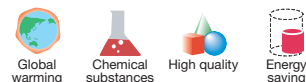
Product performance

The miniaturized TMP-V04LM series turbomolecular pumps were developed with a smaller flange, yet they provide better exhaust performance than conventional models. Integrating the separately positioned controller makes connection cables unnecessary, dramatically simplifying pump installation.

Model/ Flange size/ Gas throughput (N2) [L/s] / Height [mm] / Maximum power consumption [kVA]				
TMP-V1704LM	VG200	1400	411	1.2
TMP-V2304LM	VG250	2100	376	1.2
TMP-V2804LM (F)	VG250	2800	506	1.2
TMP-V3304LM (F)	VG300	3200	462	1.2

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan
 Tel +81-75-823-1113 Fax +81-75-823-2062
 URL <http://www.shimadzu.com/index.html>
 URL <http://www.shimadzu.com/about/environmental/index.html>



TMP-V3304LM series

EC-4-006

Machine parts

power transformers

Series Spindle Motors Striving for Energy saving and Resource conservation SJ-D

Environmental performance

-----<< Material / Resource saving >>-----

The SJ-D Series' revised electrical design cuts the use of copper wiring by 43%, while its optimized structure lowers the parts count.

-----<< Energy saving >>-----

The optimal electrical design facilitates a 25% reduction in motor power loss compared with conventional models, lowering power consumption.

-----<< Toxicity / Chemical substances reduction >>-----

Compliant with European RoHS Directive.

Product performance

Mitsubishi Electric continues to strive for energy savings and resource conservation in its products as part of its environmental countermeasures.

In a field where industrial equipment products have a lifespan in excess of 10 years, this series fuses functionality and design to become a product unaffected by prevalent trends. The SJ-D Series of spindle motor was awarded a Good Design Award (Best 15) in 2009.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
 Tel +81-3-3218-9024 Fax +81-3-3218-2465
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://global.mitsubishielectric.com/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>



Spindle Motor SJ-D Series

Available in: Japan, Worldwide

EC-4-007

Machine parts

parts of industrial electrical apparatus

High-Precision, High-Quality OFF-AXIS PARABOLIC MIRRORS SPA Series

Environmental performance

Off-axis parabolic mirrors turn plane waves into spherical waves, and vice versa, at high precision. These aspherical mirrors are essential for spectrometers and interferometers that require high resolution.

RoHS Compliant product

Product performance

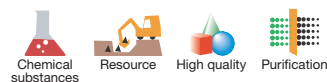
The Off-axis Parabolic Mirrors SPA Series has the following features:

- (1) Surface accuracy of $\lambda/6$ has been achieved through the newly-developed precision replica technology (conventional Shimadzu product: $\lambda/2$, $\lambda = 632.8\text{nm}$).
- (2) Stable quality due to the production of a replica mirror using a high-precision master mirror.
- (3) Proven mass-production technology ensures a stable supply of large quantities.

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan
 Tel +81-75-823-1113 Fax +81-75-823-2062
 URL <http://www.shimadzu.com/index.html>
 URL <http://www.shimadzu.com/products/opt/off/5iqj1d0000001k2i.html>
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



Off-Axis Parabolic Mirror SPA Series

EC-4-008

Machine parts

parts of industrial electrical apparatus

Toroidal Mirror TR Series

Environmental performance

A toroidal mirror is an aspheric mirror with a different curvature in the vertical and horizontal directions. As it can focus light diverging from a point source to approximately a single point under specific off-axis conditions, it can form an efficient optical system and reduce the size of optical component. The TR Series meets the requirements restricting the use of hazardous substances in EU Directive 2002/95/EC. These products can be used to configure highly energy-efficient and compact optical systems, making them suitable optical elements for ecoproducts.

The Shimadzu toroidal mirrors TR Series offer the following features:

- (1) Precision-polish optical glass offers high surface accuracy and low surface roughness.
- (2) Shimadzu's unique aluminum coating technology offers high reflectance in the UV region
- (3) RoHS Compliant product

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan
 Tel +81-75-823-1113 Fax +81-75-823-2062
 URL <http://www.shimadzu.com/index.html>
 URL <http://www.shimadzu.com/products/opt/off/5iqj1d0000002ws5.html>
 URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide



Shimadzu toroidal mirrors: TR Series

EC-4-009

Machine parts

parts of industrial electrical apparatus

Polka-Dot Beamsplitters

Environmental performance

A polka-dot beamsplitter has a polka-dot pattern aluminum coated onto a glass substrate. Incident light is reflected from the coated areas but is transmitted through the uncoated areas. Unlike a conventional dielectric beamsplitter, the light split ratio is almost independent of the angle of incidence.

These polka-dot beamsplitters meet the requirements restricting the use of hazardous substances in EU Directive 2002/95/EC. As a single polka-dot beamsplitter covers a broad wavelength range, the number of optical elements in an optical component can be reduced to contribute to space-savings and more efficient use of resources.

The polka-dot beamsplitter offers the following features:

- (1) Wide wavelength range (UV to IR)
- (2) Low dependence on angle of incidence
- (3) Two models available: standard type (to 2200 nm) and high-grade type (to 3200 nm)
- (4) RoHS Compliant product

SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan

Tel +81-75-823-1113 Fax +81-75-823-2062

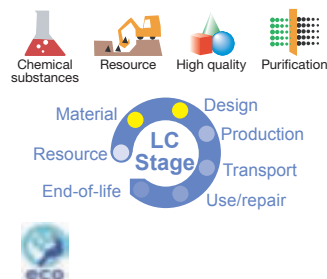
URL <http://www.shimadzu.com/index.html>

URL <http://www.shimadzu.com/products/opt/polka/index.html>

URL <http://www.shimadzu.com/about/environmental/index.html>

Available in: Worldwide

Polka-dot beamsplitters



EC-4-010

Machine parts

manufacturing products

Low voltage Electric Motors

Environmental performance

a. Siemens motors helps customer's minimize their energy consumption & increase the productivity, thus reducing their cost of ownership and proliferating savings.

b. The superior design and higher quality of materials used in energy efficient motors result in lower heat generation. This leads to increased insulation life, longer uptime, reduced maintenance costs and enhanced reliability. This means a higher productivity for customer.

c. With the energy demand from the system being reduced by use of high efficiency motors, the utility companies need to generate lesser energy and therefore burn lesser fossil fuels. Reduced combustion of fossil fuels ensures lesser CO₂ emission in the atmosphere. Thus use of energy efficient

Product performance

Energy efficient motors are designed and manufactured with very high level of precision. The material content used is also of very high grade. The processes followed for manufacturing the product are very advance and quality standards are also very stringent to achieve the higher and consistence performance. Finally the energy saving results into reducing users foot prints on the environment and reduce global warming.

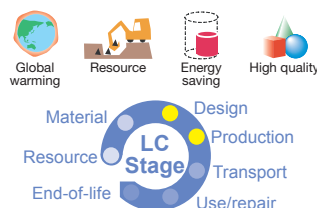
Siemens Limited

'Corporate Office - 130, Pandurang Budhkar Marg, Worli, 400 018, India

Tel + 91 22 27645902 Fax + 91 22 27645504

E-mail motors.in@siemens.com

URL www.siemens.com



Setting the benchmark in energy-efficiency and reliability

EC-5-001

Automobile parts

tires for trucks and buses

Tire for Super Single Drive Axle "GREATEC"

Environmental performance

The GREATEC was introduced in 2000 as an ultra low profile tire which would replace two conventional dual tires into one single tire. This tire not only benefits in rolling resistance but also contributes in raw material reduction, weight saving & vehicle space constraint. It is mainly sold and used in fleets in North America, Japan and European market.



GREATEC

Bridgestone Corporation

10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-8340, Japan
 Tel +81-3-3563-6972 Fax +81-3-3563-1165
 URL <http://www.bridgestone.co.jp/english/index.html>
 URL <http://www.bridgestone.co.jp/english/greatec/>

Available in: EU, U.S.A

EC-5-002

Automobile parts

tires for trucks and buses

Fuel economy Truck and Bus Tires "ECOPIA M891II"

Environmental performance

The ECOPIA M891II is the current product of truck bus mix ECOPIA series M881, which was introduced to Japan market in 2002. It adopts low rolling resistance technology such as the new eco compound on tread rubber and Energy Saving Line "GUTT" on the casing structure to achieve superior low rolling resistance performance. It reduces rolling resistance 30% than conventional life oriented product M890.



ECOPIA M891 II

Bridgestone Corporation

10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-8340, Japan
 Tel +81-3-3563-6972 Fax +81-3-3563-1165
 URL <http://www.bridgestone.co.jp/english/index.html>

Available in: Japan

EC-5-003

Automobile parts

tires for small trucks

Eco-friendly tire "ECOPIA R680"

Environmental performance

The R680, using the performance standards of the Durvais R670 as its base, has achieved a 20% reduction in rolling resistance and equal performance in the areas of wear life and regular wear endurance. Regarding the R680's wet brake performance, it should especially be noted that this is the first fuel efficient van tyre developed by Bridgestone to achieve equal performance standards to the R670.



ECOPIA R680

Bridgestone Corporation

10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-8340, Japan
Tel +81-3-3563-6972 Fax +81-3-3563-1165
URL <http://www.bridgestone.co.jp/english/index.html>

EC-5-004

Automobile parts

tires for passenger car

Run-Flat tire "POTENZA RE050 RFT"

Environmental performance

Run-flat tires are tires that can be driven on with zero inflation pressure for limited distance at reduced speeds. (1) Run-Flat tire enables to eliminate the use of spare tire. Eliminating spare tires from all vehicles would help save resources by reducing the approximately 59 million (2) spare tires annually. Furthermore, CO₂ emissions over the spare tire lifecycle-from raw material procurement to disposal-could be lowered by approximately 2 millions tons of CO₂ per year. (3) Additional CO₂ emissions can be reduced by the elimination of wheels for the spare tires.

- (1) When used normally at 0kPa inflation pressure, they can be driven for up to 80km at 80km/h (ISO technical standard).
- (2) Bridgestone investigation
- (3) The figure is calculated from the amount of CO₂ emissions of Bridgestone temper tire TR2 (The size: 145/70R18 107M) across its life cycle. Tire CO₂ emissions are calculated in accordance with the Japan Rubber Manufacturers Association's "Tire Inventory Analysis Trail" (1998 version). During the usage stage, emissions are considered to be zero.



Run-Flat tire "POTENZA RE050"

Bridgestone Corporation

10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-8340, Japan
Tel +81-3-3563-6972 Fax +81-3-3563-1165
URL <http://www.bridgestone.com/>
URL <http://www.runflat-system.com/english/>

EC-5-005

Automobile parts

tires for passenger car

Eco-friendly tire "ECOPIA"

Environmental performance

Bridgestone's advanced technology realizes a tire that combines lower rolling resistance with sustained braking performance. That is ECOPIA.

Compared with Bridgestone's standard tire, "B'style EX", ECOPIA EP100S reduces rolling resistance by 39%. Furthermore, ECOPIA EP100S has the same braking performance. ECOPIA EP100S is an environmentally friendly and fuel-efficient tire that does not compromise safety.

Compared with Bridgestone's standard tire, B250, ECOPIA EP100A reduces rolling resistance by 20% and improves fuel efficiency by 3.1%*.

* Fuel efficiency tests were conducted under Japan standard method (JC08 mode). Results may vary according to car model, tire size and driving performance.

* ECOPIA EP100S is available in Japan

* ECOPIA EP100A is available in Asia, Middle East, Africa and Russia.

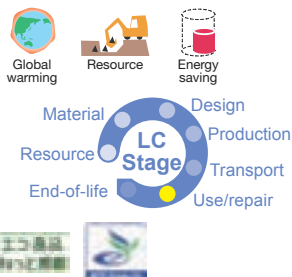
Bridgestone Corporation

10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-8340, Japan

Tel +81-3-3563-6972 Fax +81-3-3563-1165

URL <http://www.bridgestone.co.jp/english/index.html>

Available in: Japan, Asia, Middle and Near East



ECOPIA EP100S

EC-5-006

Automobile parts

steel materials

High-strength steel for forged connecting rods

Environmental performance

Higher performance and lighter weights of automobile engine components also contribute to reducing CO₂ emissions. This new material allows the two parts to be created on a single line by forging a single part and then splitting it. This helps to reduce the CO₂ that is produced by the production line.

Product performance

In collaboration with Honda Motor Co., Sumitomo Metals (Kokura) has developed a revolutionary new material for use in the connecting rods that transmit the reciprocating motion of the pistons to the crankshaft. Previously, a connecting rod was composed of two components manufactured on two separate lines. However this new material allows the two parts to be created on a single line by forging a single part and then splitting it. This also reduces the weight of the part by 13% because of its improved fatigue strength.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan

Tel +81-3-4416-6183 Fax +81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Connecting rod and cracking surface

EC-5-007

Automobile parts

steel materials

Non-heat treated nitrocarburized high-strength crankshaft steel

Environmental performance

This material contains titanium nitride and molybdenum, making it possible to omit the normalizing heat treatment that was previously essential in order to improve material fatigue strength and bending correction properties. This reduces the CO₂ emissions from the manufacturing process by 22%.

Product performance

Sumitomo Metals (Kokura) has developed a new material for crankshafts jointly with Honda Motor Co.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chiky-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

Crankshaft



EC-5-008

Automobile parts

steel materials

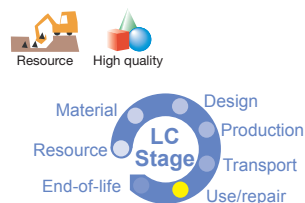
High-strength case-hardened boron steel

Environmental performance

However there are concerns that the world's supply of molybdenum is being depleted. A high-strength case-hardened boron steel uses boron as the additive instead of molybdenum. These products are contributing to resource saving.

Product performance

Ordinarily, molybdenum is added to the main shaft and counter shaft (steel components) of a motorcycle transmission so that heat treatment can be used to create an extremely hard surface. We, in collaboration with Honda Motor Co., have developed a high-strength case-hardened boron steel, which uses boron as the additive instead of molybdenum.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chiky-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Main shaft (top) and counter shaft (bottom)

EC-5-009

Automobile parts

aluminum wheels

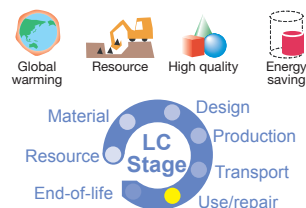
Aluminum wheels for trucks and buses

Environmental performance

Aluminum wheels reduce vehicle weights and contribute to reducing CO₂ emissions. These correspond to the new emissions restrictions that took effect in 2010.

Product performance

Sumitomo Metals developed the first single-piece forged aluminum wheels for trucks and buses in Japan. We also supply aluminum wheels for new transportation systems and special vehicles. These correspond to the new emissions restrictions that took effect in 2010.



"Tough Bright" New ISO-type wheel for Large Trucks

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
 Tel +81-3-4416-6183 Fax +81-3-4416-6793
 E-mail chikyu-kan@sumitomometals.co.jp
 URL <http://www.sumitomometals.co.jp>

Available in: Worldwide

EC-5-010

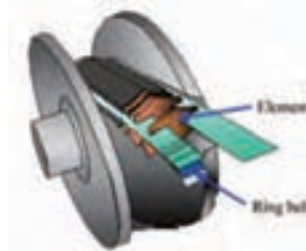
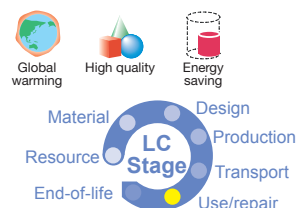
Automobile parts

cold rolled strips of specialty steel

Ring Material for CVT Belt

Environmental performance

CVT (Continuously Variable Transmission) which does not use gears, but can vary speed automatically and continuously, contributes to CO₂ reduction through its low fuel consumption performance. Hitachi Metals has developed the metal belt material with excellent fatigue strength. Excellent melting technology and cold rolling technology allow the detoxification of non-metallic inclusions and surface defects that might cause fractures.



Hitachi Metals, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan
 Tel 81-3-5765-4410
 E-mail hmcc@hitachi-metals.co.jp
 URL <http://www.hitachi-metals.co.jp/e/index.html>
 URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html

Available in: Japan, Asia

Ring Material for CVT Belt

EC-5-011

Automobile parts

power cable harnesses

Power cable Harness for Hybrid Vehicles

Environmental performance

Sizes of cable and connection methods that are specific to individual vehicle systems and spaces are offered.

Heat and oil resistance has been greatly improved through the use of FLUONLEX® for the insulator.

Safety for high voltage, noise reduction, and easier installation into the car are considered.

* FLUONLEX® is registered trademark of Hitachi Cable, Ltd.

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan

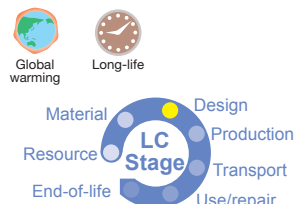
Tel 81-294-25-3835 Fax 81-294-43-3852

E-mail taketani.noriaki@hitachi-cable.co.jp

URL <http://www.hitachi-cable.co.jp/en/index.html>

URL <http://www.hitachi-cable.co.jp/en/products/vehicle/eco/index.html>

URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>



Power cable Harness for Hybrid Vehicles

EC-5-012

Automobile parts

parts of internal combustion engines for motor vehicles

Diesel Particulate Filter

Environmental performance

Composed of cordierite※ ceramics, our Diesel Particulate Filter reduces particulate matter (PM) of exhaust gas in medium- and heavy-duty diesel commercial vehicles. This environmentally conscious product functions effectively to help vehicles meet increasingly stringent exhaust gas regulations.

Our Diesel Particulate Filter has been developed through Hitachi Metals' accumulated ceramics manufacturing technologies. Our unique filter with an optimal pore structure, size and distribution demonstrates both low-pressure loss characteristics to contribute to lower fuel consumption and high PM trapping performance, enabling the capture of micro-particles as small as 10nm.

Note: One of the ceramic materials. It is composed of alumina, silica and magnesia.

Hitachi Metals, Ltd.

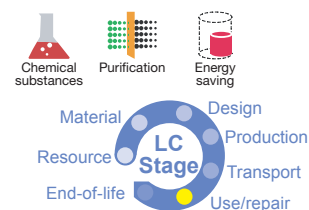
SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-8614, Japan
Tel 81-3-5765-4512

E-mail hmcc@hitachi-metals.co.jp

URL <http://www.hitachi-metals.co.jp/e/index.html>

URL http://www.hitachi-metals.co.jp/e/prod/prod06/p06_09.html

URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html



Diesel Particulate Filter

EC-5-013

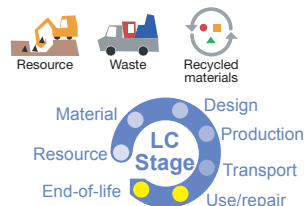
Automobile parts

parts of driving, transmission and operating units

Rebuilt alternator

Environmental performance

A remanufactured alternator is produced through the process of disassembling used units, cleaning and re-assembling after testing. Usable components from the first-made product will be used as many as possible, so it will minimize the use of new components. You can save a tremendous amount of raw materials and energy used for the production of new components by using a remanufactured alternator.



SHIN ETSU DENSO CO., LTD.

2656-210 Taira Omachi, Nagano, 398-0001, Japan
 E-mail shine@shine-reman.com
 URL <https://www.shine-reman.com>



Available in: Japan, Worldwide

EC-5-014

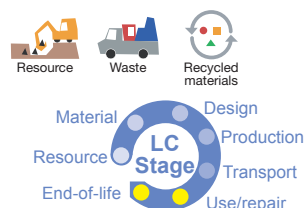
Automobile parts

parts of driving, transmission and operating units

Rebuilt starter

Environmental performance

A remanufactured starter is produced through the process of disassembling used units, cleaning and re-assembling after testing. Usable components from the first-made product will be used as many as possible, so it will minimize the use of new components. You can save a tremendous amount of raw materials and energy used for the production of new components by using a remanufactured starter.



SHIN ETSU DENSO CO., LTD.

2656-210 Taira Omachi, Nagano, 398-0001, Japan
 Tel +81-261-232788 Fax +81-261-233906
 E-mail shine@shine-reman.com
 URL <https://www.shine-reman.com>



Available in: Japan, Worldwide

EC-5-015

Automobile parts

rubber hoses

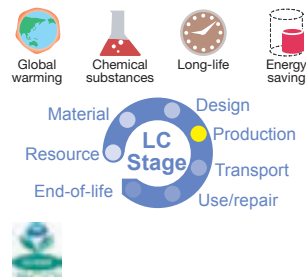
Brake Hose

Environmental performance

Long life is achieved by developing new materials and re-designing the structure.

A new forged manufacturing method of metal fittings is developed which eliminates material loss and reduces energy consumption.

Adoption of new surface treatment that doesn't use hexavalent chromium.



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki, 319-1414, Japan

Tel 81-294-25-3835 Fax 81-294-43-3852

E-mail taketani.noriaki@hitachi-cable.co.jp

URL <http://www.hitachi-cable.co.jp/en/index.html>

URL <http://www.hitachi-cable.co.jp/en/products/rubber/index.html>

URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>



Brake hose

EC-5-016

Automobile parts

auxiliary brake

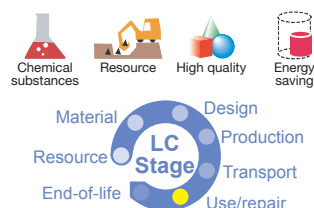
Neotard™ Retarder

Environmental performance

As many of these retarders are lightweight and compact, they contribute to consuming extremely little energy. Also by reducing the amount of hazardous substances such as brake lining wear particles, they make a large contribution to preserving the Earth's environment.

Product performance

This retarder is an auxiliary brake used in large trucks, buses, and similar vehicles. It is a product that reduces hazardous substances such as brake lining wear particles, and supports safety and riding comfort. The Sumitomo Metals retarder, Neotard Retarder™, is a permanent magnet eddy current braking system that utilizes the world's most powerful neodymium permanent magnet to generate braking force.



Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan

Tel +81-3-4416-6183 Fax +81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

URL <http://www.sumitomometals.co.jp>



Available in: Worldwide

Example of retarder use

EC-5-017

Automobile parts

parts for motor vehicles

High-efficiency crash box

Environmental performance

The crash box is a component located at the front of an automobile that folds like an accordion to lessen the impact in the event of a collision. Our product is a lightweight and high-efficiency crash box with a structure that delivers more than twice the energy absorption capability of conventional products. This product contributes to reducing vehicle body weight and CO₂.

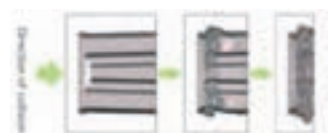
Product performance

A crash box is a component located at the front of an automobile that folds like an accordion to lessen the impact in the event of a collision. Sumitomo Metals has designed a lightweight crash box with a structure that delivers more than twice the energy absorption capability of conventional products. This product contributes to reducing vehicle body weight.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Crash box characteristics

EC-5-018

Automobile parts

parts for motor vehicles

Energy Saving Electrical Power Steering (Motor and Controller)

Environmental performance

-----<< Material / Resource saving >>-----

Compact size and High power Motor/Controller contributes to the design of light weight vehicles.

-----<< Energy saving >>-----

Consumes energy only when the steering wheel is being turned, this improves a vehicle's fuel consumption efficiency.

-----<< Long life >>-----

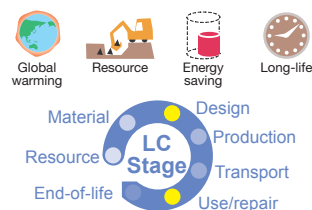
Maintainance free

Product performance

The electric power steering system assists the driver in steering only when the steering wheel is being turned; hence it serves to improve fuel economy by 3 to 5% compared with the conventional hydraulic power steering system. The compact yet high-power motor has realized system lineups for a full range from light motor vehicles up to oversized vehicles. It has its original control algorithm that creates excellent steering feeling and stability.

Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan
Tel +81-3-3218-9024 Fax +81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://global.mitsubishielectric.com/index.html>
URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
URL <http://global.mitsubishielectric.com/company/csr/index.html>



Motor for Electrical Power Steering

EC-5-019

Automobile parts

parts of chassis and bodies

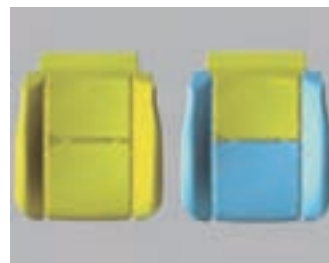
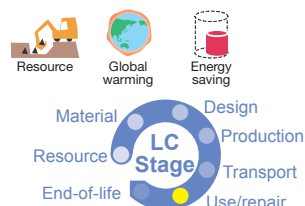
Seat Pad with Different Density but Usual Hardness

Environmental performance

We conventionally reduce the weight of seat pads with a lightweight formulation, but this sometimes reduces ride comfort and durability. Bridgestone has developed a seat with the usual hardness but less density with reduced weight without compromising ride comfort. This advantage is realized not only through high-performance formulation of the base parts that are important for ride comfort, but also through the adoption of a lightweight formulation for other parts, without reducing the weight of the whole seat pad.

Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan
Tel +81-3-5202-6959 Fax +81-3-5202-8173
URL <http://www.bridgestone.co.jp/english/index.html>



The same hardness and different density seat pad

EC-5-020

Automobile parts

batteries

Purpose built industrial batteries, charger & uninterruptible power supply

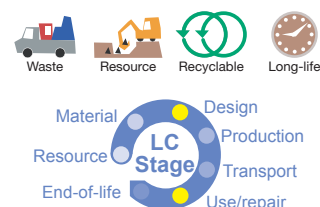
Environmental performance

- (1) Efficient usage of materials and proper design including selection of optimized products, longer intervals for replacements results in less materials used, less impact on environment by using alternative source of energy or fuel. To ensure an efficient performance and a long service life of the batteries, we determine the correct selection of equipments in the complete system, including the charger, UPS and inverter. In addition, consideration is given to the actual condition of the location where the system is installed.
- (2) Such batteries used when reaching the end of service life, are then sent for re-cycling. The plastic containers are recycled into plastic resins used to make other plastic materials including new battery containers. The internals of the batteries, primarily the battery plates are the recycled and extracted into lead ingots / bars used to make various products including new batteries.

Product performance

UTS supplies purpose built battery systems to battery operated forklifts, sweepers, tow trucks, pallet trucks and golf buggies. Such vehicles could also be classified as electric vehicles and are options to diesel / combustion engine operated units. These are zero emission clean vehicles used in operations like warehouse, distribution centers, malls, car parks etc. The batteries lasts an average of over 2 years depending on usage and maintenance, same period of zero pollution environment. Again the batteries when reaching end of life are collected by UTS and sent for recycling. In addition to that, we also supply to almost 60% of local golf courses for their fleet of battery operated golf buggies. These are zero emission motors as compared with the petrol powered combustion engine powered options. The battery powered golf buggies are also quiet and easy to maintain, requiring only re-charging and no running fuel and servicing like oil change.

There are also systems using conventional generators now replaced with solar systems used in irrigation canals. We supply again the systems used to open and close the flood gates automatically and remotely as well. Instead of the diesel powered generators, now the systems run on clean solar systems with batteries that are then recycled when reaching end of life years later.



The batteries used to power up electric fork-lifts or lift trucks operate at zero emission, is clean and quiet.

UTS Technology Sdn Bhd

No. 10 Jalan Anggerik Mokara 31/47, Kota Kemuning, Seksyen 31, Shah Alam, Selangor Darul Ehsan, 40460, Malaysia
Tel +603 5125 1111 Fax +603 5125 1112
E-mail ricky@uts.com.my
URL www.uts.com.my

EC-5-021

Automobile parts

truck liners

Aeroklas Liner

Environmental performance

Aeroklas Liner

Reduction in plastic usage, energy usage and input to decreasing waste etc. is said to be the ways to treat our earth. For industrial sector, the production process throughout delivery of goods to final customers has been the factor that contributed to global warming. The hustle in production process in order to meet the market demand has caused hazardous waste. Activities in various industries such as mining industry, paper industry to leather industry has impacted a significant share of emissions. The consequences of this are the accumulation of acid, the extinction of plants and animals, and the issue of sanitation. Therefore, we need cooperation from both organization and society to be considerate of the environment in order to slow the effect of global warming.

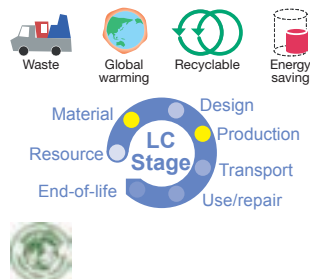
Product performance

Aeroklas Liner which has received an industrial standard award and international recognition manufactured from high molecular weight high density polyethylene (HDPE)

Aeroklas Co.,Ltd.

111/1 Mu2 T.Makhamku, A.Nikompattana, Rayong, 21180, Thailand
Tel 6638-893-599 Fax 6638-893-611
E-mail info@aeroklas.com
URL www.aeroklas.com

Available in: Worldwide



Aeroklas Liner

EC-5-022

Automobile parts

truck liners

Aeroklas Cargo Liner

Environmental performance

Aeroklas Cargo Liner

Reduction in plastic usage, energy usage and input to decreasing waste etc. is said to be the ways to treat our earth. For industrial sector, the production process throughout delivery of goods to final customers has been the factor that contributed to global warming. The hustle in production process in order to meet the market demand has caused hazardous waste. Activities in various industries such as mining industry, paper industry to leather industry has impacted a significant share of emissions. The consequences of this are the accumulation of acid, the extinction of plants and animals, and the issue of sanitation. Therefore, we need cooperation from both organization and society to be considerate of the environment in order to slow the effect of global warming.

Product performance

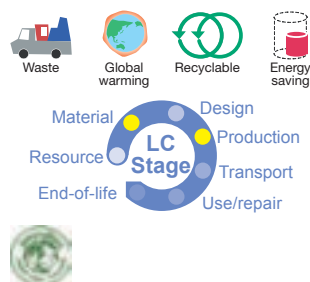
Aeroklas Cargo Liner

- Made from high quality material to endure with all usage purposes
- High edge cover your trunk to protect messy conditions
- Design to perfectly fit with various car brands and models
- Flexible & lighten material for easy cleaning
- Easy to install and decorate to your car

Aeroklas Co.,Ltd.

111/1 Mu2 T.Makhamku, A.Nikompattana, Rayong, 21180, Thailand
Tel 6638-893-599 Fax 6638-893-611
E-mail info@aeroklas.com
URL www.aeroklas.com

Available in: Worldwide



Cargo Liner

EC-6-001

Packaging

beers

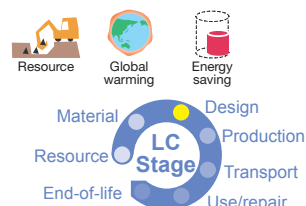
Beer in 206-diameter SuperEnd next-generation lightweight-end cans

Environmental performance

Asahi Breweries, Ltd. is introducing efforts to reduce the weight of beer-can ends. In 2007, the company reduced the surface area of these ends by approx. 6% and their thickness by 0.01 mm through the introduction of 206-diameter SuperEnd next-generation lightweight ends featuring an exclusive countersink wall. This design reduces aluminum consumption by about 9% compared with the conventional model (approx. 0.3 g per end). Using this type of end for beer cans will save approx. 1,200 tons of aluminum annually and reduce CO₂ emissions by about 9,000 tons per annum. Asahi Breweries is committed to developing environmentally friendly containers and packaging while promoting the 3 Rs (Reduce, Reuse and Recycle) toward the establishment of a recycling-oriented society.

Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan
Tel +81-3-5608-5195 Fax +81-3-5608-5201
URL <http://www.asahibeer.co.jp/english/>



Asahi Super Dry

EC-6-002

Packaging

beers

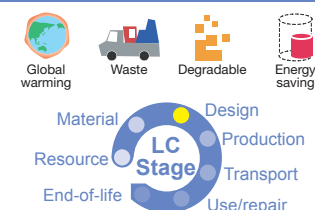
A beer-keg cap made from polylactic acid (a plant-derived plastic)

Environmental performance

Asahi Breweries, Ltd. is introducing efforts to develop environmentally friendly containers and packaging materials. This product is a cap seal that protects the mouthpiece of kegs, and is made from polylactic acid (a plant-derived plastic). It is used for stainless kegs that contain beer and RTD, and is manufactured using a type of plant-derived plastic that has no petroleum content in its raw materials and is biodegradable. This is the world's first cap seal to be introduced for keg products. CO₂ emissions in the product cycle, from raw materials to manufacturing and disposal, will be reduced by approximately 60%, which amounts to about 150 tons per year. Asahi Breweries is committed to developing environmentally friendly containers and packaging while promoting the 3 Rs (Reduce, Reuse and Recycle) toward the establishment of a recycling-oriented society.

Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan
Tel +81-3-5608-5195 Fax +81-3-5608-5201
URL <http://www.asahibeer.co.jp/english/>



Asahi Super Dry

EC-6-003

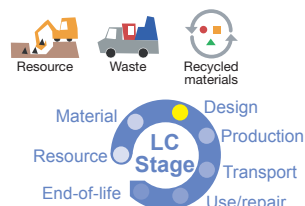
Packaging

wines

Wine in lightweight Ecology Bottles

Environmental performance

Asahi Breweries, Ltd. is introducing efforts to reduce amounts of waste containers and packaging materials and to promote recycling in order to save resources. This product uses a lightweight wine bottle called the Ecology Bottle, which uses more than 90% recycled glass. It maintains the same height as existing wine bottles, but its weight is reduced by approx. 18%. CO₂ emissions during the model's manufacture are reduced by approx. 180 tons per year, and the resulting enhancements in transportation efficiency have also led to reduced CO₂ emissions. Asahi Breweries is committed to developing environmentally friendly containers and packaging while promoting the 3 Rs (Reduce, Reuse and Recycle) toward the establishment of a recycling-oriented society.



Sainte Neige Wine

Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan
 Tel +81-3-5608-5195 Fax +81-3-5608-5201
 URL <http://www.asahibeer.co.jp/english/>

EC-6-004

Packaging

tea drinks

PET bottle based on universal design for environment load reduction

Environmental performance

PET bottle with hollow surface and thermal adhesion label
 Hollow bottle reduced the used quantity of resin by 21%. Its feature is that it is easy to hold and to pour. It is being used as the bottle of the tea drink for a famous brand. The thermal adhesion label can be thermally stuck at only one spot after it is wound up on the body of the bottle. It can reduce the used amount of label by 22% compared to conventional. The label is easy to be stripped, and it is expected to promote the classification and discharge of the bottle.

Asahi Soft Drinks Co., Ltd. contributes to the realization of rich, healthy eating habits of the consumers, through various company activities aimed at passing the earth on to the next generation in a healthier state.



Juroku-Cha PET

Asahi Soft Drinks Co., Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan
 Tel +81-3-5608-7227 Fax +81-3-5608-7248

EC-6-005

Packaging

tea drinks

PET bottle using biomass plastic label

Environmental performance

Asahi Soft Drinks Co., Ltd. introduced the eco-friendly "biomass label" on 500ml Juroku-cha PET bottles. Using 50% or more plant-derived polylactic acid made from corn starch, it is the first soft drink PET bottle label to attain the "biomass plus mark." As the labels reduce the use of fossil fuel resources, CO₂ emissions can be limited. Compared with conventional labels, approximately 283 tons of CO₂ per year will be reduced. This product won the Beverage Packaging Category Award of the Japan Packaging Contest. Asahi Soft Drinks Co., Ltd. contributes to the realization of rich, healthy eating habits of the consumers, through various company activities aimed at passing the earth on to the next generation in a healthier state.

Asahi Soft Drinks Co., Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan
Tel +81-3-5608-7227 Fax +81-3-5608-7248



Juroku-Cha PET

EC-6-006

Packaging

beverage for baby & kids

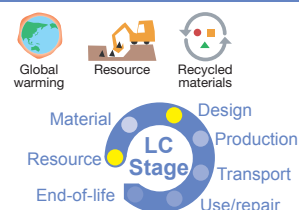
Paper container "Cartocan" using the forest thinning material

Environmental performance

Wakodo Co., Ltd. has acquired the public mark for "Forest Thinning Material" on its paper container "Cartocan," because it uses more than 30% domestic wood comprising forest thinning materials greater than 10%. Through the positive use of domestically obtained wood, some of the expense to repair local forests is fed back to the mountains, thus promoting a healthier forest. This activity coincides with a national project the Japan Forest Agency is promoting: "National campaign to promote the making of beautiful woods" and "The campaign to use domestic wood." This is helping the construction of a recycling society and the absorption of CO₂. Beverages sold include a 125 ml pack for children, including Genkicchi and the caffeine-free blended tea "Juroku-Cha".

Wakodo Co., Ltd.

2-14-3 Kanda Tsukasa-machi, Chiyoda-ku, Tokyo, 101-0048, Japan
Tel +81-3-5296-6815 Fax +81-3-5296-6808



Beverage for baby & kids 125ml pack (6 items)

EC-6-007

Packaging

printing on non-paper

Cartocan

Environmental performance

The Cartocan uses domestic lumber, including wood from forest-thinning, for over 30% of its raw materials and thus contributes to the prevention of global warming by helping to nurture healthy forests.

Product performance

An aseptic filling system is used and deterioration due to heat is minimal, meaning that the content's original quality is not lost. Toppan GL Film is used for the barrier layer. GL Film has outstanding barrier properties, enabling distribution at ambient temperatures and stable content conservation. The Cartocan has a cylindrical shape that can be held easily even by small hands and overflow of the content is minimized.



TOPPAN PRINTING CO., LTD.

1, Kanda Izumi-cho, Chiyoda-ku, Tokyo, 101-0024, Japan
 Tel +81-3-3835-5549 Fax +81-3-3835-0847
 E-mail eco@toppan.co.jp
 URL <http://www.toppan.co.jp/english/>
 URL <http://www.toppan.co.jp/english/csr/>

EC-6-008

Packaging

paperboard boxes and cups

The package using the paper which is made from pulp derived from managed forest

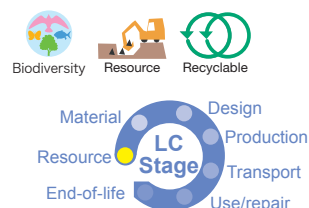
Environmental performance

Forest certification systems intend to achieve sustainable use and protect forest resources through labeling which represents to meet a certain standard such as avoiding illegal logging and preserving bio-diversity for managing forest resources in an appropriate way.

Therefore, certified paper is made from pulp derived from appropriately-managed forest.

Logo of Forest Stewardship Council (FSC) has been printed on paper package for 'Toro-Fuwa pudding'. FSC is one of the two major credible forest certification systems in the world.

Dai Nippon Printing Co., Ltd. as package manufacturer has been certified as meeting the requirement of FSC's chain of custody standards.



MORINAGA MILK INDUSTRY CO.,LTD.

34-6, Shiba 5-Chome Minato-ku, Tokyo, 108-8384, Japan
 Tel +81 3(3798)0145 Fax +81 3(3798) 1049

Available in: Japan

EC-6-009

Packaging

manufacturing products

Aluminum Beverage Cans made from Used Beverage Cans

Environmental performance

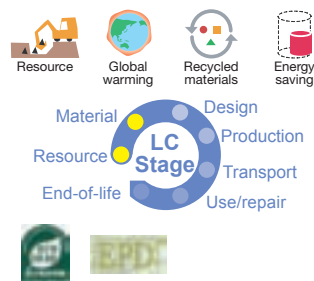
The aluminum beverage can is made up of a can body and a can end. Aluminum beverage cans produced by Universal Can Corporation (hereinafter called "UNICAN") include UBCs (used beverage cans), which account for over 50% of the total weight of aluminum can bodies. (Certified according to "EPD" Environmental Labels Type III). Recycling aluminum from UBCs uses 97% less energy than making new aluminum from bauxite. Usage of more UBCs and less new virgin metal will contribute to saving bauxite and energy and the prevention of global warming.

Mitsubishi Materials Group including UNICAN has established a unique integrated recycling process which consists of retrieving UBCs, pouring recycled aluminum into long ingots and producing can body stocks. This process can help "the Can to Can cycle" function more effectively.

*We obtained "ECO LEAF" certification (310B, 315B, 410B and 250, 350, 500ml sizes).

Universal Can Corporation

Nikkyouhan Bldg., Kouraku1-4-25, Bunkyo-ku, Tokyo, 112-8525, Japan
Tel +81-3-3868-7470 Fax +81-3-3868-7467
URL <http://www.unican.co.jp/>



EC-6-010

Packaging

manufacturing products

Oxo Green Films (Oxo-biodegradable PP films)

Environmental performance

This Oxo Green BOPP film physically look the same as the conventional BOPP film except it is degradable as compare to the conventional BOPP film which have a very slow degradation rate. Therefore, discarded BOPP film add to the millions of tones of waste buried in the landfills annually which take a substantial period of time to degrade or decompose. Such a slow decomposition rate has repercussions on the sustainability and environmental impact of such disposal methods, particularly in those regions with a limited amount of free space left for new landfills. The Oxo Green BOPP film would be the solution of the above environmental issues.

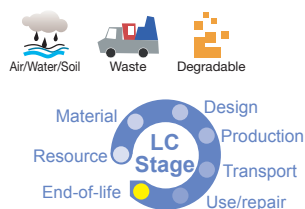
Product performance

The Oxo Green BOPP film has substantially the same properties as conventional BOPP film during the serviceable life. The degradation process of the Controllable Degradable BOPP film is initiated by light, thermal or a combination of both through a radical reaction in severing the carbon-carbon backbone of the polymer chain. Once broken down into fragment, microorganisms will convert them into carbon dioxide and water.

The degradation of the Oxo Green BOPP film comprises of two stages (refer to figure 1). Stage A is an induction period in which the Oxo Green BOPP film substantially retains constant physical properties. Stage B is a degradation period in which the film starts to lose its physical properties. The degradation period (stage B) of the Oxo Green BOPP film comprises two phases. In phase 1, degradation is initiated by light (photo) or thermal or a combination of both. In phase 2 a biodegradation process further converts the Oxo Green BOPP film into carbon dioxide and water with the presence of microorganism like bacteria, fungus, algae and etc when discards into the landfill or decomposing areas.

San Miguel Yamamura Plastic Films Sdn Bhd.

172, Jalan Usaha 5, Lot 83, 84, 85, 75 & 76, Ayer Keroh Industrial Estate,
75450 Melaka., 75450, Philippines
Tel 06-232 2177 Fax 06-232 2523
E-mail hl.tang@gpf.com.my
URL www.sanmiguel.com.ph
URL www.gpf.com.my



Oxo Green Films (Oxo-biodegradable PP films)

EC-6-011

Packaging

printing on non-paper

Clear high barrier film : GL and GX Film

Environmental performance

GL and GX Film are collective names for Toppan's clear high barrier films developed using coating and deposition technologies.

Since these films do not use chlorine-based resins, no chlorine gases are released on incineration. When they are used as packaging material, the high barrier properties preserve contents and best before and sell by dates can be extended. This therefore contributes to reducing waste from products that have passed their use or sell by dates. It is also possible to reduce waste because the packaging material itself is rationalized and reduced in volume.

Product performance

GL and GX Films have outstanding barrier properties and stability achieved through original deposition processing technologies. They hold the top share of the global market and are used widely for various applications including food packaging, toiletries, electrical components.

TOPPAN PRINTING CO., LTD.

1, Kanda Izumi-cho, Chiyoda-ku, Taito-ku, Tokyo, 101-0024, Japan
Tel +81-3-3835-5549 Fax +81-3-3835-0847
E-mail eco@toppan.co.jp
URL <http://www.toppan.co.jp/english/>
URL <http://www.toppan.co.jp/english/csr/>



GL and GX clear high barrier films

EC-6-012

Packaging

plastic containers

IB-Film^R

Environmental performance

IB-film is a transparent film with high barrier performance as an oxygen and moisture barrier. It is made by depositing aluminum oxide and silicon oxide onto polyester and nylon films. Its transparency, high barrier features and suitability for printing make it useful as a base material for packaging.

IB-film allows the elimination of layers (such as aluminum foil), aluminum vapor deposition and other plastic films with barrier capability. This reduces the weight of packing materials, thus contributing to a reduction of the environmental burden it creates. And It can be used for heating in microwaves, thus enhancing convenience.

<Major applications>

Food, snacks, beverages, drugs, medical materials, industrial materials, packaging materials

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan
Tel +81-3-5225-5901
URL <http://www.dnp.co.jp/eng/>



Available in: Worldwide

EC-6-013

Packaging

plastic containers

One piece molding tube

Environmental performance

One piece molding tube is which sholder and cap are integrated. DNP achieved 50 percent regin wheight reduction per cap and sholder by molding.

About the part of body, It is possible that 30 percent wheight reduction by changing extrusion tube to laminate tube.

In the cace of one piece laminate tube, it is possible that 40 percent wheight reduction.

By molding shoulder and cap at the same time, there is no clearance between the shoulder and cap, clean water and dust entering.

<Major applications>
Conditioner, cosmetics

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan
Tel +81-3-5225-5901
URL <http://www.dnp.co.jp/eng/>



EC-6-014

Packaging

plastic containers

Micvac

Environmental performance

MicVac is a valve system developed in Sweden used for in-pack cooking and pasteurization of foods. Fresh food ingredients and pre-cooked sauce are first filled into a tray, a MicVac valve is applied to a film lid and the lid is then sealed to the tray.

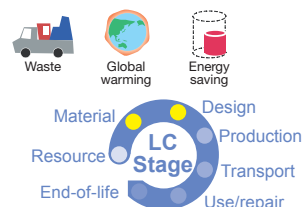
Sealed trays are then passed through a continuous microwave system to cook and pasteurize the food.

The key purpose of this system is to increase shelf life. Food products packed in this way and maintained at temperatures below 8 degrees C can have a life of up to 35 days, reducing food waste through spoilage. It will be the reason to reduction of disposal loss.

Long preservation and retention of product quality: Oxidization is almost totally eliminated so spoilage is minimized.

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan
Tel +81-3-5225-5901
URL <http://www.dnp.co.jp>
URL <http://packaging.jp>
URL <http://www.dnp.co.jp/jis/eco/index02.html>



Available in: Japan, Republic of Korea

EC-6-015

Packaging

plastic containers

Beaubelcup® - Air

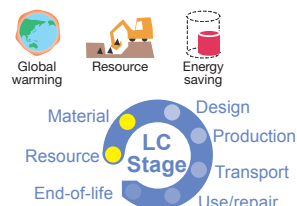
Environmental performance

DNP has developed the lightest Injection Molded Cup 9.9g in the world, called "Beaubel Cup Air", which was already adopted for Chilled Beverage Cup.

DNP achieved about 5.0 g reduction, that is, 33% resin weight reduction per a cup, compared to the conventional light weight Beaubel Cup 14.8 g. Beaubel Cup Air has no longer rigid feeling but soft with necessary strength as an original plastic cup.

<Major applications>

Beverages, desserts.



Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan

Tel +81-3-5225-5901

URL <http://www.dnp.co.jp/eng/>

Available in: Worldwide

EC-6-016

Packaging

plastic containers

Synchronized aseptic filling system

Environmental performance

This is an aseptic system that enables the filling of light PET bottles that have no heat resistance at normal temperatures in place of heavy heat-resistant PET bottles designed for hot filling.

The technique represents a low-cost, environmentally friendly system that has integrated processes from blow molding to filling by making effective use of the residual heat from blow molding to sterilize bottles.

The system has enabled a reduction in the weight of bottles and the use of bottles with improved design characteristics, thereby significantly cutting the amount of energy used.

In the new method the amount of water required to wash bottles can be reduced to approximately one sixth compared to the conventional method.

Scope of reduction

Installation space : Reduced by 50percent

Utility used : Reduced by 50percent

Water used : Reduced by 80percent



Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan

Tel +81-3-5225-5901

URL <http://www.dnp.co.jp/eng/>

Available in: Worldwide

EC-6-017

Packaging

plastic containers

DynAsept

Environmental performance

This system is efficient aseptic packaging in comparison with the retort packaging or frozen packaging that is representative food save technology. In addition, you can largely reduce plastic materials to use, because you can replace an institutional packaging with a single pouch from BIB.

This is Aseptic Packaging System which can support wide product size from 10cc to 1000cc.

This System can fill product from low viscosity such as Noodles soup, Soup stock and sauce to high viscosity such as Demi-glace sauce and White sauce. We succeeded in development of a new Aseptic Packaging System (DynAsept-Deca) ,which can support wide product size from 1L to 10L.

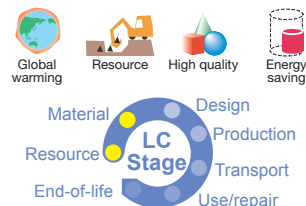
<Major applications>

Seasoning food such as Soup stock and sauce,Dairy products and Drink.

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan

Available in: Worldwide



EC-6-018

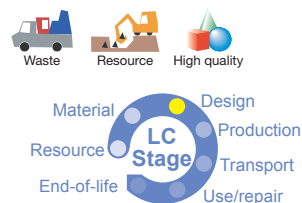
Packaging

golf ball boxes

eco slim box

Environmental performance

'Eco-slim box' is a package for the golf ball where the quantity consumed of paper was reduced,the box has been used for the products since 2009.The package of the past was a structure that divided upper and lower part. By combining it ,the quantity consumed of paper has been reduced in about 18~24%.The new package reduced by about 30% is developed, and used in 2010.The mark of 'Eco-slim box' is posted in the package and the catalog, the consumers can choose the product from respect of the environmental protection.



BRIDGESTONE SPORTS CO.,LTD.

Omori Bellport E Bldg.6-22-7, Minami-oi, Shinagawaku, Tokyo, 140-0013, Japan

Tel +81-3-5763-2500

URL <http://www.bs-sports.co.jp/english/index.html>

eco slim box

EC-6-019

Packaging

seal labels

Earth-conscious linerless seal label, Non-Sepa (R)

Environmental performance

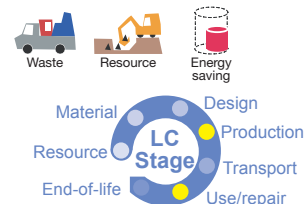
Non-Sepa (linerless) labels use no backing papers even during the production process.

Since no waste backing is left behind, the amount of paper used and CO₂ emissions are reduced.

Product performance

Disposal time and cost are reduced. In addition, roughly 40% more labels are in each roll compared with a standard roll of the same diameter, while work efficiency is improved and spaces for stock and transportation costs can be cut.

Sato's Ecomatch series promotes the 3Rs (Reduce, Reuse, Recycle), and supports customers conducting environmental conservation activities.



SATO CORPORATION

7-1, Shimomeguro 1-chome, meguro-ku, Tokyo, 153-0064, Japan

E-mail sales@satogbs.com

URL www.satoworldwide.com

Available in: Japan, Asia, Oceania, Europe, North America, South America

EC-6-020

Packaging

containers

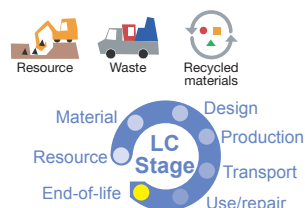
One Dish Aid confectionery container

Environmental performance

Ceramic confectionery containers used for puddings, etc., are usually disposable. The One Dish Aid confectionery container is made using 20% crushed (recycled) material from waste tableware collected from households, etc. This is Japan's first product for which a deposit system for container reuse was adopted. It also contributes to nature conservation and O₂ reduction through a system in which 2 yen of the profits from each container are donated to tree planting activities and the like. Promotion of this product not only contributes to recycling of exhaustible ceramic materials, but also if use at least 5 times during its total lifecycle, reduces CO₂ emissions to 1/4 those of conventional containers.

Product performance

To enable this product to be used repeatedly, it has an antifouling highly-glazed finish, an easy-to-wash shape, slits to facilitate drying of the base, and thick edges to improve its washing efficiency and strength. The containers come in three sizes frequently used for confectionery, and two colors (white and brown), with an extremely safe glaze. A stackable type has also been put on the market to improve storage efficiency in shops and homes.



NPO JAPAN One Dish Aid Association

Shibuya Bldg. 5F 6-10 Samon-cho, Shinjuku-ku, Tokyo, 160-0017, Japan

Tel +81-3-3354-9012 Fax +81-3-3354-9013

E-mail info@e-sakon.co.jp

URL <http://onedish.net>

URL http://onedish.net/youki/youki_top.html

URL <http://onedish.net/katsudou/index.html>

Available in: Japan

EC-6-021

Packaging

plastic packaging

R3plas Oxo-biodegradable plastic packaging

Environmental performance

Degrades with presence of UV, thermal and oxidation.
Environmental friendly and good transparency
Supports Governmental
ISO 14000
Meets ATSM standards.
Member of Oxo-Biodegradable Plastics Institute, USA
www.biodeg.org

Product performance

R3plas Oxo-biodegradable plastics shopping bags
R3plas Oxo-biodegradable plastics food trays
R3plas Oxo-biodegradable anti-static bubble bags
R3plas Oxo-biodegradable garbage bag in rolls
R3plas Oxo-biodegradable conductive bag for semi-conductor industry
R3plas Oxo-biodegradable clean room bags
R3plas Oxo-biodegradable disposable cups
R3plas Oxo-biodegradable disposable cultery
R3plas Oxo-biodegradable agricultural seeding bags
R3plas Oxo-Biodegradable food containers

WINRIGO (S) PTE LTD

No 21 Toh Guan Road East #04-09 Toh Guan Centre, 608609, Singapore
Tel +65-63101396 Fax +65-65154557
E-mail salewin@singnet.com.sg
URL www.winrigo.com.sg

Available in: Asia



R3plas Oxo-biodegradable Plastics packaging

EC-6-022

Packaging

wood packaging

Revolutionary Systems-Concept Packaging

Environmental performance

The Revolutionary Systems-Concept Packaging (RSCP) is a nail-free, lightweight packaging made from Oriented Strand Board (OSB) material. OSB is a green material sourced solely from FSC-certified sustainable forests, enabling us to cut down on indiscriminate logging and deforestation. The nail-free feature prevents products inside the packaging from getting damaged.

REDUCE- Using 20% to 60% less timber, RSCP optimises raw materials and enhances the structure of the packaging to provide greater support, resulting in lighter packaging that saves material and freight cost.

REUSE - RSCP has in-built collapsible features, allowing for easy dismantle and storage, and reassembled for reuse when needed.

RECYCLE - RSCP can also be easily recycled into chipboards or fibreboards as they do not contain nails or metallic fasteners.

Greenpac (S) Pte Ltd

8 Pandan Crescent, #01-01 United Tech Park, Singapore 128464, Singapore
Tel +65-6567-8366
E-mail info@greenpac.com.sg
URL www.greenpac.com.sg

Available in: Worldwide



Nail-Free Revolutionary Systems-Concept Packaging

EC-6-023

Packaging

DVD/CD packaging

Re-fill DVD/CD packaging

Environmental performance

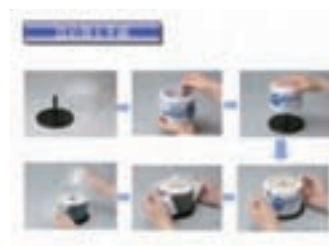
The life of conventional spindle cases tends to last only until the discs they hold are used, and they are then discarded. Re-fill, a product by Imation Corp., is a resource-saving idea that involves the refilling of spindle cases with discs to reduce waste and the consumption of material resources.



Imation Corp. Japan

Aoyama Oval Building, 52-2, Jingumae 5-chome, Shibuya-ku, Tokyo, 150-0001, Japan

Available in: Japan



EC-6-024

Packaging

take out services

PLA COATED PAPER CUPS

Environmental performance

1. Unlike PE coated cup paper, this product is coated by PLA extracted from starch, and biodegradable.
2. Wide range of printing design and size available
3. Available manufacturing sizes: 4/ 6/ 7/ 8/ 10/ 12/ 16/ 20oz

Product performance

Available as a substitute for a paper cup/ excellent in biodegradation by microorganisms/ excellent in water-proofing and strength



Hanchang Paper Co., Ltd.

EXCON VENTURE BLDG., 15-24, YEUIDO-DONG, YOUNGDEUNGPO-GU, SEOUL, KOREA, 150-969, Republic of Korea
 Tel +82-2-3774-5484 Fax +82-2-3774-5487
 E-mail wonchoong@gmail.com
 URL www.hanchangpaper.co.kr
 URL www.greenus-eco.com

Available in: Worldwide



PLA COATED PAPER CUPS FOR HOT/ COLD BEVERAGES

EC-6-025

Packaging

take out services

BIO BAGS

Environmental performance

This coated paper is biodegradable due to its utilization of PLA extracted from starch and other eco-friendly resins, not polyethylene (PE) and polystyrene (PS). Its strength is similar to the products using PE/PS.

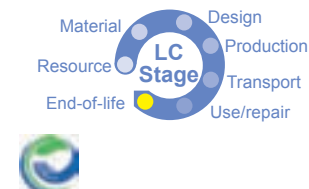
Product performance

Usable as a roll bag and shopping bag/ excellent in biodegradation by microorganisms/ excellent in productivity and processability)

Hanchang Paper Co., Ltd.

EXCON VENTURE BLDG., 15-24, YEOUIDO-DONG, YOUNGDEUNGPO-GU,
SEOUL, KOREA, 150-969, Republic of Korea
Tel +82-2-3774-5484 Fax +82-2-3774-5487
E-mail wonchoong@gmail.com
URL www.hanchangpaper.co.kr
URL www.greenus-eco.com

Available in: Worldwide



EC-6-026

Packaging

take out services

C-PLA LIDS

Environmental performance

1. Biodegradable by natural process since it is made of PLA material extracted from starch.
2. Custom logo design available.
3. Available manufacturing sizes: 80mm for 8oz / 90mm for over 10oz

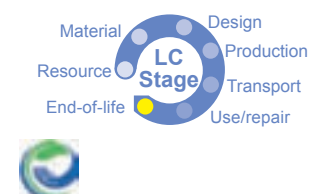
Product performance

Excellent in thermal resistance (95°C or higher)/ biodegradable by microorganisms

Hanchang Paper Co., Ltd.

EXCON VENTURE BLDG., 15-24, YEOUIDO-DONG, YOUNGDEUNGPO-GU,
SEOUL, KOREA, 150-969, Republic of Korea
Tel +82-2-3774-5484 Fax +82-2-3774-5487
E-mail wonchoong@gmail.com
URL www.hanchangpaper.co.kr
URL www.greenus-eco.com

Available in: Worldwide



PLA COATED PAPER CUPS FOR HOT/ COLD BEVERAGES

EC-7-001

Others

printing on non-paper

Color filter (BM made of organic resin)**Environmental performance**

To improve light transmission that contributes to saving electric power for liquid crystal display panels (LCDs), the width of the color filter's black matrix (BM) is formed narrower than before.

In addition, more environmentally friendly materials, resin, is used instead of chrome which has been widely used as BM material.

Product performance

Color filters are key components of color LCD panels and consist of primary three-color patterns of RGB.

In the process of manufacturing them, it is necessary to form BM first on a glass substrate in order to prevent unnecessary leakage of light through patterns.

TOPPAN PRINTING CO., LTD.

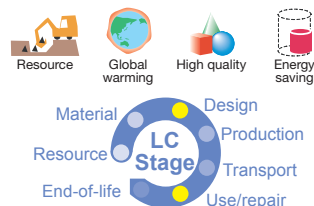
1, Kanda Izumi-cho, Chiyoda-ku, Tokyo, 101-0024, Japan

Tel +81-3-3835-5549 Fax +81-3-3835-0847

E-mail eco@toppan.co.jp

URL <http://www.toppan.co.jp/english/>

URL <http://www.toppan.co.jp/english/csr/>



Eco-products



- 1 Home electric appliances/lighting**
- 2 Carriers/automobiles**
- 3 OA/IT equipment**
- 4 Office supplies/furniture**
- 5 Apparel/textiles**
- 6 Household goods and equipment**
- 7 Building and civil engineering**
- 8 Machines and equipment**
- 9 Others**

Eco-products are environment-friendly products. In this section, they refer particularly to “finished products” to differentiate them from “eco-materials” and “eco-components.” Like eco-materials and eco-components, eco-products include “products that help clean and conserve the environment” and “products with high performance, yet creating a low environmental impact.” The latter come in a wide variety. The first stage of eco-product development is eco-design. Eco-design proceeds based on the evaluation of three factors: 1) effective and efficient use of materials, 2) energy saving, and 3) toxicity.

Characteristics of eco-products, including the environment-friendly aspect, are determined during the design stage, and evaluation factors are therefore crucial. These three product evaluation factors differ from the six criteria for eco-materials (see the page titled “Eco-materials”). This is because eco-products involve consumers more directly than eco-materials, and the environmental aspects of eco-products are appropriately evaluated from the consumer’s viewpoint.

To help consumers understand eco-products better, environmental labels are widely used in Japan. It is hoped that an ideal cycle to support a low environmental-impact society will develop, where more consumers are encouraged by environmental labels to buy eco-products so that manufacturers make further efforts in eco-product development and the provision of environmental information in response to consumer demand.

EP-1-001

Home electric appliances/lighting

electric rice cookers

Rice Cooker & Warmer

Environmental performance

- Energy saving by steam recycling as well as thermal insulation, and special iron inner pot which achieves efficient induction heating.
- Energy Conservation Standard achievement percentage in Japan: 110% (target year: FY2008)
- RoHS* Directive compliant.
- * RoHS: Restriction of the use of certain hazardous

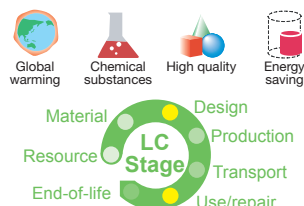
Product performance

- Cooks delicious rice with 1.3 air pressure and 107 degrees high temperature steam.
- Not necessary to worry about damages to wall or furniture as only a small amount of steam will come out.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
Tel 81-3-3502-2111 Fax 81-3-3506-1442
URL <http://www.hitachi-ap.com/>

Available in: Japan, Taiwan (Rep. of China)



RZ-KV100K

EP-1-002

Home electric appliances/lighting

electric rice cookers

The best rice cooked by double vacuum and pressure.

Environmental performance

- Mitigation of climate change: Energy-saving-standard achievement rate of 101%. Annual power consumption of 92.8 kWh/year

Product performance

- Permeation and water absorption in a double vacuum: 70% increase in the tasty elements of the rice surface by soaking the rice in water at 30°C
- Keeping rice warm and white in a double vacuum: Cooked rice is kept warm and tasty for up to 40 hours.



Vacuum Pressure IH Rice Cooker RC-10VGD

TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan
Tel +81-256-53-2545 Fax +81-256-53-2776
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan

EP-1-003

Home electric appliances/lighting

electronic ovens

Microwave Oven

Environmental performance

- Energy Conservation Standard achievement percentage*¹ in Japan: 111% (target year: FY2008)
- RoHS*² Directive compliant.

*1 Percentage shows how much a given product achieves Energy Conservation Standard (target standard value).

*2 RoHS: Restriction of the use of certain hazardous substances

Product performance

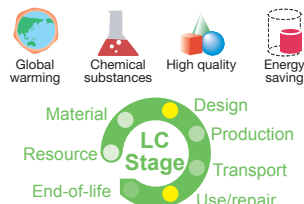
- This microwave oven adopts the preheating and the back panel 4-layered insulation that suppresses the heat leakage.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
Tel 81-3-3502-2111 Fax 81-3-3506-1442
URL <http://www.hitachi-ap.com/>

Available in: Japan, Taiwan (Rep. of China)

MRO-GV300



EP-1-004

Home electric appliances/lighting

electronic ovens

New Oven with curved ceiling and side hot air system improve delicious cooking with 350°C high temperature, rapid temperature rising, and even temperature.

Environmental performance

- Temperature rising in Oven is only 5 minutes to reach 300°C by rapid and even supply of Hot Air with new system, and Delicious Cooking is acquired by 350°C Hot Oven.
- Microwave performance is improved by high efficient Magnetron and bet impedance matching.
- Energy-saving-standard achievement rate of 112%. Annual power consumption of 65.6 kWh/year.

Product performance

- Ishikawa tornade engine: Supply Hot Air by Heater with fin and double plate fan brade sysytem
- Dome Stone Oven : Curved ceiling of Oven make Convection of Hot Air
- Side Hot Air: Supply Hot Air also from side of Oven By these system, High Temperature Hot Air supplied to Foods even.

TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Microwave Oven with Steam Function ER-HD500

EP-1-005

Home electric appliances/lighting

electric refrigerators

Refrigerator

Environmental performance

- The energy consumption^{*1} is reduced refrigerator is by approximately 22%^{*2} by adopting our original "Frost Recycling Cooling" technology, with which the coolness of frost sticking to the cooling device when the refrigerator is operated is effectively utilized.

*1 Energy consumption efficiency was measured according to JIS C 9801 (2006).

*2 Comparison was made between the new model R-A6200:280kWh/year (model 2010) and the previous model R-Z6200:360kWh/year (model 2009).

Product performance

- "Vacuum"³ Compartment W" is equipped, which is has larger storage space (storage volume expanded by approx. 50%⁴) and eliminate oxidization.

*3 Vacuum designates the space whose air pressure is lower than one of the normal atmosphere (0.8atm).

*4 The result of food storage volume comparison inside the vacuum compartment. R-A6200:13.8L, R-Z6200:9.1L

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel 81-3-3502-2111 Fax 81-3-3506-1442

URL <http://www.hitachi-ap.com/>

Available in: Japan



R-A6200

EP-1-006

Home electric appliances/lighting

electric refrigerators

Refrigerator with Plasmacluster

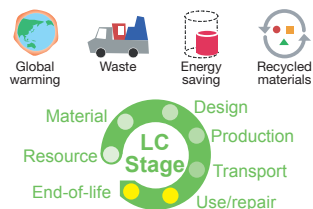
Environmental performance

- Aside from the High performance compressor and the application of the "wide linear" inverter control, high efficiency freezing cycle and heat releasing fan, build the basis to the high energy saving specification.
- Recycled plastic made using closed-loop material recycling technology* is used for parts.
- R600a Refrigerant specification.
- Complies to RoHS (examples are, PWB made of lead-free solder, and abolishing specific brominated flame retardants)

*Recycling technology that repeatedly recovers plastic from used consumer electronics and reuses it in parts of new consumer electronics for the Japanese market.

Product performance

- The new "Plasmacluster deodorization and inactivation of germs system" strongly deodorizes the compartment and inactivate the airborne molds and adhering germs.
- "Fresh & Crisp" vegetable room which applies the high humidity sealed construction enables vegetables to retain moisture up to two times. On the upper case, Plasmacluster technology enables inactivation of the adhering germs in approximately one day.
- The combination of the LED lights and the application of light guide panel offers a bright compartment throughout.
- Unique ice-mode function offers the making of very transparent ice.



SJ-XF52T

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp

URL <http://sharp-world.com/>

URL <http://sharp-world.com/corporate/eco/>

EP-1-007

Home electric appliances/lighting

electric refrigerators

Energy- and Material-saving Refrigerator "MR-E50R"

Environmental performance

-----<< Material / Resource saving >>-----

-Refrigerator parts are produced with the self-recirculated recycling of plastic (polypropylene, polystyrene) from end-of-life refrigerators at recycling plants.

-----<< Energy saving >>-----

Hybrid defrost heater is equipped on coolers and the pre-frost formation coolers are loaded to catch moisture and to prevent the cooling-air trunks being clogged with frost. This pre-frost formation system cuts defrost time and saves energy.

-----<< Toxicity / Chemical substances reduction >>-----

Emits no substances defined in the EU RoHS directive, Japanese Industrial Standards (JIS) or J-Moss.

Product performance

The Spinning Shelves, which are installed on the top of the shelves in the refrigerator and can be rotated while putting foods on them, and the Moving Selves, whose heights can be changed, improve the usability and storage spaces. The Omakase Eco functions, including the Scene Fit Control function for ideal operation according to each home, the Eco Mode function to control energy saving and the Eco Monitor to show the condition of operation, are adopted on this refrigerator.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

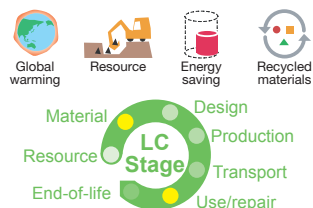
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Refrigerator MR-E52S

EP-1-008

Home electric appliances/lighting

electric refrigerators

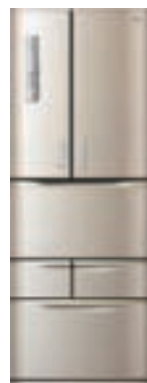
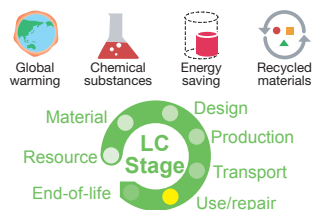
-Large capacity and energy saving, Equipped pico-ion disinfection, Equipped function of vegetable freezing.

Environmental performance

- Adoption of R600a coolant which has a low global warming coefficient.
- 20kg/year reduction in CO₂ by improvement of VIP covering and twelve sensors control based on "W-twin cooling".

Product performance

- Keep cold and freshness by W-twin cooling.
- Keep clean inside by Picoion unit.
- "Vegetable freezing" can save vegetables without damage and time and effort.



Refrigerator-Freezer equipped pico-ion moisture vegetables room. "VEGETA" GR-D50F

TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 489-8610, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan

EP-1-009

Home electric appliances/lighting

air conditioners

Room Air Conditioner

Environmental performance

- CV-PAM* Control, High Efficient Motor, Indoor unit heat exchanger with increased energy efficiency and high-density outdoor unit condenser realized high energy efficiency.

(APF 6.5 Energy consumption 1,233kWh in designated period by JRAIA)

*Cascade Vector PAM control

Product performance

- "Stainless Clean System" which stainless steel material is applied to indoor unit interior.
It prevents dirt and dust from sticking inside of the unit. Auto-filter cleaning is also applied.
- Energy saving operation using "Look, Listen, Feel Sensor".
It creates comfortable air conditioning depending on human and room conditions in the room with a single button on the remote control.
- "Ionized Mist" for keeping skin moisture and good hair condition.

Hitachi Appliances, Inc.

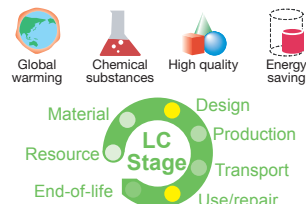
Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel 81-3-3502-2111 Fax 81-3-3506-1442

URL <http://www.hitachi-ap.com/>

Available in: Japan

RAS-S40A2



EP-1-010

Home electric appliances/lighting

air conditioners

Air Conditioner : energy-saving, air-cleaning : CS/CU-C12MKY

Environmental performance

Energy saving is achieved by high efficiency refrigeration cycle and "ECONAVI" function with local-oriented control, which can save energy by sensing human presence and activity volume. Through this product concept, we deliver to consumers the company message of "eco ideas".

Product performance

This air conditioner has "e-ion air purifying system (APS)", which can clean the room air speedily. In addition, Panasonic's unique function "PATROL" monitors and keeps the air quality always clean.

Panasonic Corporation, Home Appliances Company

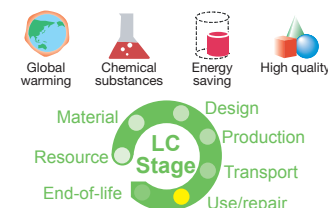
Lot 2, Persiaran Tengku Ampuan, Section 21, Shah Alam Industrial Site, 40300 Shah Alam, Selangor, Malaysia., Malaysia

Tel +60-3-5891-4000 Fax +60-3-5891-4001

URL <http://phaam.panasonic.com.my/>

Available in: Asia

Model : CS/CU-C12MKY



EP-1-011

Home electric appliances/lighting

air conditioners

Air Conditioner with Hi-Density Plasmacluster 25000 Technology

Environmental performance

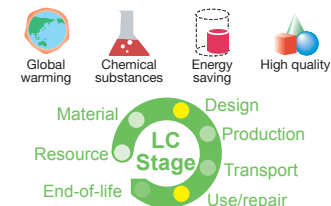
- (1) This model realized top class energy efficiency with compact chassis by adopting "Louverless Long Panel" based on hydrodynamics and unique indoor and outdoor fans based on biomimetics engineering.
- (2) This model can always achieve the most energy efficient operation of the moment by just one push of "auto-eco" button.

Product performance

- (1) Not only the air purification and virus inactivation inside the room and the product itself, High-Density Plasmacluster 25000 brings positive effects to make your skin beautiful.
- (2) Comfortable cooling and heating without direct air Unique "Ultra-wide Airflow" will cool down or warm up the room gently and comfortably without feeling direct airflow on your body.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL <http://sharp-world.com/corporate/eco/>



AY-A40SX

EP-1-012

Home electric appliances/lighting

air conditioners

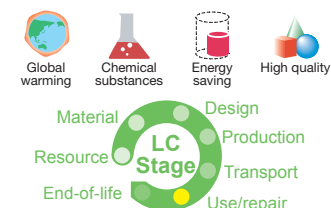
High performance, energy-saving air conditioner

Environmental performance

Features such as the new swing compressor and reluctance DC motor provide energy efficiency, achieving high COPs. Management of chemical substance used for all of the parts was strengthened, and the use of safe materials is realized.

Product performance

Daikin's Ururu Sarara series of air conditioners is the first in the world* to offer humidifying and drying functions for humidity control along with fresh air supply ventilation. It provides advanced climate control for an optimally comfortable indoor environment.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL http://www.daikin.com/global_ac/products/
 URL <http://www.daikin.com/csr>

FTK (X) S-D Series

EP-1-013

Home electric appliances/lighting

air conditioners

Energy-saving Performance for Long Period of Time - A World Leading Model in Terms of Quality and Environmental Performance

Environmental performance

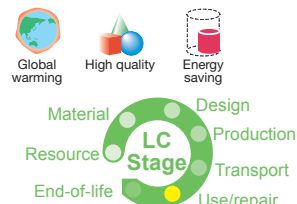
- Mitigation of climate change: 55% reduction in annual power consumption compared with the conventional model (a rated model of Toshiba). 1.1 tons/year reduction in CO₂ emissions compared with the conventional model.
- Management of chemicals: Adoption of lead-free soldering and chromium-free steel plating.

Product performance

- Self-cleaning function: Automatic cleaning to maintain energy-saving performance for a long time.
- Comfort control: New flaps for omnidirectional airflow contribute to comfort with minimal uneven temperature distribution.
- Simple installation: The monitor displays the status during trial operation for simple, quick installation.

Toshiba Carrier Corporation

3-23-17 Takanawa, Minato-ku, Tokyo, 108-0074, Japan
 Tel +81-3-6409-1735 Fax +81-3-5447-8101
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>



EP-1-014

Home electric appliances/lighting

air conditioners

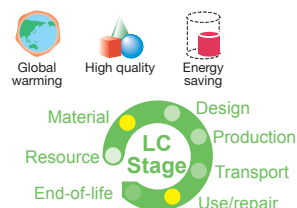
"Realized 45W power consumption of 1yen/hour. Air conditioner which evolute comfort and energy saving by equipped with sensor."

Environmental performance

- Mitigation of climate change: Equipped with a dual compressor, cooling and heating is done with only 45W power consumption (1yen/hour). 26% reduction in annual power consumption. (conventional model RAS-406YDR '00 model)
- Eliminate futility operation which checked person motion and brightness by active search sensor and brightness sensor.

Product performance

- Air cleaning: Control of virus and mold by pico-ion.
- Dash heating: Warm air blow off at about 1 minute.



Room Air-Conditioner DAISEIKAI JDR; RAS-402JDR

TOSHIBA HOME APPLIANCES CORPORATION

2-15, Sotokanda 2-chome, Chiyoda-ku, Tokyo, 101-0021, Japan
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-1-015

Home electric appliances/lighting

air conditioners

Room Air Conditioner with "Notice Navi" Function to Encourage Energy-Saving Operation

Environmental performance

- << Material / Resource saving >> ----
- Our selection technology allows three major types of plastic to be separated from the mixed plastic that results from end-of-life home appliances. This technology enables recycled plastic to be reused for the plastic parts of this device, greatly increasing the utilization of recycled plastic produced from used devices.
 - Our unique coating technology effectively reduces the adhesion of contamination to 1/10 the normal level.
- << Energy saving >> ----
- Efficiency of compressors, heat exchangers and fan motors are improved, realizing the leading energy-saving performance in the industry.
 - Our infrared sensor, Move Eye, senses floor and wall temperatures, as well as people's locations and movements, and automatically adjusts its direction and temperature according to individual body temperatures while achieving an energy saving of up to 65%.
 - The "Notice Navi" function provides energy-saving advice during operation to develop the users' consciousness for energy saving.
- << Toxicity / Chemical substances reduction >> ----
- Emits no substances defined in the EU RoHS directive, Japanese Industrial Standards (JIS) or J-Moss.

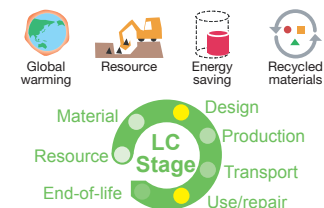
Product performance

The Comfort Selection function is adopted to allow intuitive air conditioner operation by selecting pictures shown on the remote controller's LCD. This is the brand-new remote controller which allows users to select 21 different varieties of functions, such as foot heating and skin moisturizing. The Raku-raku Assist function displays easy-to-understand letters and pictures using the Graphical User Interface (GUI) on the 3.5-inch full-dot LCD. The advanced infrared sensor, Move Eye, senses the condition of rooms to operate the air conditioner automatically to provide comfort for users.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
 Tel +81-3-3218-9024 Fax +81-3-3218-2465
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://global.mitsubishielectric.com/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Room Air Conditioner ZW Series (MSZ-ZW401S)

EP-1-016

Home electric appliances/lighting

air conditioners

Household Air Conditioners SANYO SAP-C257V/SAP-E257V3

Environmental performance

Energy Saving and Low Noise.

The coating materials used by the product not contain mercury, mercury compounds or mixed with dyestuff containing lead, cadmium, hexavalent chromium and their oxides. The products not have any organic solvent residue.

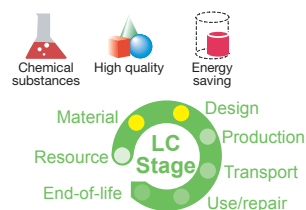
The product and its manufacturing process not contain or use substances controlled by the Montreal Protocol.

Corrugated carton used for packaging be made from recycled pulp with at least 80% recycled paper content. The packaging material not be made with CFC blowing agent.

SANYO ELECTRIC (TAIWAN) CO., LTD.

10F., NO.266, SONGJIANG RD., ZHONGSHAN DIST., TAIPEI CITY 10437,
 TAIWAN (R.O.C.), Republic of China
 Tel +886-2-2521-0251 Fax +886-2-2901-2113
 URL <http://www.sanyo.com.tw/>

Available in: Taiwan (Rep. of China)



SANYO SAP-C257V/SAP-E257V3

EP-1-017

Home electric appliances/lighting

air conditioners

Household Air Conditioners SANYO SAP-C287V/SAP-E287V3

Environmental performance

Energy Saving and Low Noise.

The coating materials used by the product not contain mercury, mercury compounds or mixed with dyestuff containing lead, cadmium, hexavalent chromium and their oxides. The products not have any organic solvent residue.

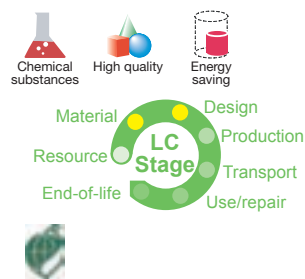
The product and its manufacturing process not contain or use substances controlled by the Montreal Protocol.

Corrugated carton used for packaging be made from recycled pulp with at least 80% recycled paper content. The packaging material not be made with CFC blowing agent.

SANYO ELECTRIC (TAIWAN) CO., LTD.

10F., NO.266, SONGJIANG RD., ZHONGSHAN DIST., TAIPEI CITY 10437,
TAIWAN (R.O.C.), Republic of China
Tel +886-2-2521-0251 Fax +886-2-2901-2113
URL <http://www.sanyo.com.tw/>

Available in: Taiwan (Rep. of China)



SANYO SAP-C287V/SAP-E287V3

EP-1-018

Home electric appliances/lighting

air conditioners

Household Air Conditioners

Environmental performance

Energy Saving and Low Noise.

The coating materials used by the product not contain mercury, mercury compounds or mixed with dyestuff containing lead, cadmium, hexavalent chromium and their oxides. The products not have any organic solvent residue.

The product and its manufacturing process not contain or use substances controlled by the Montreal Protocol.

Corrugated carton used for packaging be made from recycled pulp with at least 80% recycled paper content. The packaging material not be made with CFC blowing agent.

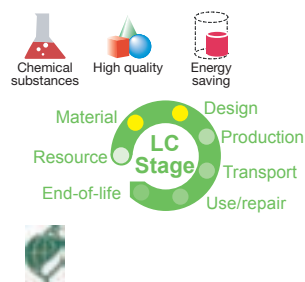
Series:

- SAP-C408V / SAP-E408V3
- SAP-C458V / SAP-E458V3
- SAP-C508V / SAP-E508V3
- SAP-C568V / SAP-E568V3
- SAX-MBC19KB / SAX-E9KB+SAX-E12KB

SANYO ELECTRIC (TAIWAN) CO., LTD.

10F., NO.266, SONGJIANG RD., ZHONGSHAN DIST., TAIPEI CITY 10437,
TAIWAN (R.O.C.), Republic of China
Tel +886-2-2521-0251 Fax +886-2-2901-2113
URL <http://www.sanyo.com.tw/>

Available in: Taiwan (Rep. of China)



Household Air Conditioners

EP-1-019

Home electric appliances/lighting

air conditioning and household equipment

Mobie Type Plasmacluster Ion Generator (IG-CM1)

Environmental performance

- (1) Newly developed Plasmacluster ion generating device with low power consumption.
- (2) Maximum power consumption is 3.3W (when AC adaptor in use)
- (3) Abolish specified brominated flame retardants which may produce harmful gas when it is burned.

Product performance

- (1) High density Plasmacluster 25000 can remove airborne viruses*, mold, allergens and adhering odor. In addition, Plasmacluster ion has 3 skin beautifying effects (increase in skin moisture, skin elasticity and skin texture).
- (2) Palm-sized, compact design. Rechargeable battery (last for 8 hours) allows you to use it when you are out or travelling in shinkansen (bullet train). It can also be easily recharged as it is chargeable from any USB port in the office or by AC adapters in the home.

*This results is by test in the box 1m³, do not guarantee similar results in an actual space.

Tested by: Retroscreen Virology Ltd.,UK

Tested method: Viruses were suspended in the air inside a 1-m³ box, and the percentage of airborne viruses removed was measures.

Test results: In about 10 minutes, density of 50,000 ions/cm³ removed 99.9% of airborne viruses.

Sharp Corporation

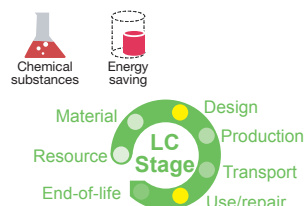
22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp

URL <http://sharp-world.com/>

URL <http://sharp-world.com/corporate/eco/>



IG-CM1

EP-1-020

Home electric appliances/lighting

air conditioning and household equipment

Air Purifier

Environmental performance

- Adoption of Artificial Zeolite as a deodorizing filter deodorization material; this is made from coal ash generated in thermal power plants.
- RoHS* Directive compliant.
- Realization of long life filter (deodorizing filter approx. 10 years, air clean filter: approx. 8 years)

* RoHS: Restriction of the use of certain hazardous substances

Product performance

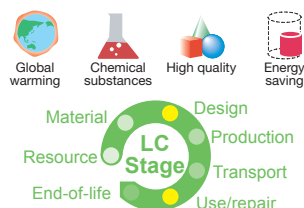
- Seven functions are installed in one set; air purifier, deodorization, humidification, skin humidification, de-moisturization, clothing drier, and dew condensation restraint.
- Design that considers convenience as big button and character are seen easily and comprehensible font is used.
- Clean hygienic design to adopt washable water tank with "Ag" sanitizing unit.
- The driving sound is decreased. (Compared with previous model EP-DV1000, about 2dB at the minimum style amount of about 4dB at maximum style amount.)

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel 81-3-3502-2111 Fax 81-3-3506-1442

URL <http://www.hitachi-ap.com/>



EP-EV1000

Available in: Japan

EP-1-021

Home electric appliances/lighting

electric washing machines

Fully Automatic Washer/Dryer Combo with Plasmacluster (ES-TX800)

Environmental performance

- (1) Recycled plastic through Sharp's closed-loop material recycling technology* is used for a washing tub and a bottom stand.
- (2) Green material: Main board uses lead-free solder.
- (3) A hole-less stainless steel tub saves energy and water during washing and drying. Since the hole-less tub prevents water from going to between the water tub and wash/spin tub, the amount of water and detergent used is drastically reduced. This tub also keeps heat inside, and the temperature of inner tub rises in a shorter time, thus it achieves energy saving.
- (4) Standby power consumption is 0W.

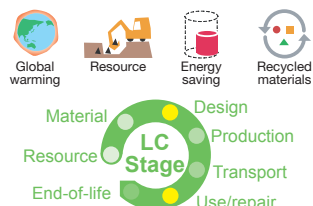
*Recycling technology that repeatedly recovers plastic from used consumer electronics and reuses it in parts of new consumer electronics for the Japanese market.

Product performance

- (1) The Sharp original air purification Technology "Plasmacluster" technology is installed. After washing, Plasma discharge automatically generates and emits the same kind of positive and negative ions that exist in nature into the place where the washing machine is set, which suppress the effects of viruses and removes airborne mold. The ions also get rid of the smell of the laundry that is difficult to be washed.
- (2) This machine adopts the "wide mouth" design with no inner lid which was used to seal heat in wash/spin tub during drying. This makes the entrance of laundry about 1.2 times as wide as the former one and makes it easier to put in and out large pieces of laundry such as blankets.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL <http://sharp-world.com/corporate/eco/>



ES-TX800

EP-1-022

Home electric appliances/lighting

electric washing machines

BD-105V2: Front Loading Automatic Washer and Dryer (Washing 10.5kg Drying 7.0kg)

Environmental performance

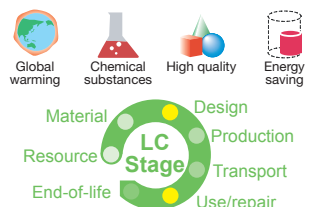
- With a water circulation pump, the water consumption of this machine is 73.4L. (Singapore WELS)
- 2,788Wh energy consumption for this washing machine at the condition of 7kg wash & dry.
- RoHS* Directive compliant.
- * RoHS: Restriction of the use of certain hazardous substances

Product performance

- Wash more evenly and remove stubborn dirt by beating effect of 60cm diameter big size drum and detergent melted by water circulation pump. Dry clothes softly and effectively by spreading wrinkles within the big size drum.
- Innovative technologies such as twin-action suspension, five-ply liquid balancer and twin vibration sensors significantly reduce vibration.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
 Tel 81-3-3502-2111 Fax 81-3-3506-1442
 URL <http://www.hitachi-ap.com/>



BD-105V2 (Champagne)

Available in: Singapore, Thailand, Malaysia

EP-1-023

Home electric appliances/lighting

electric washing machines

BW-105JV: Top Loading Washing Machine (Washing capacity 10.5kg)

Environmental performance

- With a water circulation system, water consumption of this washing machine is 132.1L. (Singapore WELS)
- RoHS* Directive compliant. Lead-free solder is used for printed-circuit board.
- * RoHS: Restriction of the use of certain hazardous substances

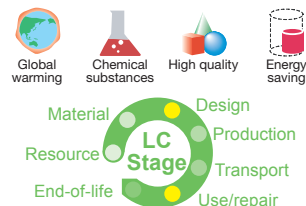
Product performance

- Water circulation flow and "Beat Wing" pulsator enables water savings and washes thoroughly at the same time.
- "Air Jet Dry" dries up to 4kg clothes in 3 hours with nano titanium filter cleanly and economically.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
Tel 81-3-3502-2111 Fax 81-3-3506-1442
URL <http://www.hitachi-ap.com/>

Available in: Singapore, Thailand, Malaysia



BW-105JV (Platinum)

EP-1-024

Home electric appliances/lighting

electric washing machines

Energy and water saving, drum-type electric washer dryer with heat pump

Environmental performance

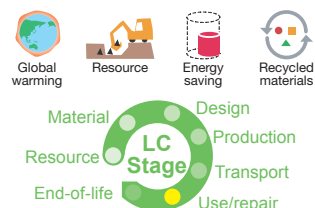
- Mitigation of climate change: 76% reduction in power consumption by the variable magnetic flux motor and the optimized control of heat pump unit. 72% reduction in CO₂ emissions in comparison to the conventional model TW-F70 ('00 model).
- Efficient use of resources: 65% reduction in water consumption to wash & dry 6kg of laundry by the high-pressure double shower, centrifugal wash and heat pump unit in comparison to the conventional model TW-F70 ('00 model).

Product performance

- Water-saving "ZABOON" washing: By the centrifugal wash and high-pressure double shower, it washes firmly and can rinse with fewer water.
- Speedy: Reduction washing time by active-suspension.
- Eco mode: Eliminate futility and water saving that detected cloth quantity, type and temperature by three sensors.
- Disinfection and deodorization: It is possible to prevent both unpleasant smells and bacteria by "pico ion", so that the drum and tub can be kept clean.

TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 489-8610, Japan
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Heat Pump Drum-type Electric Washer-dryer "ZABOON" TW-Z9100

EP-1-025

Home electric appliances/lighting

electric washing machines

Clothes Washers SANYO

Environmental performance

Water-Saving and Low Energy Consumption.

The product and its manufacturing process not contain or use substances controlled by the Montreal Protocol.

Corrugated carton used for product packaging contain at least 80% recycled paper. The product packaging not use filling material with Montreal Protocol controlled substances as blowing agents.

Series:

- SW-15DV3 (Series models: SW-14DV3, SW-13DV3, SW-11DV3)
- SW-1488UF (Series models: SW-1388UF, SW-1568UF)

Product performance

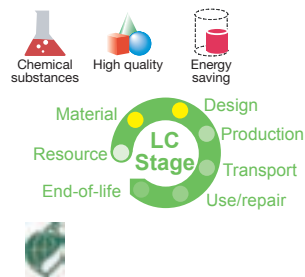
When operated under the conditions of rated maximum load, high water level, standard wash cycle, soil and stain removal ratio above 0.8, and water extraction efficiency above 45%:

1. Electrical energy consumption per kilogram of clothing load not exceed 0.015 kilowatt-hour (kWh).
2. Water consumption per kilogram of clothing load not exceed 22 liters.
3. The airborne acoustic noise during the water extraction cycle not exceed 60 dB.

SANYO ELECTRIC (TAIWAN) CO., LTD.

10F., NO.266, SONGJIANG RD., ZHONGSHAN DIST., TAIPEI CITY 10437,
TAIWAN (R.O.C.), Republic of China
Tel +886-2-2521-0251 Fax +886-2-2901-2113
URL <http://www.sanyo.com.tw/>

Available in: Taiwan (Rep. of China)



SANYO SW-15DV3

EP-1-026

Home electric appliances/lighting

vacuum machines

Vacuum Cleaner

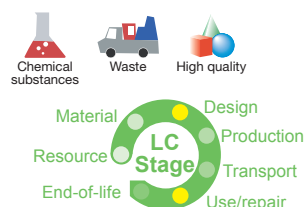
Environmental performance

- Lead-free solder for power control board.

Product performance

- Easy to use and high power bagless type cleaner.
- This Cyclone type vacuum cleaner was awarded the Allergy UK Seal of Approval in recognition of its proven ability to reduce exposure to allergens.

*Tested by Allergy UK (The British Allergy Foundation)



Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
Tel 81-3-3502-2111 Fax 81-3-3506-1442
URL <http://www.hitachi-ap.com/>

Available in: Thailand, Malaysia

CV-SJ21V

EP-1-027

Home electric appliances/lighting

vacuum machines

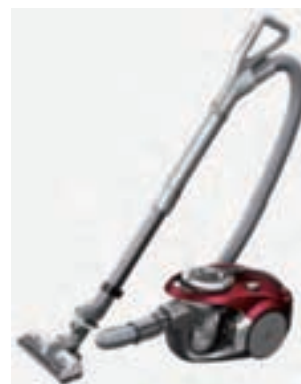
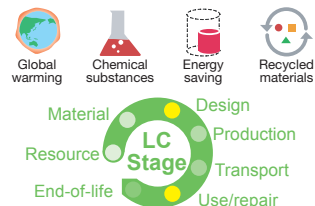
Equipped with Dual Tornado System and Quie Construction. A Cleaner of the Energy Saving and Low Noise

Environmental performance

- Mitigation of climate change: Because continue strong power of absorption in Dual Tornado System, Don't use useless electricity. A maximum of about 55% reduction in power consumption in Eco Automatic Mode compared with High Mode.
- Efficient use of resources: Recycling rate of plastic parts is 88.4%.

Product performance

- Long-lasting: Power lasts by Dual Tornado System.
- Low noise: Vibration control structure is strengthened with using a spring for keep of motor.
- Self-propelled head: Ease cleaning with the grip which easy to use.



Cyclone Cleaner "TORNEO" VC-CG510X

TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 259-1393, Japan
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-1-028

Home electric appliances/lighting

general lighting bulbs

LED Lamp "PARATHOM"

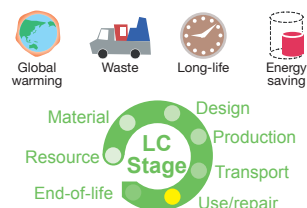
Environmental performance

1. Energy saving
 - This lamp is more efficient than incandescent lamp.
 - Consumption energy is 6.9W and the illuminance on the floor or desk is the same as 60W incandescent lamp.
 - (6.9W E26 base type)
2. Long lifetime
 - The lifetime is 40000 hours.
 - It's 40 times of incandescent lamp. (General lamp type)
3. Mercury free
 - LED lamp doesn't contain mercury.

Product performance

Run-up speed and on-off cycle is the same level as incandescent lamp.

In PARATHOM series, krypton mini lamp, chandelier and reflector lamp types also are lined up.



PARATHOM 6.9W type

MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No. 3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama,
 220-0004, Japan
 Tel +81-45-323-5187 Fax +81-45-323-5156
 URL <http://www.mol-oml.co.jp>

Available in: Japan

EP-1-029

Home electric appliances/lighting

general lighting bulbs

Halogen Lamp "Halogen Energy Saver"

Environmental performance

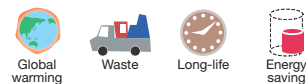
1. Energy saving
 - 25% energy saving compared with an incandescent lamp
(Our white bulb lamp 60 W)
2. Long lifetime
 - Twice the life time compared with an incandescent lamp
(Our white bulb lamp 40 W, 60 W)

Product performance

This halogen lamp is our original product which has outer glass and an E26 base like an incandescent lamp. It is more energy saving and has a longer lifetime than an incandescent lamp. It can be used in dimming fixtures. It also has the same quality of light, shape and size as an incandescent lamp.

MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No.3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama,
220-0004, Japan
Tel +81-45-323-5187 Fax +81-45-323-5156
URL <http://www.mol-oml.co.jp>



Halogen Energy Saver

EP-1-030

Home electric appliances/lighting

general lighting bulbs

LED Bulbs that Can Replace Incandescent Lamps Directly

Environmental performance

- Mitigation of climate change: Power consumption and CO₂ emissions slashed to 1/8~1/6 of those of incandescent lamps
- Management of chemicals: Mercury-free LED light source

Product performance

- Industry's No.1 energy-saving performance : 5.4W type LED lamp with small type incandescent bulb shape has 550lm/W and 101.9lm/W.
- Long life and maintenance saving: Long life of 40,000 hours (40 times longer than an incandescent lamp) greatly reduces the need for replacement.
- Easy replacement: Replacement of an incandescent lamp with this low-power consumption LED lamp is simple because this lamp's cap is the same as that of an incandescent lamp.

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan
Tel +81-46-862-2153 Fax +81-46-860-1200
URL http://www.tlt.co.jp/tlt/index_e.htm



High-output LED Bulb "E-CORE Series" Incandescent Bulb Type LDA5N-E17 and 30 more models (non-dimming and dimming models)

EP-1-031

Home electric appliances/lighting

general lighting bulbs

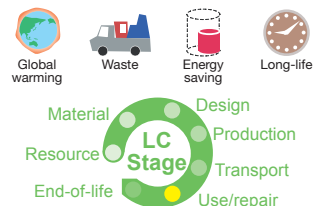
Flat type LED unit with GX53-cap

Environmental performance

- Mitigation of climate change: Power consumption and CO₂ emissions slashed to 1/8. (attached the suitable fixture)
- Management of chemicals: Mercury-free LED light source

Product performance

- Flat thin-model : LED unit with GX53-cap, light colors and angles are selected.
- Long life and maintenance saving: Long life of 40,000 hours greatly reduces the need for replacement.



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan
 Tel +81-46-862-2153 Fax +81-46-860-1200
 URL http://www.tlt.co.jp/tlt/index_e.htm



LED Unit ,flat type LEDF13N-GX53 and 20 moer model

EP-1-032

Home electric appliances/lighting

fluorescent lamps

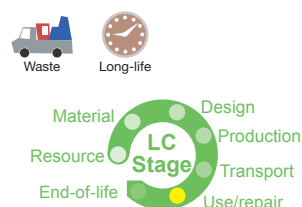
Compact fluorescent lamp"FHP Platinum""DULUX T/E Platinum"

Environmental performance

- Longlife time
- Long lifetime of 20000 hours leads reduction of maintenance cost and discarded lamp.

Product performance

The lifetime of "FHP Platinum" is 1.6 times and "DULUX" T/E PLATINUM" is twice longer than conventional products. They enable users to reduce maintenance cost and lead to the efficient use of resources. Other specification such as lighting color variation and lumen are the same as conventional products.



FHP Platinum and DULUX T/E Platinum

MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No. 3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama,
 220-0004, Japan
 Tel +81-45-323-5187 Fax +81-45-323-5156
 URL <http://www.mol-oml.co.jp>

Available in: Japan

EP-1-033

Home electric appliances/lighting

fluorescent lamps

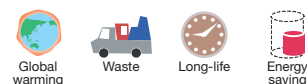
Screw-in Fluorescent Lamp "spiraLUPICA mini"

Environmental performance

1. Energy saving
 - Consumption power is one fifth compared to an incandescent lamp (40W,60 W) .
2. Long lifetime
 - The lifetime of "spiraLUPICA mini" is 10 times longer than that of an incandescent lamp. (EFA15)

Product performance

- SpiraLUPICA mini is a compact screw base fluorescent lamp. Its small spiral shaped inner bulb and compact inverter give it its compact size.
 - Consumption power is one fifth compared to an incandescent lamp (40W, 60W) .Therefore, it enables energy saving and a reduction of greenhouse gas.
 - In addition, the lifetime of "spiraLUPICA mini" is 10 times longer than that of an incandescent lamp. (EFA15)
 - Run-up speed is fast, so it's bright even right after switching on a light.
 - The ON-OFF cycle is up to 20,000 times. (Cycle is 10 seconds on and 170 seconds off.)
- This product is also suitable for places where you frequently repeat switching on and off.



spiraLUPICA mini

MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No. 3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama,
220-0004, Japan
Tel +81-45-323-5187 Fax +81-45-323-5156
URL <http://www.mol-oml.co.jp>

Available in: Japan

EP-1-034

Home electric appliances/lighting

fluorescent lamps

Self-ballasted Fluorescent Lamp Offering Energy-saving Performance and Long Life

Environmental performance

- Mitigation of climate change: 15% reduction in power consumption compared with the previous year's model.
- Efficient use of resources: Rated life has been doubled to 12,000 hours, which means a reduction in waste lamps. Weight has also reduced.
- Management of chemicals: Lead-free glass and soldering.

Product performance

- Easy replacement: Replacement of an incandescent lamp with this lamp is simple because it is virtually the same size and shape as an incandescent lamp.
- UV-cut: 99% ultraviolet protection. Less attraction of bugs. 58% reduction of color fading.
- Plastic globe: Plastic globe means no scattering of glass if the lamp gets broken.



Compact Self-ballasted Fluorescent Lamp "NeoBall Z Real PRIDE" EFA15EL/10-PD and two other models

EP-1-035

Home electric appliances/lighting

fluorescent lamps

LVD Induction Lamp

Environmental performance

Energy conservation, less carbon emission and incorporate less toxic substances like mercury have been the major issues for lighting systems. Monrio LVD Induction Lamps had stand up to address these issues. Monrio extends its arm to collect and retrieve their busted lamps from their consumers for proper handling and disposal. MONRIO LVD lamps save energy, are environmental friendly, yet they are super long life. Again, the lamp is said to be super long life because of its new technology. The lamp has no filament and there is nothing to rupture inside. This in return gives you many years of useful life for each lamp. (A 5 years warranty is being given to companies with minimum orders of 100 pcs. and performs total retrofit of their facilities.)

Monrio Industrial Corporation

No. 11, N. Roxas St., La Loma, Quezon City Philippines, Philippines
Tel (+632) 7419997 Fax (+632) 7119005
E-mail admin@elamps.org
URL www.elamps.org



EP-1-036

Home electric appliances/lighting

electric lighting fixtures

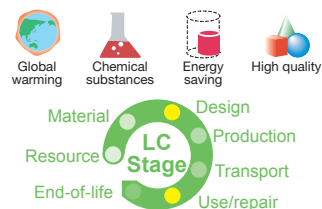
Ceramic Metal Halide Lamp, Giving an Energy-saving High-grade Illumination Space

Environmental performance

- Mitigation of climate change: Power consumption slashed by about 64% from 400W to 145W.
- Efficient use of resources: External tube diameter is reduced from 116mm to 40mm; the slimmer tube saves resources.
- Management of chemicals: Mercury content cut to less than one fifth.

Product performance

- Beautiful and bright: Dramatic improvement in efficiency from 55lm/W to 130lm/W, the industry's best performance. Color rendering index (Ra) doubled from 40 to 80 for higher color performance.
- Quick start-up: Start-up time slashed from around 4 minutes to 2 minutes.



Neocera "PRIDE" MT145CHE-W

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan
Tel +81-46-862-2153 Fax +81-46-860-1200
URL http://www.tlt.co.jp/tlt/index_e.htm

EP-1-037

Home electric appliances/lighting

electric lighting fixtures

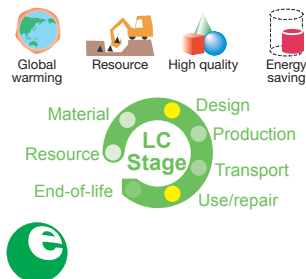
Dimming Functions to Fine-tune the Lighting According to User Preference plus Greater Energy Saving

Environmental performance

- Mitigation of climate change: 10% reduction in power consumption. Dimming control to suit user preference allows a maximum of 40% reduction
- Efficient use of resources: Two lamps achieve illumination equivalent to that of three conventional lamps.

Product performance

- Dimming function: 1-100% dimming function to suit user preference.
- Various timer functions: Morning timer, night timer, on/off timer for security, and fade-in and fade-out lighting function.



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan
 Tel +81-46-862-2153 Fax +81-46-860-1200
 URL http://www.tlt.co.jp/tlt/index_e.htm



Fluorescent Ceiling Light "NeoSlim V Digilix"
 FVH16700TRUEN and 1 more model

EP-1-038

Home electric appliances/lighting

electric lighting fixtures

Linelight

Environmental performance

Compared with conventional one-point lighting fixtures, these installations require fewer light sources, and because only one or two light sources need to be changed, maintenance is also simplified.

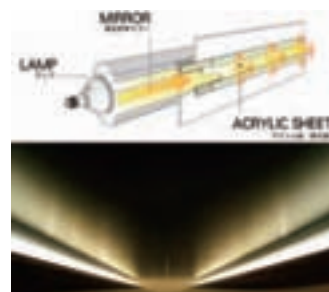
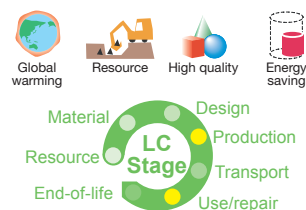
Product performance

Linelight maximizes the illumination potential of artificial lighting by efficiently channeling the illumination of a single or two light sources along a certain length of line. Linelight comprises a highly reflective aluminum mirror housing with a total reflection rate of 98%, fronted by an acrylic sheet for even dispersion, all contained within an aluminum frame.

Linelight accepts 35- to 150-Watt light sources and will project bright light 9 meters or more using only one or two lamps. It boasts a versatile design and abundant powers of expression, while saving energy particularly if used for indirect lighting.

Materialhouse Co.,LTD

1-19-3, Naka-ikegami, Ota-ku, Tokyo, 146-0081, Japan
 Tel +81-3-3751-5158 Fax +81-3-3755-0065
 E-mail h.arai@materialhouse.co.jp
 URL <http://www.materialhouse.jp/>



EP-1-039

Home electric appliances/lighting

electric lighting fixtures

Mirror Ducts

Environmental performance

A mirror duct is a piece of equipment that contributes to the reduction of CO₂ emissions by lowering electric power usage for lighting, as well as creating an environment more comfortable than that of artificial lighting.

Product performance

This system brings daylight indoors for lighting purposes, and its thorough diffusion and control of light during the receiving and conducting processes makes it easy to use. It was adopted by Toyoko Summit heid in July,2008, and this prominent technology was introduced for the whole world.

1. simple structure allowing the economical utilization of abundant light;
2. high energy efficiency due to its direct use of natural light ;
3. collection and diffusion of light without the consumption of kinetic energy due to the absence of driving parts such as sun-trucking devices;
4. low maintenance due to a simple, sealed structure that protects it from failure and deterioration.

Materialhouse Co.,LTD

1-19-3, Naka-ikegami, Ota-ku, Tokyo, 146-0081, Japan
Tel +81-3-3751-5158 Fax +81-3-3755-0065
E-mail h.arai@materialhouse.co.jp
URL <http://www.materialhouse.jp/>



EP-1-040

Home electric appliances/lighting

electric lighting fixtures

Energy-saving and long service life, environment-friendly LED Ceiling Lights

Environmental performance

Three eco-functions allow energy savings of up to 65%* (DL-C501V/C301V/C302V).

- (1) The Eco Light Rhythm function automatically adjusts color and brightness (DL-C501V/C301V/C302V).
 - (2) The Eco Dimmer function (all models) gently reduces brightness so the eyes can easily adjust to the change.
- Note: The functions in (1) and (2) were developed in collaboration with the Inoue Laboratory, Department of Residential Environment and Design, Faculty of Human Life and Environment, Nara Women's University.)
- (3) The Eco Sensor function (all models) detects natural light and other lighting fixtures and reduces the unnecessary light accordingly.

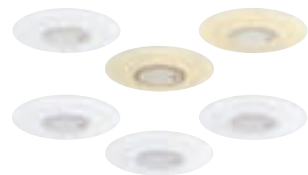
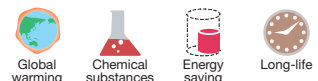
*Sharp measurements. When three eco-functions (Eco Light Rhythm, Eco Dimmer, Eco Sensor) are turned on versus turned off.

Product performance

- (1) Thin design: 43 mm at the thickest part and just 8 mm at the thinnest.
- (2) Adjustable color function and dimmer function (DL-C501V/C301V/C302V) combine for a total of 110 different levels of color and brightness.
- (3) The Eco Light Rhythm function (DL-C501V/C301V/C302V) is a proprietary lighting program that automatically adjusts the color and brightness throughout the day.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
Tel +81-6-6625-0438 Fax +81-6-6625-0153
E-mail eco-info@sharp.co.jp
URL <http://sharp-world.com/>
URL <http://sharp-world.com/corporate/eco/>



LED Ceiling Lights (a total of 6 models)

EP-1-041

Home electric appliances/lighting

electric lighting fixtures

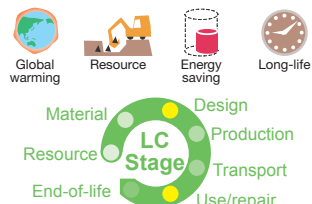
Epoch-making LED Downlight with the Industry's top level efficiency and total luminous flux.

Environmental performance

- Mitigation of climate change: Power consumption and CO₂ emissions slashed to 2/3~1/6.
- Management of chemicals: Mercury-free LED light source

Product performance

- Increased illuminance: 8000 lumen series has top level luminous flux of 8,600lm and integrated efficiency of 75lm/W..
- Long life and maintenance saving: Long life of 40,000 hours greatly reduces the need for replacement.
- Dimming function: 5-100% continuous dimming function to suit user preference.



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan
 Tel +81-46-862-2153 Fax +81-46-860-1200
 URL http://www.tlt.co.jp/tlt/index_e.htm



High-efficiency LED Downlight "E-CORE Series" 8000lm class LEDD-90001W-LD9 and 138 more models.

EP-1-042

Home electric appliances/lighting

electric lighting fixtures

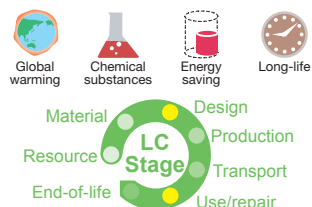
LED Security Light with Sufficient Luminance but Minimal Electricity Charge

Environmental performance

- Mitigation of climate change: 70% reduction in power consumption and CO₂ emissions.
 - Efficient use of resources: Optimum design to secure a distance of 35 m between lamps (*) to minimize the number of lamps required.
- *Class B illumination recommended by the Japan Security Systems Association -Management of chemicals: Mercury-free light source.

Product performance

- Economical: Possible to lower the electricity contract category for greater economy.
- Long life and maintenance saving: Rated life of 60,000 hours means no need for replacement for 15 years. (used 4000 hour per year)
- Compact and lightweight: Easy installation and difficult to break without glass bulbs.



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan
 Tel +81-46-862-2153 Fax +81-46-860-1200
 URL http://www.tlt.co.jp/tlt/index_e.htm



High-efficiency LED Crime Prevention Light "E-CORE Series" LEDG-70942-LS8 and 6 more models

EP-1-043

Home electric appliances/lighting

electric lighting fixtures

Solar LED Lantern

Environmental performance

The Solar LED Lantern is a high efficient LED lantern that can be charged the internal rechargeable battery by the solar panel during daytime and used as an illumination lamp in nighttime.

Also, it implements a USB power output that can charge mobile-phones.

This product utilizes natural energy for an electric power source in non electrification area.

Product performance

The high efficient 3W solar panel can fully charge within about 4 days in clear weather direct sunlight.

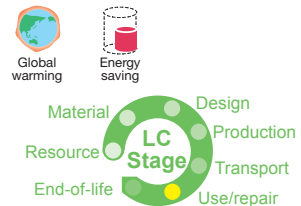
It can light more than 26 hours at High Mode (52 hours at Low Mode).

High Mode provides 350 lux (at 30 cm) of sufficient illumination (Low Mode is 160 lux).

SANYO Electric Co.,Ltd.

5-5, Keihan-hondori2-chome, Moriguchi City, Osaka, Japan

Available in: Asia, Middle and Near East



EP-1-044

Home electric appliances/lighting

household electric appliances

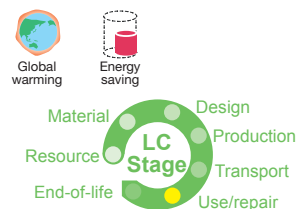
Mobile solar power station : Violetta Solargear VS01

Environmental performance

A pocket sized solar power station designed for charging AA/AAA batteries, and the batteries of small mobile applications, such as cellular phones, PDAs, digital cameras, portable audio/visual devices, and portable games. A long life and evergreen product awarded GOOD DESIGN AWARD 2001-2002, Small and Medium Enterprises Prize.

Product performance

Designed for charging 2 pieces of AA or AAA (sold separately) Violetta Ni-MH rechargeable batteries at the same time by sunlight. The batteries can be charged in shorter time by interconnecting 2 or more units with DC Power Cables (sold separately). Designed for charging the batteries of DC4V-6V appliances, such as cellular phones, PDAs and audio/visual devices with USB Power Adaptors (sold separately) and with widely available USB charger cables. Designed for powering DC3V appliances, such as audio/visual devices with DC Power Cables.



STUDIO DEL SOLE INC.

1-101, City Court Meguro, 2-10-34, Kamiosaki, Shinagawa-ku, Tokyo, 141-0021, Japan

Tel +81-3-5423-6801 Fax +81-3-5423-6802

E-mail info@violetta.com

URL <http://violetta.com/>

Available in: Japan, Worldwide

Violetta Solargear VS01

EP-1-045

Home electric appliances/lighting

household electric appliances

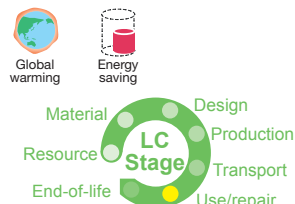
Mobile solar power station : Violetta Solargear VS12

Environmental performance

IP67 dust and waterproof mobile PV systems with the world's first* commercial spherical silicon flexible solar panels designed for powering a broad range of appliances. Composed of a combination of a ultra-thin, light and flexible solar panel and a compact, lightweight yet rugged battery compartment for the ultimate portability, resistance, weather resistance and ruggedness in business, disaster prevention, leisure and everyday living. *As of 1/10/2009, source by STUDIO DEL SOLE INC.

Product performance

Charging the built-in 12V batteries by sunlight, and powering a broad range of appliances through AC100V, DC12V and DC5V output.



STUDIO DEL SOLE INC.

1-101, City Court Meguro, 2-10-34, Kamiosaki, Shinagawa-ku, Tokyo, 141-0021, Japan
Tel +81-3-5423-6801 Fax +81-3-5423-6802
E-mail info@violetta.com
URL <http://violetta.com/>



Available in: Japan, Worldwide

Violetta Solargear VS12

EP-1-046

Home electric appliances/lighting

water heating systems

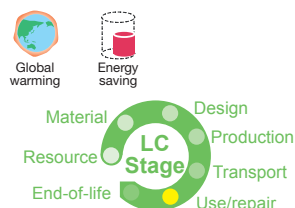
I-HOT

Environmental performance

Each installation of minimum 200 liters per day (LPD) will save minimum 9000.Kcl of energy per day for about 300-320 days in a year. This is equal to the saving of approximately 0.9.Liters of diesel and accordingly the Green gas emission is also reduced.

Product performance

The "I-Hot" service provides Hot water to its customers/Users. The hot water is generated through Solar Water Heating system only. After a feasibility study of the site and suitable locations, the Solar water heater is installed with a meter, the charges are collected based on the users monthly hot water consumption.



Anu Solar Power Pvt Ltd

ANU SOLAR POWER .PVT .LTD # 248, 3rd cross , 8th Main,3rd Phase,
Peenya Industrial Area , Bangalore, 560058, India
Tel + 91-80 43550200 Fax + 91-80 43550234
E-mail info@anusolar.com
URL www.anusolar.com



Available in: U.S.A, South Africa

EP-1-047

Home electric appliances/lighting

televisions

LCD TV embedded with Intelligent Presence Sensor<BRAVIA>LX900 Series

Environmental performance

By adopting Edge LED backlight, the LX900 series reduces power consumption and make the sets thinner. Additionally, this series features Intelligent Presence Sensor that helps customers save energy.

[Energy-saving effect]

- By adopting Edge LED backlight, this series achieved 133% (60V), 133% (52V), 120% (46V) and 114% (40V) of the standard set forth under Japan's Law Concerning the Rational Use of Energy.
- The embedded Camera Sensor with face detection will dim the Picture or turn it off automatically if no-one is looking.
- Energy Saving Switch reduces power consumption to nearly zero without unplugging the AC cord from the outlet.

Product performance

3D in Full HD 1080p

Energy efficient Edge LED backlight

Motionflow PRO 240Hz refresh rate technology

Advanced Intelligent Presence Sensor with Face Detection - TV recognizes when someone is watching the screen.



Global warming



Energy saving



High quality



Sony Corporation

1-7-1 Konan Minato-ku, Tokyo, 108-0075, Japan

URL www.sony.net

URL www.sony.co.jp/csr



Available in: Japan, Asia and Oceania, Oceania, Europe, North America, Central America, South America, Southeast Asia, Middle and Near East

<BRAVIA>LX900 series

EP-1-048

Home electric appliances/lighting

televisions

The Viera VT-series / GT-series full hi-vision 3D plasma TV (VT:50/65-inch models GT:42-inch models)

Environmental performance

Energy & resource saving:

Achieved five stars in the BEE. due to the energy saving design (Our measurement)

Chemical substances & recycling:

Non-use of lead for plasma panels (a world first)

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires and power cords

Long-life design:

Approx. 100,000 hours of life for plasma panels

Product performance

FULL HD 3D

Infinite Black Pro with Dynamic Contrast 5,000,000:1

600Hz Sub-field Drive & 1080 Line Moving Picture Resolution

VIERA CAST with Skype

USB Terminals for USB Flash Memory, Wireless LAN Adaptor and USB Keyboard

THX® (VT Series)

VIERA Image Viewer (Photo and Video)



Global warming



Resource



High quality



Energy saving



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.net/>

URL <http://panasonic.net/avc/viera/>

URL <http://panasonic.net/csr/>



Available in: Japan

Plasma-TV VIERA TH-P65VT20

EP-1-049

Home electric appliances/lighting

televisions

The Viera V-series full hi-vision plasma TV (42/50-inch models)

Environmental performance

Energy & resource saving:
 Achieved five stars in the BEE. due to the energy saving design (Our measurement)
 Chemical substances & recycling:
 Non-use of lead for plasma panels (a world first)
 Non-use of specific chemical substances (compliant with the EU RoHS directive)
 Non-use of lead-solder circuit boards
 Non-use of vinyl chloride (PVC) resin for internal wires and power cords
 Long-life design:
 Approx. 100,000 hours of life for plasma panels

Product performance

Infinite Black with Dynamic Contrast 5,000,000:1
 600Hz Sub-field Drive
 VIERA CAST with Skype
 VIERA Image Viewer (Photo and Video)
 USB Terminals for USB Flash Memory, Wireless LAN Adaptor and USB Keyboard
 V-Audio ProSurround



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/viera/>
 URL <http://panasonic.net/csr/>



Available in: Japan

Plasma-TV VIERA TH-P50V20

EP-1-050

Home electric appliances/lighting

televisions

The Viera U-series full hi-vision plasma TV (46/50-inch models)

Environmental performance

Energy & resource saving:
 Achieved five stars in the BEE. due to the energy saving design (Our measurement)
 Chemical substances & recycling:
 Non-use of lead for plasma panels (a world first)
 Non-use of specific chemical substances (compliant with the EU RoHS directive)
 Non-use of lead-solder circuit boards
 Non-use of vinyl chloride (PVC) resin for internal wires and power cords
 Long-life design:
 Approx. 100,000 hours of life for plasma panels

Product performance

Dynamic Contrast 2,000,000:1
 600Hz Sub-field Drive
 VIERA Image Viewer (Photo and Video)
 V-Audio



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/viera/>
 URL <http://panasonic.net/csr/>



Available in: Japan

Plasma-TV VIERA TH-P50U20

EP-1-051

Home electric appliances/lighting

televisions

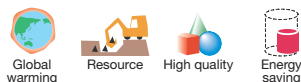
The Viera X-series / A-series hi-vision plasma TV (X:42/46/50-inch models A:42-inch models)

Environmental performance

Energy & resource saving:
 Achieved five stars in the BEE. due to the energy saving design (Our measurement)
 Chemical substances & recycling:
 Non-use of lead for plasma panels (a world first)
 Non-use of specific chemical substances (compliant with the EU RoHS directive)
 Non-use of lead-solder circuit boards
 Non-use of vinyl chloride (PVC) resin for internal wires and power cords
 Long-life design:
 Approx. 100,000 hours of life for plasma panels

Product performance

Dynamic Contrast 2,000,000:1
 600Hz Sub-field Drive
 VIERA Image Viewer (Photo)
 Clear Sound (A-series)



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/viera/>
 URL <http://panasonic.net/csr/>



Available in: Japan

Plasma-TV VIERA TH-P50X20

EP-1-052

Home electric appliances/lighting

televisions

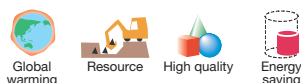
Plasma Display TV

Environmental performance

- "Low power consumption mode" decrease electric consumption realizing suitable brightness.
- "Automatic power off" function automatically turns off the electric power after certain period of on operation or no signal.
- "Intelligent sensor" detects the degree of brightness and the color type of lighting in the room, produces suitable pictures and decreases electric power consumption.

Product performance

- High resolution full HD panel for digital HD broadcasting.
- Removable HDD "iVDR-S" set into "iV-pocket" in the TV set increases capacity of recording.
- "Smooth cinema" function produces smooth, natural pictures.



Hitachi Consumer Electronics Co., Ltd.

Shin-Otemachi Bldg, 2-1, Otemachi 2-chome, Chiyoda-ku, Tokyo, 100-0004, Japan
 URL <http://www.hitachi-ce.co.jp>
 URL <http://av.hitachi.co.jp>



Available in: Japan

P42-XP05

EP-1-053

Home electric appliances/lighting

televisions

The Viera S-series / U-series full hi-vision LCD-TV (S:42-inch models U:32/42-inch models)

Environmental performance

Energy & resource saving:
 Achieved five stars in the BEE, due to the energy saving design (Our measurement)
 Chemical substances & recycling:
 Non-use of specific chemical substances (compliant with the EU RoHS directive)
 Non-use of lead-solder circuit boards
 Non-use of vinyl chloride (PVC) resin for internal wires
 Long-life design:
 Approx. 60,000 hours of life for panels

Product performance

Wide Viewing Angle with IPS Panel
 Dynamic Contrast 20,000:1
 100Hz Motion Picture Pro (S series)
 VIERA Image Viewer (Photo and Video) (S-series)
 VIERA Image Viewer (Photo), Slide Show with music (U-series)
 USB terminal
 Smart Networking with VIERA Link

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/viera/>
 URL <http://panasonic.net/csr/>

Available in: Japan



LCD-TV VIERA TH-L32U20D

EP-1-054

Home electric appliances/lighting

televisions

The Viera C-series hi-vision LCD-TV (19/22/24-inch models)

Environmental performance

Energy & resource saving:
 Achieved five stars in the BEE, due to the energy saving design (Our measurement)
 Chemical substances & recycling:
 Non-use of specific chemical substances (compliant with the EU RoHS directive)
 Non-use of lead-solder circuit boards
 Non-use of vinyl chloride (PVC) resin for internal wires
 Long-life design:
 Approx. 60,000 hours of life for panels

Product performance

Powerful Sound from 15W (RMS) x 2 Side Speakers
 Wide Viewing Angle with IPS Panel
 Lowest Energy Consumption - only 78 W
 Smart Networking with VIERA Link
 (TH-L32C22)

Sport Mode
 HDMI x 1
 PC Input
 (TH-L24/19C20)

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/viera/>
 URL <http://panasonic.net/csr/>

Available in: Japan



LCD-TV VIERA TH-L32C22

EP-1-055

Home electric appliances/lighting

televisions

The Viera A-series/X-series hi-vision LCD-TV (32-inch models)

Environmental performance

Energy & resource saving:
 Achieved five stars in the BEE. due to the energy saving design (Our measurement)
 Chemical substances & recycling:
 Non-use of specific chemical substances (compliant with the EU RoHS directive)
 Non-use of lead-solder circuit boards
 Non-use of vinyl chloride (PVC) resin for internal wires
 Long-life design:
 Approx. 60,000 hours of life for panels

Product performance

2way4SP Powerful Sound (15W+15W) (A-series)
 Wide Viewing Angle with IPS Panel
 Dynamic Contrast 20,000:1
 VIERA Image Viewer (Photo), Slide Show with music (A-series)
 Smart Networking with VIERA Link

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/viera/>
 URL <http://panasonic.net/csr/>

Available in: Japan



LCD-TV VIERA TH-L32A20

EP-1-056

Home electric appliances/lighting

televisions

LCD Television

Environmental performance

- "Slim Block Back light panel" saves the power consumption by decreasing unnecessary Back light operation of dark light picture.
- "Low power consumption mode" decrease electric consumption realizing suitable brightness.
- "Automatic power off" function automatically turns off the electric power after certain period of on operation or no signal.
- "Intelligent sensor" detects the degree of brightness and the color type of lighting in the room, produces suitable pictures and decreases electric power consumption.

Product performance

- Fine and high contrast picture by "Slim Block Back light panel"
- High resolution full HD panel for digital HD broadcasting.
- Removable HDD "iVDR-S" set into "iV-pocket" in the TV set increases capacity of recording.
- "Smooth cinema" function produces smooth, natural pictures.

Hitachi Consumer Electronics Co., Ltd.

Shin-Otemachi Bldg, 2-1, Otemachi 2-chome, Chiyoda-ku, Tokyo, 100-0004, Japan
 URL <http://www.hitachi-ce.co.jp>
 URL <http://av.hitachi.co.jp>

Available in: Japan



L42-ZP05

EP-1-057

Home electric appliances/lighting

televisions

The Viera D-series full hi-vision LCD-TV (32/42-inch models)

Environmental performance

Energy & resource saving:

Achieved five stars in the BEE, due to the energy saving design (Our measurement)

Chemical substances & recycling:

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

Long-life design:

Approx. 60,000 hours of life for panels

Product performance

IPS LED LCD

Stylish Slim Design

100Hz Motion Picture Pro

Dynamic Contrast 2,000,000:1

Wide Viewing Angle with IPS Panel

VIERA CAST with Skype (42/32D25 only)

USB terminal for USB Flash Memory, Wireless LAN Adaptor and USB Keyboard (42/32D25 only)



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.net/>URL <http://panasonic.net/avc/viera/>URL <http://panasonic.net/csr/>

Available in: Japan

LCD-TV VIERA TH-L42D25

EP-1-058

Home electric appliances/lighting

televisions

Digital High-Definition LCD TV (LC-60LX3/52LX3/46LX3/40LX3)

Environmental performance

(1) These models adopt four-primary-color¹ technology developed based on Sharp's proprietary UV²A technology³. This technology newly adds Y (yellow) to the three RBG (red, blue, green) primary colors. A significant improvement in light utilization efficiency yielded a reduction in power consumption by approximately 10%³ compared to previous models.

(2) Backlight longevity is about 60,000 hours.

(3) Green materials: halogen-free cabinet, power cord and interior wiring / circuit board with lead-free solder.

(4) Smaller cartons use less packaging materials.

(5) Recycled paper is used for the operation manuals.

*1 The use of four primary colors is sharp's own concept designed for LCDs, and differs from the conventional three-primary-color concept of light and color.

*2 Abbreviation of Ultraviolet induced multi-domain Vertical Alignment. Photo-alignment technology that precisely control the alignment of liquid crystal molecules using a manufacturing method based on UV light exposure.

*3 Annual power consumption (for same size screens) of the LX3 Series compared to the LX1 Series (introduced in November 2009).

Product performance

(1) Four-primary-color technology enables the images to be reproduced with outstanding quality by vividly rendering colors such as brilliant yellow, brassy gold, and emerald green, which are difficult to reproduce using the three conventional primary colors. High image quality: TV contrast¹ of 5,000,000:1

(2) ARSS² eight-speaker system³ integrates video and audio, plus Duo Bass low-vibration woofer.

*1 The maximum contrast level a TV set is capable of achieving.

*2 Abbreviation of "Around Speaker System". Audio technology in which speakers are arranged around the screen.

*3 Featured in 60V/52V/46V-inch models (40V-inch models use a 7-speaker system).



Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jpURL <http://sharp-world.com/>URL <http://sharp-world.com/corporate/eco/>

LC-60LX3

EP-1-059

Home electric appliances/lighting

televisions

Digital High-Definition LCD TV with Built-in Blu-ray Disc Recorders (LC-52LB3/46LB3)

Environmental performance

- (1) These models adopt four-primary-color^{*1} technology developed based on Sharp's proprietary UV²A technology². This technology newly adds Y (yellow) to the three RGB (red, blue, green) primary colors. A significant improvement in light utilization efficiency yielded a reduction in power consumption.
- (2) Backlight longevity is about 60,000 hours.
- (3) Green materials: halogen-free cabinet, power cord and interior wiring / circuit board with lead-free solder
- (4) Smaller cartons use less packaging materials.
- (5) Forest certification paper is used for the operation manuals.

^{*1} The use of four primary colors is sharp's own concept designed for LCDs, and differs from the conventional three-primary-color concept of light and color.

^{*2} Abbreviation of Ultraviolet induced multi-domain Vertical Alignment. Photo-alignment technology that can precisely control the alignment of liquid crystal molecules using a manufacturing method based on UV light exposure.

Product performance

- (1) Four-primary-color technology enables the images to be reproduced with outstanding quality by vividly rendering colors such as brilliant yellow, brassy gold, and emerald green, which are difficult to reproduce using the three conventional primary colors. High image quality: TV contrast¹ of 5,000,000:1
- (2) Impressive 3D images with screen brightness approximately 1.8times² higher than previous Models.
- (3) Built-in Blu-ray Disc recorder compatible with Blu-ray 3D³ specifications.
- (4) ARSS⁴ eight-speaker system integrates video and audio, plus Duo Bass low-vibration woofer.

^{*1} The maximum contrast level a TV set is capable of achieving.

^{*2} Screen brightness when displaying 3D images compared to Sharp's previous technology (three-primary-color Advanced Super View LCD without FRED technology).

^{*3} Abbreviation of "Around Speaker System". Audio technology in which speakers are arranged around the screen.

Sharp Corporation

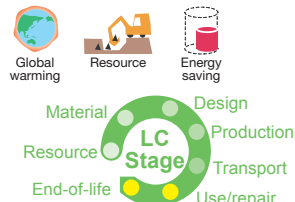
22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp

URL <http://sharp-world.com/>

URL <http://sharp-world.com/corporate/eco/>



LC-52LB3

EP-1-060

Home electric appliances/lighting

televisions

Show 3D high-definition images and polished design. Ecological stylish model

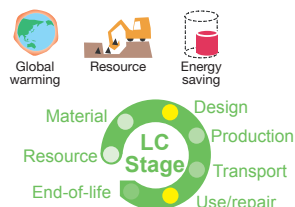
Environmental performance

- Mitigation of climate change: 79% reduction in annual power consumption by optimization of image signals and adoption of LED panel.
- Efficient use of resources: 65% reduction in weight by slim and minimal design.

*comparison with model of 2003

Product performance

- Full High-definition 3D
- High-definition recording function: recordable LCD TV by connecting to USB External HDD
- Automatic picture adjustment: Automatic picture adjustment optimized for the viewing environment.
- Full HD Energy saving LCD pane



TOSHIBA CORPORATION Visual Products Company

1-1, Shibaura 1-chome, Minato-ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan

Digital high-definition LCD TV REGZA 55F1

EP-1-061

Home electric appliances/lighting

televisions

MK2432 LCD TV

Environmental performance

- Operation mode < 60W and Standby mode < 1W power consumption. Complying with Taiwan Green Mark.
- Non-Use of specified hazardous substances designated by EU RoHS Directive.
- Design to be easy disassembled with regular tools and include labels on all major plastic parts, indicating the composition code to facilitate future recycling. (meet ISO 11469 requirements)
- The product packaging does not contain PVC or other chlorine-containing plastic, and does not use CFCs and HCFCs as blowing agent. Paper box used as product packaging have at least 80% recycled paper content.

Product performance

A 24" Full HD 1080p LCD TV with HDMI slot, 10,000:1 Dynamic Contrast Ratio, and Senseye Technology, the BenQ MK2432 is built to deliver incredible contrast with faithfully-rendered picture performance. Whether you are at work or play, things will be looking great with the BenQ MK2432 LCD TV!

BenQ Corporation

No.16, Jihu Rd., Neihu Dist., Taipei, Taiwan, Republic of China
Tel +886-2-27278899 Fax +886-2-26562438
URL <http://www.benq.com/>

Global warming

Chemical substances

Energy saving

Material

Design

Production


Transport

Use/repair

End-of-life

Resource

LC Stage



MK2432

EP-1-062

Home electric appliances/lighting

televisions

SE2231 LCD TV

Environmental performance

- Operation mode < 50W and Standby mode < 1W power consumption. Complying with Taiwan Green Mark.
- Non-Use of specified hazardous substances designated by EU RoHS Directive.
- Design to be easy disassembled with regular tools and include labels on all major plastic parts, indicating the composition code to facilitate future recycling. (meet ISO 11469 requirements)
- The product packaging does not contain PVC or other chlorine-containing plastic, and does not use CFCs and HCFCs as blowing agent. Paper box used as product packaging have at least 80% recycled paper content.

Product performance

Featuring 22" Full HD 1080p, HDMI slot, 10,000:1 Dynamic contrast ratio and Senseye Technology, BenQ's compact SE2231 LCD TV keeps your cozy home and work space looking great with true-to-life picture quality! Finally, you get to have it all - for work and play!

BenQ Corporation

No.16, Jihu Rd., Neihu Dist., Taipei, Taiwan, Republic of China
Tel +886-2-27278899 Fax +886-2-26562438
URL <http://www.benq.com/>

Global warming

Chemical substances

Energy saving

Material

Design

Production

Transport

Use/repair

End-of-life

Resource

LC Stage



SE2231

Eco-product // Home electric appliances/lighting

1

2

3

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9

173

EP-1-063

Home electric appliances/lighting

televisions

VB3223E LCD TV

Environmental performance

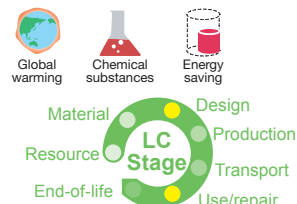
- 90W power consumption, 35%~45% power saving compared to last generation LCD TV.
- Non-Use of specified hazardous substances designated by EU RoHS Directive.
- Taiwan Product Carbon Footprint Label acquired.

Product performance

BenQ power-saving series LCD TV, VB3223E, reduce 35%~45% power consumption compared to last generation LCD TV. Featuring 32" panel, HDMI slot, 2,500:1 contrast ratio and Senseye Technology.

BenQ Corporation

No.16, Jihu Rd., Neihs Dist., Taipei, Taiwan, Republic of China
Tel +886-2-27278899 Fax +886-2-26562438
URL <http://www.benq.com/>



1255kg-CO₂ Inspection Resource/Materials/Production/Transfer/Use/End-of-Life



VB3223E

EP-1-064

Home electric appliances/lighting

blu-ray disc recorder

3D Blu-ray Disc recorder DMR-BWT3100/2100/1100

Environmental performance

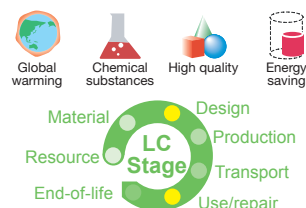
Achieved power consumption of approx.31W (DMR-BWT3100)/approx.27W (DMR-BWT2100)/approx.26W (DMR-BWT1100) due to low power circuit technology. Circuit is highly integrated to conserve energy. Resources saving design employed for circuit boards and key components. Standby consumption :approx.0.1W
Non-Use of Specific Chemical Substances. *
(*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

3D Blu-ray Disc recorder with 2TB (DMR-BWT3100), 1TB (DMR-BWT2100), 500GB (DMR-BWT1100) HDD.
High quality Digital Audio & Video and UniPhier system Technology.
Digital duble Tuner.
BD-Live, Act Vila, DNLA.
100GB Blu-ray Disc (BDXL)

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
Tel +81-6-6905-8356 Fax +81-6-6905-4755
URL <http://panasonic.net/>
URL <http://panasonic.net/csr/>



3D Blu-ray Disc recorder DMR-BW3100

Available in: Japan

EP-1-065

Home electric appliances/lighting

blu-ray disc recorder

Blu-ray Disc Recorder with various movie editing features

Environmental performance

- Mitigation of climate change: Low power consumption (0.7W) in standby mode for quick start-up.
- Efficient use of resources: using recycled plastic at one of the plastic part.. 41% reduction in weight for resource saving (comparison with model of 2001)

Product performance

- USB External HDD for adding even if main HDD become full.
- MPEG4 AVC for recording longer time with High Definition resolution.
- Resolution Plus XDE for much more clear playback, not only Blu-ray movie title, but also titles recorded in long-time modes.
- 3D playback for Blu-ray 3D Disc.



TOSHIBA CORPORATION Visual Products Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan

HDD & Blu-ray Disc Recorder
<REGZA Blu-Ray> RD-BR600

EP-1-066

Home electric appliances/lighting

stereo sets

2.1-Channel SoundBar Speaker System SC-HTB500

Environmental performance

Achieved stand-by power consumption of approx. 0.3W.. (North America model).
Achieved power consumption of approx. 47W (North America model) due to low power circuit technology.

Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances *

(*: Lead,mercury,cadmium, hexavalent chromium,two specific brominated flame retardants,designated by the EU RoHS Directive.)

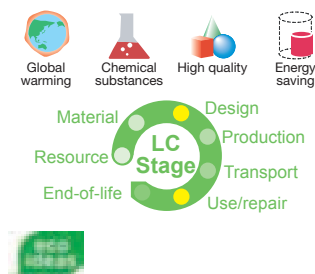
Product performance

2.1-Channel SoundBar Speaker System.

With Wireless Kelton Subwoofer system

Slim design of main unit depth 58mm & Stylish design.

Digital power Amplifier 240W.



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.co.jp/>URL <http://panasonic.net/csr/>

Available in: North America

2.1-Channel SoundBar Speaker System SC-HTB500

EP-1-067

Home electric appliances/lighting

stereo sets

3D Blu-ray Home Theater System SC-BTF800

Environmental performance

Achieved stand-by power consumption of approx. 0.5W.
 Achieved power consumption of approx. 85W due to low power circuit technology.
 Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.
 Non-Use of Specific Chemical Substances *
 (*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

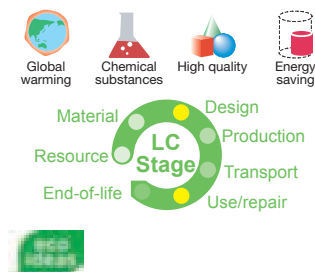
Product performance

2.1ch Blu-ray Disk Home Theater System.
 Wireless Sub Woofer system
 Slim and Stylish design.
 7.1ch Virtual Surround Speaker system.
 VIERA CAST, BD-LIVE.
 Digital power Amplifier 300W. (Front 90Wx2, Wireless Sub Woofer 120W)

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/csr/>

Available in: North America, Oceania, Europe



3D Blu-ray Home Theater System SC-BTF800

EP-1-068

Home electric appliances/lighting

stereo sets

3D Blu-ray Disk Home Theater System SC-BTT350/750

Environmental performance

Achieved stand-by power consumption of approx. 0.05W. (North America model).
 Achieved power consumption of approx. 90W (North America model)
 due to low power circuit technology.
 Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.
 Non-Use of Specific Chemical Substances*
 (*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

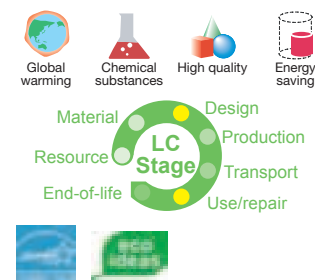
Product performance

5.1ch Full HD 3D Blu-ray Disk Home Theater System.
 Slim and Stylish design.
 DLNA, Viera Cast, YouTube compatible, VIERA CAST.
 Digital power Amplifier 1000W (RMS).

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/csr/>

Available in: North America, Oceania, Europe



3D Blu-ray Home Theater System SC-BTT750

EP-1-069

Home electric appliances/lighting

speaker

High-Fidelity and eco-friendly loudspeaker with cabinets made from used whiskey barrels

Environmental performance

The cabinets of the "Pure Malt Speaker" series are made from used whiskey barrels (virgin white oak) that produce rich sounds. Pioneer promotes the 3Rs (Reduce, Reuse, Recycle) aggressively, by not using new wood, preventing forest destruction, and preserving bio-diversity.

Oak trees grow for 100 years before serving as whiskey casks for another 50 to 70 years. After that, the wood is recycled into speaker cabinets that produce warm, rich sounds for many more years.

By using heat from natural spas, energy is saved during the wood processing from barrels; efforts in using lower VOC (Volatile Organic Compounds) in adhesives and paint are used; and pulp molded material is adopted as shock absorbing material for packaging. Pioneer's original efforts to reduce harmful chemical substances through stricter in-house standards than those of the RoHS Directive are also implemented.

A portion of the revenues from product sales is donated to the Green Fund of the National Land Afforestation Promotion Organization as a contribution to government-led promotion of afforestation.



PIONEER CORPORATION

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan

Tel +81-44-580-3211

URL <http://pioneer.jp/>

URL http://pioneer.jp/components/puremalt/index.html?cl=200903_main_puremalt

URL <http://pioneer.jp/environment/>

Available in: Worldwide

PURE MALT SPEAKER S-A4SPT-PM

EP-1-070

Home electric appliances/lighting

digital cameras

Digital Camera PowerShot SX200 IS

Environmental performance

- (1) Compact body and weight of only 220g contribute to resource savings.
- (2) Compliance with the RoHS Directive.
- (3) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) 12x optical zoom to make it easy to get up close to a distant object.
- (2) 28mm wide-angle lens to capture the subject dynamically from wide viewing angles.
- (3) Lens-shift type image stabilizer (IS) system works even when zoomed in with large magnification.
- (4) Safety zoom function for using digital zooms without the image deterioration.



Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan

Tel +81-3-3758-2111 Fax +81-3-3758-8225

URL <http://www.canon.com/environment/>

Available in: Worldwide

PowerShot SX200 IS

EP-1-071

Home electric appliances/lighting

digital cameras

DIGITAL CAMERA DIGITAL IXUS 100 IS

Environmental performance

- (1) Compact body and weight of only 115g contribute to resource savings.
- (2) Compliance with the RoHS Directive.
- (3) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) HD movie shooting capability plus HDMI mini output make it easy to enjoy digital video.
- (2) 2.5-inch clear live LCD II has a high visibility from wide viewing angles (even when viewed at an oblique angle or out of doors).
- (3) AF (Auto Focus) Servo to focus on a moving subject and select the proper settings for shooting.
- (4) Smart AUTO selects the proper settings from predefined 18 scene modes just by pressing the shutter button.

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
 Tel +81-3-3758-2111 Fax +81-3-3758-8225
 URL <http://www.canon.com/environment/>

Available in: Worldwide



DIGITAL IXUS 100 IS

EP-1-072

Home electric appliances/lighting

digital cameras

DIGITAL SLR CAMERA EOS 550D EUR

Environmental performance

- (1) Compact body and weight of only 475g contribute to resource savings.
- (2) Compliance with the RoHS Directive.
- (3) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) High image quality and high-speed image processing. Approximately 18 mega pixel CMOS (Complementary Metal Oxide Semiconductor) Sensor and new DIGIC 4 Image Processor.
- (2) Face detection technology in Live View and full HD movie shooting function.
- (3) Digital single-lens reflex camera that has interchangeable lenses and high-speed continuous drive up to 3.7 frame/s.
- (4) High sensitivity: ISO 100~6400 (normal).

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
 Tel +81-3-3758-2111 Fax +81-3-3758-8225
 URL <http://www.canon.com/environment/>

Available in: Worldwide



EOS 550D

EP-1-073

Home electric appliances/lighting

digital cameras

Digital Interchangeable Lens Camera: LUMIX DMC-GH2

Environmental performance

Achieved Main Product weight (w/o battery) of approx.392g due to low resource use technology.

Power saving performance realizing about 340 continuous shots.

Circuits have been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances *

(*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

Micro Four Thirds Camera System.

16.05-megapixel Live MOS sensor

3.0-inch LCD monitor.

Full High Definition AVCHD Movie Recording.

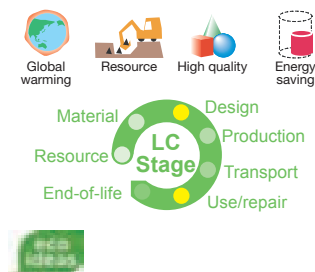
Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.net/>

URL <http://panasonic.net/csr/>



Digital Interchangeable Lens Camera:
LUMIX DMC-GH2

Available in: Worldwide

EP-1-074

Home electric appliances/lighting

digital cameras

Digital Camera: LUMIX DMC-FZ45/40

Environmental performance

Achieved Main Product weight (w/o battery) of approx.454g due to low resource use technology.

Power saving performance realizing about 580 continuous shots.

Circuits have been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances *

(*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

14.1 Megapixel Digital Camera.

High Definition AVCHD Lite Movie Recording.

Wide-angle 27mm LEICA DC VARIO-ELMARIT lens and 24x optical zoom.

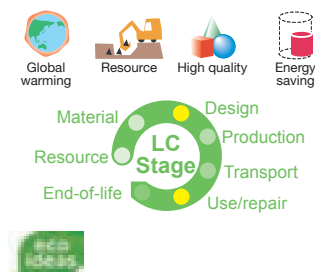
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Tel +81-6-6905-8356 Fax +81-6-6905-4755

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URL <http://panasonic.net/csr/>



Digital Camera: LUMIX DMC-FZ45

Available in: Worldwide

EP-1-075

Home electric appliances/lighting

digital cameras

Nikon Digital SLR Camera D3100

Environmental performance

- (1) Reduction of weight
 - * Reduces 8% of the parts compared to "D3000"
 - * Reduces 8% of the weight, compared to "D3000", so contributes to waste reduction and resource saving
- (2) Reduction of hazardous substances
 - * Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive
 - * Lead-free solder: Used on all circuit boards
 - * Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

"D3100" has a 14.2 Megapixel Nikon DX-format CMOS Image sensor, and also has various functions, such as Nikon's new image processing engine "EXPEED 2", ISO sensitivity 100-3200 expandable to 12800 equivalent, Full 1080p HD Cinematic Video "D-Movie", "Guide Mode" and Scene Auto Selector, etc. So many useful functions and moreover joy-to-operate and easy-to-use are also packed in its compact lightweight body. "D3100" is a high cost-effective digital camera.

NIKON CORPORATION

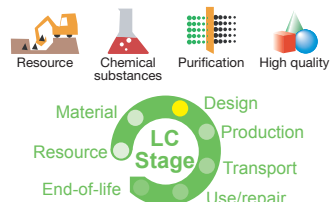
Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
Tel +81-3-3214-5311

URL <http://www.nikon.com/>

URL <http://imaging.nikon.com/products/imaging/lineup/digitalcamera/slr/d3100/index.htm>

URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Nikon Digital SLR Camera D3100

EP-1-076

Home electric appliances/lighting

digital cameras

Nikon Digital Compact Camera COOLPIX S1100pj

Environmental performance

- (1) Resource saving
 - The suppression of photo print, by using a built-in projector, saves paper resource
- (2) You can also project data stored on PC at the presentation or meeting. This will be some sort of "Eco" at the business situations, instead of using the conventional data projectors
- (3) Power consumption efficiency: the projector brightness increases 40% compared with its predecessor "COOLPIX S1000PJ"
- (4) Reduction of hazardous substances
 - * Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive
 - * Lead-free solder: Used on all circuit boards
 - * Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

"COOLPIX S1100pj" is the compact digital camera with a built-in projector. You can start up the projector only by a touch of a button and enjoy projecting pictures on the spot they taken. "COOLPIX S1100pj" is a highly cost-effective camera with advanced functions, such as Optical 5x zoom from wide angle 28mm, VR image stabilization, Easy Auto Mode and Smart Portrait System etc.

NIKON CORPORATION

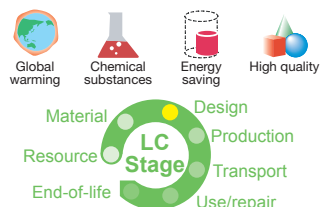
Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
Tel +81-3-3214-5311

URL <http://www.nikon.com/>

URL <http://imaging.nikon.com/products/imaging/lineup/digitalcamera/coolpix/style/s1100pj/index.htm>

URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Nikon Digital Compact Camera COOLPIX S1100pj

EP-1-077

Home electric appliances/lighting

digital cameras

Casio Digital Camera: EXILIM EX-H20G

Environmental performance

- *Advanced low-power technology suited for the various situations enables to realize the highly precise and speedy position tracking.
- *Enables users to take up to 600 shots with a single battery charge.
- *Contains no particular chemicals. (lead, mercury, cadmium, chromium hexavalent, flame retardant polybrominated biphenyls directed by EU RoHS/No PBDE)

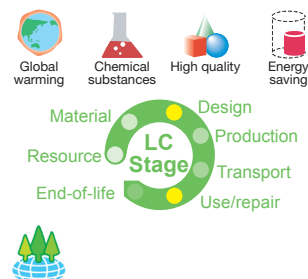
Product performance

- *World's first digital camera with autonomic indoor positioning through Hybrid GPS combining GPS with Motion-Sensor Driven Autonomic Positioning.
- *Complete with a wide range of functions useful for traveling.
- *Premium Auto function produces beautiful photos with just a press of the shutter button.
- *New Engine Enabling accurately capture the photo subjects with high-speed and advanced image processing.
- *Powerful zoom that maintains high-resolution image quality through 15x.

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543, Japan
 Tel +81-3-5334-4111
 URL <http://world.casio.com/>
 URL <http://www.exilim.com/>
 URL <http://world.casio.com/csr/>

Available in: Japan, Worldwide



EXILIM EX-H20G with Hybrid GPS technology

EP-1-078

Home electric appliances/lighting

digital cameras

3MOS Digital High Definition Video Camera HDC-TM650/TM750/SDT750

Environmental performance

Achieved Main Product weight (w/o Battery) of approx.380g (TM750/SDT750)/approx.328g (TM650) in 3mos type. Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved. Non-Use of Specific Chemical Substances * (*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

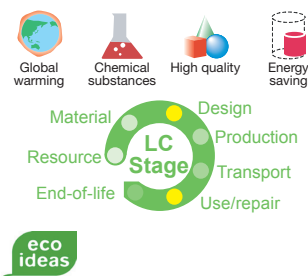
Product performance

3MOS Full HD 1080/60p Movie Recording.
 Built-In 96GB (TM750)/64GB (TM650) Memory & SD Card Twin Memory.
 12x Optical Zoom.
 HYBRID Optical Image Stabilization.
 Touch Screen.

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/csr/>

Available in: Worldwide



3MOS Digital High Definition Video Camera HDC-TM750

EP-1-079

Home electric appliances/lighting

digital cameras

Digital High Definition Video Camera HDC-TM35/SDX1

Environmental performance

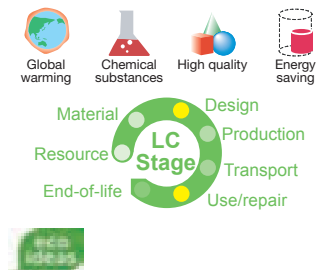
Achieved Main Product weight (w/o Battery) of approx.185g.
Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.
Non-Use of Specific Chemical Substances *
(*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

Full-HD & compact body.
Built-In 32GB Memory (TM35) & SD Card Twin Memory.
16.8x Optical Zoom.
HYBRID Optical Image Stabilization
Touch Screen.

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
Tel +81-6-6905-8356 Fax +81-6-6905-4755
URL <http://panasonic.net/>
URL <http://panasonic.net/csr/>



Available in: Japan, Asia, Europe, North America, China, South Africa, Southeast Asia, Thailand

Digital High Definition Video Camera HDC-TM35

EP-1-080

Home electric appliances/lighting

video cameras, except broadcast video cameras

Full HD CMOS-based Remote Head Color Camera System

Environmental performance

- Mitigation of climate change: 9.6% reduction in carbon dioxide emissions by 36% reduction in the number of electronic parts thanks to the adoption of a CMOS sensor and highly integrated circuits.
- Efficient use of resources: Adoption of recycle plastic

Product performance

FULL HD (1920x1080) output. Smallest and lightest CMOS remote head color camera in this field.
1/3 type 2.2 million pixel (effective pixel) progressive scanning CMOS is adopted.
- To obtain the best image quality, various function such as photometry area setting, 6 color matrix setting etc. are abundantly installed.
- DVI-I output enables us to connect with a commercial FULL HD monitor by 60 frames per second.
(as of August 2009)



TOSHIBA CORPORATION Digital Products & Network Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
URL <http://www.toshiba.co.jp/index.htm>
URL http://www.toshiba.com/taisid/indmed/products/prod_detail_ikhr1h.jsp
URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan, North America

Industrial Full HD Camera IK-HR1H/IK-HR1CD

EP-1-081

Home electric appliances/lighting

car navigation system

The ecologically (prevention of global warming) and economically highly efficient car navigation system

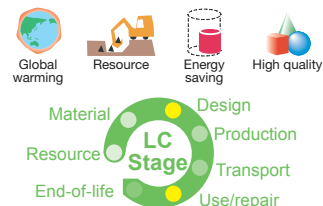
Environmental performance

The AV all-in-one HDD Car Navigation CARROZZERIA "CYBER NAVI" (AVIC-VH9990/ZH9990/H9990) supports true eco-driving, as a car navigation function that proposes the most fuel efficient route. The "Eco-route search" function estimates fuel consumption for all possible routes in advance, based on Smart Loop Congestion Information and Pioneer's proprietary "fuel estimation technology". It then proposes the route with the lowest fuel consumption. Eco-route driving reduces CO₂ emissions by about 20%* compared with car navigation systems that do not take into account traffic congestion (such as the FM-VICS). When the cost of gasoline is taken into account, eco-route driving delivers an approximate annual savings of 20,000 yen.

"Eco-status" feature enables enjoyment of checking the degree of eco-driving with a sense of fun in choosing from a variety of 10 graphic display types, and voice messages to support your eco-drive.

* According to a study by Pioneer (based on the results of a January 2010 comparative driving test on a Pioneer-specified course using 1500cc-class passenger vehicles by Japanese manufacturers).

Based on the Family Income and Expenditure Survey, conducted by Japan's Statistics Bureau of the Ministry of Internal Affairs and Communications in 2008.



PIONEER CORPORATION

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan

Tel +81-44-580-3211

URL <http://pioneer.jp/>

URL <http://pioneer.jp/carrozzeria/cybernavi/>

URL <http://pioneer.jp/environment/>



Available in: Japan

CARROZZERIA "CYBER NAVI" AVIC-ZH9990

EP-1-082

Home electric appliances/lighting

digital photo player

Digital Photo player MW-20

Environmental performance

consumption : approx.0.1W (North America and Japan model) .

Circuit is highly integrated to conserve energy.

Resources saving design

employed for circuit boards and key components.

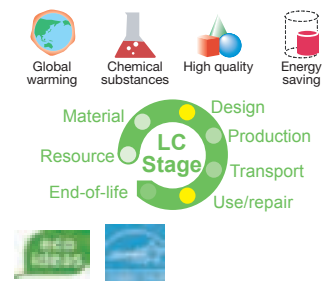
Non-Use of Specific Chemical Substances.*

(*Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

9inch TFT wide display.

Slim design of main unit depth 9.4mm & Stylish design.



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.net/>

URL <http://panasonic.net/csr/>



Available in: Japan, North America, Oceania, Europe

Digital Photo player MW-20

EP-1-083

Home electric appliances/lighting

watches

Casio Wristwatch: Radio Wave Solar Watch G-SHOCK

Environmental performance

*Uses a solar-power battery as the power source.

*An originally-designed solar system is utilized to transform even low amounts of light into power.

Product performance

*Shock resistant structure with high performance in heavy centrifugal gravity situations.

*The latest auto radio-wave receiving function, Multi-Band 6, receives time calibration radio signals up to six times per day (Japan_N, US, UK, Germany and China).



G-Shock Sky Cockpit GW-3500BD-1AJF

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543, Japan

Tel +81-3-5334-4111

URL <http://world.casio.com/>

URL <http://world.g-shock.com/>

URL <http://world.casio.com/csr/>

Available in: Japan, Worldwide

EP-1-084

Home electric appliances/lighting

ceiling fans

Welly Energy-Saving Ceiling Fan

Environmental performance

The Welly Energy Saving Ceiling Fan allows the user to set the air conditioner several degrees warmer without compromising comfort. This results in considerable savings over the course of the season by reducing electricity consumption, maximizing the performance of the cooling and heating systems and overall, providing better cost-effectiveness and helping to reduce carbon emission to protect the environment.

Product performance

The Welly Energy Saving Ceiling Fan is a fan which is installed on the ceiling. With the use of a central or window air-conditioning system, this fan eliminates the inconsistency of indoor temperature and increase indoor air ventilation. It is equipped with an infrared multi-functional remote control with 3 speeds for cooling. The ball-bearing electric motor is able to run up to 10,000 hours or more and the 18-inch blade with 360° degrees rotor frame can distribute the air evenly to every corner of the room. Each building has different interior ceiling height, there are different products to use and supply effectiveness of different.



Welly Technology International Ltd.

No.53-6, Fenliao Rd., Linkou Township, Taipei County, Taiwan (R.O.C), 244, Republic of China

Tel 886 (2) 86013579 Fax 886 (2) 86011940

E-mail rolandsu@welly-fan.com.tw

URL www.welly-fan.com.tw

Available in: Worldwide

EP-2-001

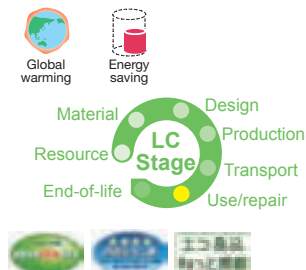
Carriers/automobiles

automobiles

New eco-friendly Prius with hybrid power

Environmental performance

The new Prius model is equipped with THS, a new-generation Toyota Hybrid System known as Hybrid Synergy Drive, which refers to the simultaneous evolution of ecology and power. It has achieved world-beating fuel economy of 35.5 km/L* and low exhaust emissions. The drive has been dramatically improved by the development of hybrid power. 10-15 mode drive. *Ministry of Land, Infrastructure, and Transport figure.



Toyota Motor Corporation

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan
 Tel +81-565-23-1341 Fax +81-565-23-5754
 E-mail satoshi_aida@mail.toyota.co.jp
 URL <http://www.toyota.co.jp>



Prius

EP-2-002

Carriers/automobiles

automobiles

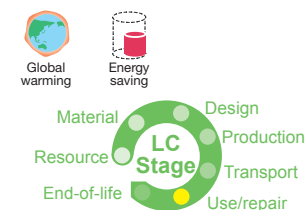
TOYOTA FCHV-adv

Environmental performance

The Toyota FCHV-adv achieved 25% better fuel economy and 60% higher pump-to-wheel efficiency in the Japanese 10-15 test cycle (Toyota test data) due to improvements made to the Toyota FC Stack and a redesigned fuel cell control system.

Product performance

From the start of the fuel cell vehicle effort in 1992, Toyota has pursued the development of its own fuel cell stack, the core component of any fuel cell vehicle. This high-performance fuel cell-the Toyota FC Stack-is a performance leader among vehicular fuel cells worldwide. In addition to the fuel cell, the FCHV has a secondary battery which stores energy regenerated during braking. When combined with the hybrid system which was first put to large-scale application in the Prius, the FCHV achieves highly efficient operation through sophisticated energy management. (Fuel type) Hydrogen, (Max cruising range) 330 km, (Max speed) 155 km/h, (Weight) 1880 kg, (Seating capacity) 5 people.



Toyota Motor Corporation

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan
 Tel +81-565-23-1341 Fax +81-565-23-5754
 E-mail satoshi_aida@mail.toyota.co.jp
 URL <http://www.toyota.co.jp>



TOYOTA FCHV-adv

EP-2-003

Carriers/automobiles

automobiles

Eco-friendly vehicle "TOYOTA CROWN HYBRID"

Environmental performance

Automobile hybrid systems combine two motive power sources, namely an internal combustion engine and an electric motor, to take advantage of the benefits provided by both these power sources while compensating for each other's shortcomings, resulting in highly efficient driving performance. Although hybrid systems use an electric motor, they do not require external charging as do all-electric vehicles.

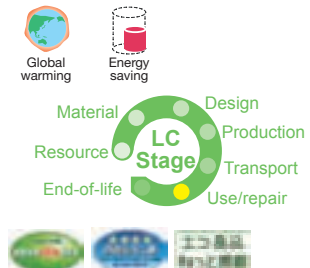
Product performance

Toyota Crown Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 15.8 km/liter
- 2) Technology to reduce fuel consumption
 - Variable valve timing
 - Electric power steering system
 - Direct injection 4 stroke gasoline engine
 - Idling stop system

Toyota Motor Corporation

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan
 Tel +81-565-23-1341 Fax +81-565-23-5754
 E-mail satoshi_aida@mail.toyota.co.jp
 URL <http://www.toyota.co.jp>



TOYOTA CROWN HYBRID

EP-2-004

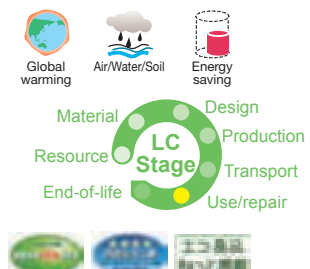
Carriers/automobiles

automobiles

Eco-friendly Hybrid vehicle "TOYOTA HARRIER HYBRID"

Environmental performance

Toyota Harrier Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure, and Transport. (1) Specific fuel consumption (10-15 Japanese test cycle): 17.8 km/liter (2) Technology to reduce fuel consumption: Hybrid system -- Continuously variable transmission, Variable valve timing, Electric power steering system



Eco-friendly Hybrid vehicle "TOYOTA HARRIER HYBRID"

Toyota Motor Corporation

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan
 Tel +81-565-23-1341 Fax +81-565-23-5754
 E-mail satoshi_aida@mail.toyota.co.jp
 URL <http://www.toyota.co.jp>

EP-2-005

Carriers/automobiles

automobiles

Eco-friendly Lexus LS600h with hybrid power

Environmental performance

The Lexus 600h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 12.2 km/L and low exhaust emissions.

Global warming

Air/Water/Soil

Energy saving

Material

Resource

End-of-life




Design




Production


Transport

Use/repair

LC Stage







Lexus LS600h with hybrid power

EP-2-006

Carriers/automobiles

automobiles

Eco-friendly Lexus GS450h with hybrid power

Environmental performance

The Lexus 450h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 14.2 km/L and low exhaust emissions.

Global warming

Energy saving

Material

Resource

End-of-life



Design



Production


Transport

Use/repair

LC Stage







Lexus GS450h with hybrid power

EP-2-007

Carriers/automobiles

automobiles

Honda FCX Clarity hydrogen fuel cell electric vehicle

Environmental performance

The FCX Clarity was designed from scratch as a dedicated hydrogen fuel cell electric vehicle. It is powered by the highly compact, efficient and powerful Honda V Flow fuel cell stack. Boasting a low-slung, dynamic and sophisticated appearance made possible by the innovative layout of the fuel cell power plant, the FCX Clarity offers superior design and driving performance as well as environmental responsibility.
Fuel/cruising range: 620km in 10-15 mode (Honda calculations)

Product performance

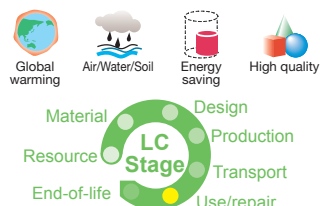
Length:4,845mm
Wight:1,845mm
Height:1,470mm
Wheelbase:2,800mm

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan
URL <http://world.honda.com/>
URL <http://world.honda.com/FCXClarity/>
URL <http://world.honda.com/CSR/>

Available in: Japan, U.S.A

Honda FCX Clarity



EP-2-008

Carriers/automobiles

automobiles

Honda Insight

Environmental performance

Designed to set the standard for compact cars for a new era, the Insight combines outstanding environmental performance with fun, responsive driving and efficient, versatile packaging. The all-new Honda Insight was developed with the goal to provide these attributes in a car that is affordable to more customers.

Offering customers exceptional fuel economy, the Insight features a newly developed hybrid system including a 1.3-liter i-VTEC engine and Honda's proprietary Integrated Motor Assist (IMA). To further support fuel-efficient driving, the Insight features the Ecological Drive Assist System (Eco Assist) as standard equipment on all models.
fuel economy: 30 km/L in 10-15 mode (G-type and L-type)

Product performance

Length:4,390mm
Width:1,695mm
Height:1,425mm
Wheelbase:2,550mm

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan
URL <http://world.honda.com/>
URL <http://world.honda.com/INSIGHT/>
URL <http://world.honda.com/CSR/>

Available in: Japan, Europe, North America

Honda Insight



EP-2-009

Carriers/automobiles

automobiles

Honda Civic Hybrid

Environmental performance

The Civic Hybrid is equipped with the new 3-Stage i-VTEC + IMA Honda Hybrid System that delivers both spirited performance and an ultra-high fuel economy of 31 km/L*.

* Civic Hybrid MXB-type in 10-15 mode

Product performance

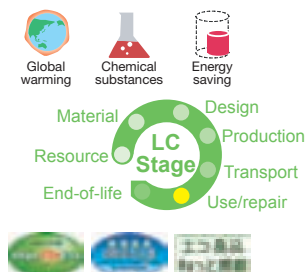
Length: 4,535mm
Width: 1,750mm
Height: 1,435mm
Wheelbase: 2,700mm

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan
URL <http://world.honda.com/>
URL <http://world.honda.com/CIVICHYBRID/>
URL <http://world.honda.com/CSR/>

Available in: Japan, Asia, North America, South America

Honda Civic Hybrid



EP-2-010

Carriers/automobiles

automobiles

Honda CR-Z

Environmental performance

Based on Honda's passion to broaden the potential for a hybrid vehicle and enable customers to experience a new kind of excitement with all of their senses, CR-Z was developed offering three core values - Emotional (emotional look and feel), Exciting (make people want to enjoy driving) and Smart (environmentally responsible, useful and liberating). To achieve these three values in all areas of this vehicle, including design, packaging and performance, Honda applied its most advanced technologies.

Environmental Performance

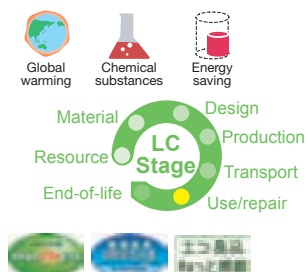
- 1) The CR-Z offers exceptional fuel economy of 25.0 km/L (CVT) and 22.5 km/L (MT) in 10-15 mode and 22.8 km/L (CVT) and 20.6 km/L (MT) in JC08 mode.

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan
URL <http://world.honda.com/>
URL <http://world.honda.com/CR-Z/>
URL <http://world.honda.com/CSR/>

Available in: Japan, Europe, North America

Honda CR-Z



EP-2-011

Carriers/automobiles

automobiles

Honda Fit Hybrid

Environmental performance

The newly-added Fit Hybrid will be offered at the starting price of 1.59 million yen*1, making it the most affordable of all Honda hybrid vehicles. The battery for the hybrid system*2 is located under the rear cargo area which enables the Fit to share the same flexible seating configurations as the rest of the lineup without sacrificing interior comfort that is unique to Fit. This also made it possible to achieve excellent fuel economy of 30km/liter*3 without sacrificing the enjoyable drive feel.

*1 MSRP (including consumption tax)

*2 IPU (Intelligent Power Unit) which consists of PCU (Power Control Unit) and a battery.

*3 Figures for Fit Hybrid, based on results of 10-15 mode fuel-efficiency testing by Japanese Ministry of Land, Infrastructure, Transport and Tourism

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

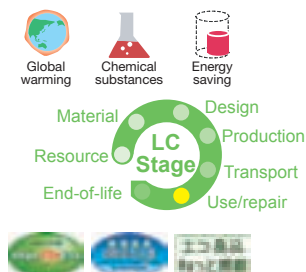
URL <http://world.honda.com/>

URL <http://world.honda.com/Fit/>

URL <http://world.honda.com/CSR/>

Available in: Japan, Asia, North America, South America

Honda Fit Hybrid



EP-2-012

Carriers/automobiles

automobiles

Nissan LEAF

Environmental performance

Nissan LEAF is a zero emission car which doesn't produce CO₂ or exhaust gas. As a uniquely designed mass production EV, it has a roomy 5 passenger seating capacity and features a laminated lithium-ion battery (90kW) manufactured by AESC, a Nissan and NEC joint venture that give it a driving range of 200km (under JC08 mode: estimation). The inverter and small high-powered motor which gives the Nissan LEAF its powerful and linear driving are also assembled by Nissan. A full 100% charge takes about 8 hours with a normal charging outlet (200V) and when depleted can be powered up to 80% in just 30 minutes using the Quick Charger. Special features also include a unique Zero Emission IT support system that guide drivers to the nearest charging spots while traveling and a timed charging system that automatically charges, to take advantage of cheaper electricity rates at night time when plugged in.

Nissan LEAF will be launched in Japan and US in December, 2010, followed by Europe in early 2011.

Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan

Tel +81-45-523-5523

URL <http://www.nissan-global.com>

URL <http://www.nissan-zeroemission.com>

Available in: Japan, Europe, North America



EP-2-013

Carriers/automobiles

automobiles

Energy Saving and Low Pollution

Environmental performance

FIT helps make for a cleaner, greener world with Euro 4 compliant emissions, advanced technology for cleaner exhausts, and uses recyclable parts. Also, the aerodynamic shape, innovative engine design and light, high-tensile steel make FIT an efficient machine.

Resource

Air/Water/Soil

Energy saving

Material

Resource

End-of-life


Design

Production

Transport

Use/repair

LC Stage



Honda Taiwan Co., Ltd.

No. 337, Dashi Rd., Pingtung City 900-93, Taiwan, R.O.C., Republic of China
Tel 886-8-7558788 Fax 886-8-7559788
E-mail cc_lu@honda-htw.com.tw
URL <http://www.honda-taiwan.com.tw/index.aspx>

Available in: Taiwan (Rep. of China)

EP-2-014

Carriers/automobiles

automobiles

Energy Saving and Low Pollution

Environmental performance

In designing, CR-V 2.0 focused on aerodynamics, modern lines and meticulous attentions to 12.4 detail. CR-V 2.0 shaped to enhance fuel economy. So feel free to your travel, without guilt. The i-VTEC technology ensured that the CR-V achieves both power and efficiency.

Resource

Energy saving

Material

Resource

End-of-life


Design

Production

Transport

Use/repair

LC Stage



Honda Taiwan Co., Ltd.

No. 337, Dashi Rd., Pingtung City 900-93, Taiwan, Republic of China
Tel 886-8-7558788 Fax 886-8-7559788
E-mail cc_lu@honda-htw.com.tw
URL <http://www.honda-taiwan.com.tw/index.aspx>

Available in: Taiwan (Rep. of China)

EP-2-015

Carriers/automobiles

automobiles

Chevrolet AVEO

Environmental performance

- Comply EURO III emission standard.
- Low fuel consumption.
- Low noise disturbance from engine.
- Control the use of all chemical substances as General Motors's requirements.
- No ozone depletion potentials.
- Use recycled material parts.
- Provide guidance for waste disposal in service manual.
- Manufacturing process comply ISO14001

Product performance

Chevrolet AVEO use recycled material parts, and control the use of all chemical substances as General Motors's requirements.
Chevrolet AVEO has low fuel consumption and low exhaust emission.

General Motors (Thailand) Ltd.

111/1 Moo 4 Eastern Seaboard Industrial Estate Pluakdaent Rayong, 21140, Thailand
Tel +66 3895 4999 Fax +66 3895 4808
E-mail infocac@chevroletthailand.com
URL www.gmthailand.com
URL www.chevrolet.co.th

Available in: ASEAN, Thailand



CHEVROLET AVEO

EP-2-016

Carriers/automobiles

automobiles

Chevrolet Captiva

Environmental performance

- Comply EURO III emission standard.
- Low fuel consumption.
- Low noise disturbance from engine.
- Control the use of all chemical substances as General Motors's requirements.
- No ozone depletion potentials.
- Use recycled material parts.
- Provide guidance for waste disposal in service manual.
- Manufacturing process comply ISO14001

Product performance

Chevrolet Captiva use recycled material parts, and control the use of all chemical substances as General Motors's requirements.
Chevrolet Captiva has advanced technology with environment friendly.

General Motors (Thailand) Ltd.

111/1 Moo 4 Eastern Seaboard Industrial Estate Pluakdaent Rayong, 21140, Thailand
Tel +66 3895 4999 Fax +66 3895 4808
E-mail infocac@chevroletthailand.com
URL www.gmthailand.com
URL www.chevrolet.co.th

Available in: ASEAN, Thailand



CHEVROLET CAPTIVA

EP-2-017

Carriers/automobiles

automobiles

Nissan Fuga Hybrid

Environmental performance

The Fuga Hybrid's Intelligent Dual Clutch Control system connects the high-response electric motor and engine directly to the transmission, without the use of a torque converter. This highly efficient and lightweight hybrid system contributes to fuel efficiency of 19.0km/L (10-15 mode) - comparable to that of a compact car, while also providing the direct feel and exhilarating driving performance.

Since one of the two clutches completely disconnects the motor from the engine, quiet and highly efficient EV mode driving is realized. The EV mode is frequently applied, helping the Fuga Hybrid achieve best-in-class fuel economy.

The Fuga Hybrid's compact, high-output lithium-ion battery is able to charge/discharge quickly. Also the Fuga Hybrid's electronic 7-speed hybrid transmission with manual shift mode features optimized shift performance according to the motor's output characteristics.

Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan

Tel +81-45-523-5523

URL <http://www.nissan-global.com>

Available in: Japan, North America



Nissan Fuga Hybrid

EP-2-018

Carriers/automobiles

automobiles

Nissan Clean Diesel X-TRAIL 20GT

Environmental performance

Nissan Clean Diesel X-TRAIL 20GT meets most stringent emissions regulation and also achieves excellent fuel economy such as 15.2km/l (manual transmission) / 14.2km/l (automatic transmission) in 10/15 mode by featuring advanced technologies for emission reduction.

- Common rail fuel injection system
- Re-circulated exhaust gas cooler
- Diesel particulate filter
- New Lean NOx trap catalyst
- Double swirl port

Nissan Clean Diesel X-TRAIL 20GT highly reduced typical diesel noise and vibrations and also provides superior quietness in the cabin.

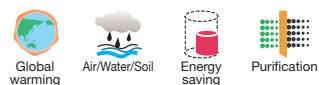
Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan

Tel +81-45-523-5523

URL <http://www.nissan-global.com>

Available in: Japan



EP-2-019

Carriers/automobiles

trucks

Natural Gas Truck

Environmental performance

The natural gas vehicle (NGV) is environmentally friendly as it emits no PM / black exhaust and less NO_x / CO₂ than gasoline or diesel vehicles.

Because of its environmentally-friendly features, NGV plays an important role in reducing the world's dependency on oil. Osaka Gas promotes broader use of NGVs in Japan by spreading it in the network of intercity transportation.

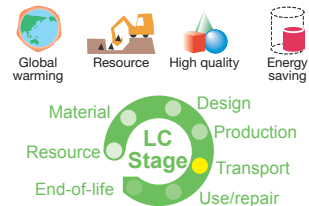
Product performance

- (1) Mileage per filling: 450 km (Tank capacity: 721 l)
- (2) Displacement: 9,900 cc
- (3) Maximum output: 380 Ps
- (4) Maximum load: 13.5 t

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan
 Tel +81-6-6205-4605 Fax +81-6-6202-1040
 URL <http://www.osakagas.co.jp/indexe.html>
 URL http://www.osakagas.co.jp/csr_e/index.html

Available in: Japan



Natural Gas Truck

EP-2-020

Carriers/automobiles

trucks

Clean Diesel Truck "TOYOTA DYNA & TOYOACE Hybrid"

Environmental performance

This truck equipped with a hybrid system is the first of its kind in the world and was jointly developed with Hino Motors, Ltd. This truck has achieved a PM & NO_x emission level that is 10% lower than the standard levels for 2005, qualifying it as a low emission diesel vehicle. The truck's fuel efficiency has also been improved by 30%. Max payload: 2-3 tons; Fuel type: low-sulfur diesel at 50 ppm max



Clean diesel truck "TOYOTA DYNA Hybrid"

Toyota Motor Corporation

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan
 Tel +81-565-23-1341 Fax +81-565-23-5754
 E-mail satoshi_aida@mail.toyota.co.jp
 URL <http://www.toyota.co.jp>

EP-2-021

Carriers/automobiles

forklift trucks

Internal combustion lift truck "GENEO (8FG/D) "

Environmental performance

The newest model internal combustion lift truck "GENEO (8FG/D)" now comes equipped as standard with an electronically controlled fuel injection system and a three-way catalytic muffler. Compared to our previous model lift truck, CO emissions have been cut by nearly 57%, and NOx and HC emissions have been reduced nearly 99%. Thanks to these improvements the exhaust gasses are cleaner and they already meet the new exhaust gas emissions standards for gasoline powered vehicles.

Also, operating noise has been reduced through the adoption of sound insulation and absorption measures, as well as a mechanism to prevent fork operating noise. Improvements to the paints used and the use of lead-free solder have lead to huge reductions in lead and hexavalent chromium.



Internal combustion lift truck "GENEO (8FG/D) "

Toyota Industries Corporation

2-1, Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan

Tel +81-566-22-2511 Fax +81-566-27-5650

URL <http://www.toyota-industries.com/>

URL <http://www.toyota-industries.com/product/indv/lf/sangyo01.html#sangyo01a>

URL <http://www.toyota-industries.com/csr/library/>

EP-2-022

Carriers/automobiles

motorcycles

Honda Super Cub 50

Environmental performance

The Super Cub 50's 50-cc air-cooled 4-stroke single-cylinder engine is equipped with Programmed Fuel Injection (PGM-FI)*, which brings an ideal balance between energy and environmental design and smooth and powerful output characteristics. This system enables appropriate, computer-controlled fuel supply according to various driving conditions, and gasoline mileage, especially on roads in urban areas where frequent acceleration is required, is greatly improved. In addition, thanks to the catalyzer equipped inside the exhaust pipe along with PGM-FI, the vehicle complies with national exhaust emissions regulations for two-wheel vehicles.

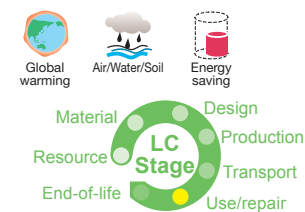
*PGM-FI (Programmed Fuel Injection) is a registered trademark of Honda.

Product performance

*4-stroke engine that offers excellent fuel efficiency, silence, reliance and endurance

*Low-floor backbone frame to allow users to get on and off easily.

*Auto centrifugal clutch dispensing clutch operation



Honda Super Cub50

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL <http://world.honda.com/>

URL <http://world.honda.com/CSR/>

Available in: Japan

EP-2-023

Carriers/automobiles

electric hybrid bicycle

Electric Hybrid Bicycle CY-SPL226

Environmental performance

- 1) Loop-charge technology
Comfortable running with automatic control program & long running distance. Includes a smart automatic control system that changes the motor output on uphill slopes depending on gradient and automatically switches the motor to a generator on downhill slopes.
- 2) Power up mode
Powerful assistance of 1:2 compared with assistance is achieved.
- 3) Abolition of polystyrene foam for packaging.
- 4) The new "Eco Charge Mode" enables the rider to charge the battery smoothly in consideration of human senses even while pedaling on flat roads according to various riding conditions such as the exercise volume, riding speed and road conditions. Compared to the "Power Mode", "Eco Charge Mode" increases the riding distance on one charge by about 50%.

Product performance

- 1) Battery light with reflector and three high-intensity white LED lights for the headlamp of the bike's light system. The taillight uses a brake lamp whose blink rate changes when the brake is applied in association with the operation of the rear brake lever.
- 2) Simple design with a new S-shaped frame featuring built-in
- 3) Power will resume even after motor assist turns off.
If motor assist turns off while riding because of the low battery level, the motor assist can resume with about 1 Ah of batter power remaining by holding down the power button for two seconds. This is the industry's first function.*

*For power-assisted bicycles for women, as of the release date (March 2, 2010). n cords and wiring.

SANYO Electric Co., Ltd.

5-5, Keihan-hondori2-chome, Moriguchi City, Osaka, Japan



Global warming



Energy saving



Available in: Japan, North America

Electric Hybrid Bicycle CY-SPL226

EP-2-024

Carriers/automobiles

energy storage systems for rolling stock

An Accumulating System for Railroad Carriages which Recycles Discharged Thermal Energy

Environmental performance

- Mitigation of climate change: 8% of inverter regenerated energy (energy generated during braking) is absorbed and recycled, amounting to 2% of the rolling stock acceleration energy.

Product performance

- Improvement in brake energy consumption: 50% of the energy previously consumed by the mechanical brakes of a motor-powered train is recycled.
- Increased brake life: Reduced brake abrasion lengthens the life of parts.



Global warming



High quality



Energy saving



TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-4556 Fax +81-3-5444-9276

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Energy storage system (EDLC) : COB015-A0,
DC/DC converter system: COV068-A0

EP-3-001

OA/IT equipment

multifunctional copy machines/printers

Powerful performance and lightning speed color MFP for office environment

Environmental performance

- Mitigation of climate change: Reduces CO₂ emissions of mainly in usage stage by adopting high-efficient fusing engine and low-temperature fusing toner technologies (reduce amount of CO₂ emissions of all stages: 461.6kg per year)
- Efficient use of resources: Uses recycled plastics for cases etc.
- Management of chemicals: Reduces harmful substances by halogen-free and chromium-free materials

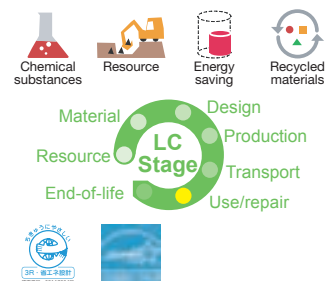
Product performance

- Touch panel: Large color LCD with touch panel enables easy operation
- High speed: High-speed printing to match business needs
- Fast scanning: High speed document scanner enables fast scanning for high volume documents

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo,
141-8664, Japan
Tel +81-3-6422-7164 Fax +81-3-6422-7121
URL <http://www.toshibatec.co.jp/index.html.html>
URL <http://www.toshibatec.co.jp/csr/report/index.html>

Available in: Japan



Multifunctional Digital Color Systems e-STUDIO6530C

EP-3-002

OA/IT equipment

multifunctional copy machines/printers

Monochrome laser multifunction printer, imageCLASS MF4550d

Environmental performance

- (1) Energy saving with Canon's original On-Demand fixing technology, resulting in a first copy out time of 9 seconds and the power consumption of approx 3W in sleep mode. Comply with the International ENERGY STAR Program standard (TEC value: 0.9kWh for 230V).
- (2) Comply with EU RoHS Directive which restricts and prohibits the use of hazardous substances
- (3) Automatic double-sided printing and 4-in-1 printing which reduce paper consumption

*This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

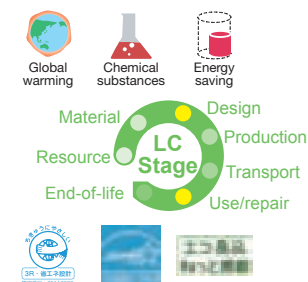
Product performance

- (1) Copy and print speed: 25 cpm/ppm (A4 size)
- (2) Easy to use LCD display with 5 lines of text plus animations
- (3) Space-saving design of 390mm wide
- (4) China model has standard handsets, which are optional in the other areas.

CANON INC.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
Tel +81-3-3758-2111 Fax +81-3-3758-8225
URL <http://www.canon.com/environment/>

Available in: Japan, Asia, Oceania, Europe



imageCLASS MF4550d

EP-3-003

OA/IT equipment

multifunctional copy machines/printers

imageRUNNER ADVANCE C2020/C2030

Environmental performance

- (1) Energy saving and quick start with Canon's original On-Demand fixing technology, achieving the power consumption of less than 1W in sleep mode and less than 10 seconds for recovery (warm-up time)
- (2) Comply with EU RoHS Directive, and further lead-free in anticipation of RoHS exemptions review
- (3) Biomass plastic with more than 25% plant-derived constituents used for operation buttons

* This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

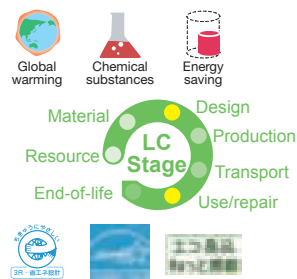
Product performance

- (1) Compact body and space-saving design with internal finishing configuration
- (2) High definition color screen with user-friendly icons making operation ever so easy and customizable menu to improve operation efficiency
- (3) Auto-duplex which reduces the cost for paper

CANON INC.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
Tel +81-3-3758-2111 Fax +81-3-3758-8225
URL <http://www.canon.com/environment/>

Available in: Worldwide



imageRUNNER ADVANCE C2030 with option units

EP-3-004

OA/IT equipment

multifunctional copy machines/printers

imageRUNNER ADVANCE C5051/C5045/C5035/C5030

Environmental performance

- (1) Energy saving with Canon's original On-demand fixing technology and less than 1.5W power consumption in sleep mode.
- (2) CO₂ emissions in product life cycle (the stages of producing, use and transportations) are reduced, using original new design system.
- (3) Biomass plastic with highest levels of flame retardance is used in exterior plastic parts. Biomass plastic is also used in a touch pen and operation buttons.
- (4) Comply with the EU RoHS Directive, and further lead-free in anticipation of RoHS exemptions review.

* This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

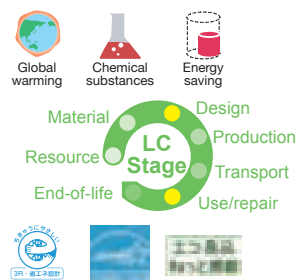
Product performance

- (1) A large screen with user-friendly icons making operation ever so easy and customizable menu to improve operation efficiency
- (2) Security options to ensure that your documents stay safe and confidential
- (3) Compact body and space-saving design

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
Tel +81-3-3758-2111 Fax +81-3-3758-8225
URL <http://www.canon.com/environment/>

Available in: Worldwide



imageRUNNER ADVANCE C5035 with options including Inner Finisher

EP-3-005

OA/IT equipment

multifunctional copy machines/printers

Black and White Multifunctional Printer iR 3245/3245N

Environmental performance

- (1) Energy saving with Canon's original On-Demand fixing technology, resulting in the power consumption of 1.5W in sleep mode and 10 sec or less recovery time.
- (2) Comply with the EU RoHS Directive which restricts and prohibits the use of chemical substances
- (3) Standard automatic duplexing

* This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc.
The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

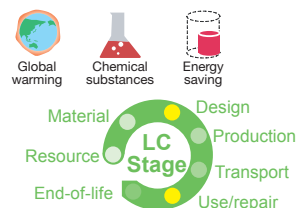
Product performance

- (1) Copy/Print speed 45 ppm (A4 size)
- (2) Compact body of 565 mm (same as with optional Finisher-S1)
- (3) Providing with color scanning. With the optional Color Universal Send Technology, users can distribute scanned documents to multiple network destinations such as e-mail addresses and network folders.
- (4) Control panel designed with a new TFT touch-screen, providing a wider viewing angle and greater contrast to facilitate easier operation.

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
Tel +81-3-3758-2111 Fax +81-3-3758-8225
URL <http://www.canon.com/environment/>

Available in: Worldwide



iR 3245 with DADF-U1, Finisher-S1, etc.

EP-3-006

OA/IT equipment

multifunctional copy machines/printers

iR 6570N

Environmental performance

- (1) The used machines collected from the customers are disassembled and remanufactured. Only the parts complying with the remanufacturing quality standards are selected and cleaned. An average 91% of parts are reused by weight with Canon's original recycling technology for cleaning the exterior parts. The high rate of reused parts reduces environmental burden (converted to CO₂ emissions) up to the manufacturing stage.
- (2) Canon's original IH fixing technology is equipped, which achieves great reduction of energy consumption.

* This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc.
The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

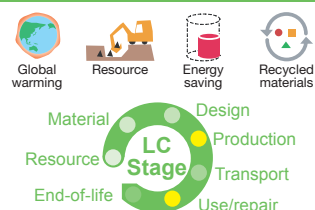
Product performance

- (1) 65ppm
- (2) Standard LIPS LX is incorporated which shortens data processing time and improves printing performance

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
Tel +81-3-3758-2111 Fax +81-3-3758-8225
URL <http://www.canon.com/environment/>

Available in: Japan, Republic of Korea



iR 6570N-R for Japan (same as iR 6570N for Korea) with optional finisher

EP-3-007

OA/IT equipment

multifunctional copy machines/printers

PIXUS MG6130/PIXMA MG6170, A4 Inkjet Photo All-In-One Printer

Environmental performance

- (1) Energy saving: Power savings of 28% have been achieved compared to the conventional printer MP610 through energy saving technology for the power-off, standby, and operating modes.
- (2) Resource Saving: Package volume has been reduced with compact design and strengthening of the printer. 9% reduction by printer volume and 26% reduction by package volume have been achieved in comparison with those of the MP610.
- (3) Eco-mark label is approved.

* This product is manufactured by CANON INC. and is sold by Canon Marketing Japan Inc. The party to the Eco Mark utilization contract for this product is Canon Marketing Japan Inc.

Product performance

- (1) The high-definition photo-printing with exceptional resolution up to 9600 dpi and ink droplets of 1 pl (pico-liter), with 41 sec. of high-speed A4 photo printing, and the 4800dpi high-resolution scanning.
- (2) Only those keys required for each operation light up to guide users with enhanced operating ease.
- (3) Wireless printing and scanning are available with wireless LAN.
- (4) Possible to print from non-PC device, such as iPhone, iPod touch and Android terminals.

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
Tel +81-3-3758-2111 Fax +81-3-3758-8225
URL <http://www.canon.com/environment/>

Available in: Worldwide



Global warming



Energy saving



Resource



End-of-life



Design

Production

Transport

Use/repair



PIXUS MG6130/PIXMA MG6170

EP-3-008

OA/IT equipment

multifunctional copy machines/printers

Multi function printer EP-803A/AW (Epson Stylus Photo TX720WD/PX720WD, Artisan 725)

Environmental performance

<Resource saving>
The EP-803A/AW is 34% smaller and 3% lighter than the PM-A890 (FY2005). Reduced size has resulted in a 14% increase in the number of units that can be loaded on pallets for delivery.

<Products that are focused on the effective use of resources>
Unpainted housing: Reduces the impact of painting and improves plastic recyclability
Use of recycled materials: Uses recycled plastic for internal printer parts
Effective use of paper: Optional auto-duplex printing feature

<Elimination of hazardous substances>
The EP-803A/AW conforms to the EU RoHS Directive.

<Global warming impact>
The EP-803A/AW has approximately 5% lower global warming impact (CO₂ equivalent) across the product life cycle than the EP-802A from 2009.

*This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation. The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation. For more information, see <http://www.epson.jp/>

Product performance

This product is an all-in-one inkjet printer having the functions of copier, scanner, and printer built-in Wi-Fi, plus wired LAN and wireless LAN, and versatile paper handling.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan
Tel +81-266-52-3131
URL <http://www.epson.co.jp/e/community/environment/>
URL <http://www.epson.com/>
URL <http://www.epson.co.jp/e/community/>

Available in: Japan, Oceania, Europe, North America, Central America, South America, Republic of Korea, China, Southeast Asia



Global warming



Resource



Energy saving



Recyclable

69kg-CO₂

not Inspection



Resource/Materials/Production/Transfer/Use/End-of-Life



EP-803A/AW (Epson Stylus Photo TX720WD/PX720WD, Artisan 725)

EP-3-009

OA/IT equipment

multifunctional copy machines/printers

Digital Multifunctional System (MX-M200D/M160D)

Environmental performance

- (1) Energy-saving design: these models have pre-heat and auto power shut-off modes.
- (2) Non-halogen resin is used for the exterior and interior parts (except for some internal parts).

Product performance

The three functions of copying, printing and scanning are integrated into one main unit to help improve operational efficiency in the office.



MX-M200D/M160D (inc. options)

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL <http://sharp-world.com/corporate/eco/>

EP-3-010

OA/IT equipment

multifunctional copy machines/printers

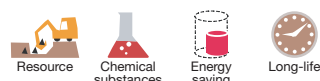
Digital Multifunctional System (MX-M310/M310N/M260/M260N)

Environmental performance

- (1) Energy-saving design: these models have pre-heat and auto power shut-off modes.
- (2) These models comply with the EU RoHS directive. Non-halogen resin is used for the exterior and interior parts (except for some internal parts).

Product performance

The two functions of copying and printing are integrated into one main unit to help improve operational efficiency in the office.



MX-M310/M310N/M260/M260N (inc. options)

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL <http://sharp-world.com/corporate/eco/>

EP-3-011

OA/IT equipment

multifunctional copy machines/printers

Digital Multifunctional System (MX-M502N/M452N/M362N/M282N)

Environmental performance

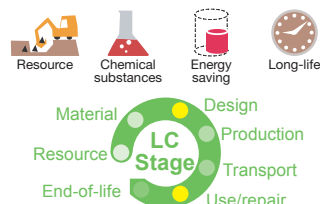
- (1) Night-time fax standby power consumption is less than 1W. These models lead the industry in energy saving for MFPs.
- (2) Complies with the RoHS directive and uses no hazardous substances. Sharp has fully eliminated harmful lead and chromium in all parts and materials of these models.
- (3) Conforms to the ENERGY STAR program. These models have two levels of energy-saving modes to reduce or shut off electricity after a period of inactivity.

Product performance

These models deliver a fast output of 50/45/36/28 cpm/ppm, enabling large volume documents that include memory-intensive graphics to be produced in less time. The first copy comes out in just 3.9/3.9/4.6/4.6 seconds to save valuable time when performing multiple short-run jobs.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL <http://sharp-world.com/corporate/eco/>



MX-M502N/M452N/M362N/M282N (inc. options)

EP-3-012

OA/IT equipment

multifunctional copy machines/printers

Digital Full Color Multifunctional System (MX-2310U)

Environmental performance

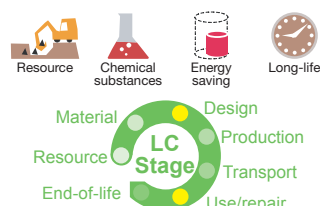
- (1) Fax standby power consumption is less than 1W. This model leads the industry in energy saving for colour MFPs.
- (2) Complies with the RoHS directive and uses no hazardous substances. Sharp has fully eliminated harmful lead and chromium in all parts and materials of this model.
- (3) Conforms to the ENERGY STAR program. This model has two levels of energy-saving modes to reduce or shut off electricity after a period of inactivity.

Product performance

Sharp thoroughly revamped its imaging process for this model; now a high-performance processor, a new developer, and the second-generation Mycrostoner-HG (High Grade) combine to provide breathtaking image quality.

Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL <http://sharp-world.com/corporate/eco/>



MX-2310U (inc. options)

EP-3-013

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub C220

Environmental performance

Konica Minolta bizhub C220 color multi-functional product is designed with the environment in mind.

- Blue Angle
- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

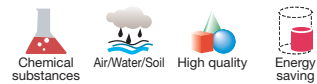
Konica Minolta bizhub C220 is color multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NOx and SOx emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability
- 7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.
- Reduced machine operation noise.

Inter Far East Engineering Public Company Limited

33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

Available in: Thailand



bizhub C220 main unit FS-527 Staple
finisher DF-617 Document feeder PC-207
2x universal tray

EP-3-014

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub C280

Environmental performance

Konica Minolta bizhub C280 color multi-functional product is designed with the environment in mind.

- Blue Angle
- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

Konica Minolta bizhub C280 is color multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NOx and SOx emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability
- 7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.
- Reduced machine operation noise.

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33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

Available in: Thailand



bizhub C280 main unit FS-527 Staple
finisher DF-617 Document feeder PC-207
2x universal tray

EP-3-015

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub C360

Environmental performance

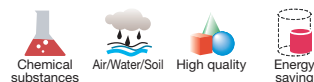
Konica Minolta bizhub C360 color multi-functional product is designed with the environment in mind.

- Blue Angle
- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

Konica Minolta bizhub C360 is color multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NOx and SOx emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability
- 7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.
- Reduced machine operation noise.



bizhub C360 main unit FS-527 Staple finisher DF-617 Document feeder PC-408 Large capacity tray

Inter Far East Engineering Public Company Limited

33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

Available in: Thailand

EP-3-016

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub C452

Environmental performance

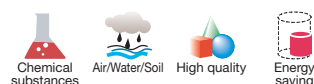
Konica Minolta bizhub C452 color multi-functional product is designed with the environment in mind.

- Blue Angle
- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

Konica Minolta bizhub C452 is color multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NOx and SOx emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability
- 7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.
- Reduced machine operation noise.



bizhub C452 main unit, JS-504 Job separator

Inter Far East Engineering Public Company Limited

33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

Available in: Thailand

EP-3-017

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub C652

Environmental performance

Konica Minolta bizhub C652 color multi-functional product is designed with the environment in mind.

- Blue Angel
- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

Konica Minolta bizhub C652 is color multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NOx and SOx emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability
7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.
- Reduced machine operation noise.



bizhub C652 main unit, FS-526 Staple finisher, PI-505 Post inserter, SD-508 Saddle kit

Inter Far East Engineering Public Company Limited

33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

Available in: Thailand

EP-3-018

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub 601

Environmental performance

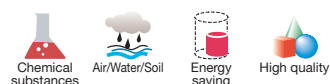
Konica Minolta bizhub 601 multi-functional product is designed with the environment in mind.

- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

Konica Minolta bizhub 601 is multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NOx and SOx emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability
7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.



bizhub 601 FS-610, Booklet finisher, PI-504, Post Insertor

Inter Far East Engineering Public Company Limited

33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

Available in: Thailand

EP-3-019

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub 751

Environmental performance

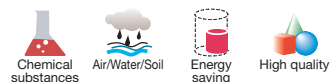
Konica Minolta bizhub 751 multi-functional product is designed with the environment in mind.

- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

Konica Minolta bizhub 751 is multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NOx and SOx emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability 7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.



bizhub 751, main unit, FS-610, Booklet finisher, PI-504, Post Insertor

Available in: Thailand

Inter Far East Engineering Public Company Limited

33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

EP-3-020

OA/IT equipment

multifunctional copy machines/printers

Multi-Function Product (Copier, Printer, Scanner and Facsimile)

Environmental performance

Ricoh's Philosophy - "...to achieve a sustainable society where environmental impact is limited to a level that the Earth can deal with."

Like all Ricoh products, the awarded models reflects Ricoh's commitment to the environment through:

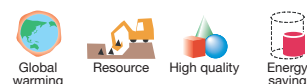
- Life Cycle Management - striving to reduce all environmental impact systematically, including business partners, in every environmental aspect of the total life cycle.
- Total Green Office Solution - Ricoh has developed tools to help you better compare, assess and monitor your organization's carbon foot print.

Ricoh provides all levels of technical support to address any issue, ranging from basic break/fix support to questions related to Ricoh software and solutions.

Product performance

High Quality & Eco-friendly Products & Services at its finest!

Ricoh's Managed Document Services is a global service that goes way beyond printing. We can help improve your document workflow and office processes as well as manage and optimize your information. You will see increased productivity and reduced TCO. This means that all you have to do is focus on the job.



RICOH Philippines, Incorporated

G/F OPPEN Building 349 Sen. Gil J. Puyat Avenue, Makati City Philippines
1200, Philippines
Tel (+632) 7507383 Fax (+632) 8950896
E-mail sales@rph.ricoh.com.ph
URL www.ricoh.com.ph

EP-3-021

OA/IT equipment

multifunctional copy machines/printers

Konica Minolta bizhub 362

Environmental performance

Konica Minolta bizhub 362 multi-functional product is designed with the environment in mind.

- Energy Star
- Energy Conservation
- Emission Reduction
- Use Recycled Materials
- Toner Recycle Mechanism
- Production at ISO Certified Factories
- ROHS Compliance
- WEEE Compliance
- Reduction of Toxic Substances
- Take back information

Product performance

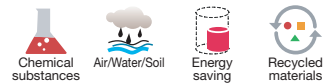
Konica Minolta bizhub 362 is multi-function product (copy/print/scan/fax) include environment many features.

- Polymerised Toner (exclusive for Konica Minolta) reduces environmental impacts (CO₂, NO_x and SO_x emissions during product of toner) by about 40% compared to conventional toners.
- Spare parts availability 7 years after end of production.
- Can use with recycled paper.
- Toner satisfies the requirement of RAL-UZ 122.

Inter Far East Engineering Public Company Limited

33, Soi Ramkhamhaeng 22, Ramkhamhaeng Road, Huamark, Bangkok,
Bangkok., 10240, Thailand
Tel +66 2 718 8000 Fax +66 2 718 8134
E-mail thanayot.m@ifec.co.th
URL www.ifec.co.th

Available in: Thailand



This image is Konica Minolta bizhub 362 main body installed with option paper feed cabinet (PC-407) and Reverse Automatic Document Feeder (DF-620).

EP-3-022

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 4000, MP 5000

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparaffins, take back toner cartridges and drum from the customer.

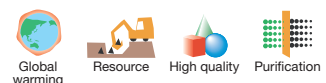
Product performance

- Exceptional productivity.
- Unique colour scanning & distribution.
- Multifunctional wizards.
- Professional faxing.
- Essential security.
- Expert finishing.
- East operation.
- Wide media versatility.
- At the forefront of.

RICOH (THAILAND) LIMITED

341 Onnuj Road, Prawet, Prawet, Bangkok, 10250, Thailand
Tel +6627621111 Fax +6627621170
E-mail siriprom.san@ricoh.co.th
URL www.ricoh.com
URL www.ricoh.co.th

Available in: Thailand



EP-3-023

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 4001, MP 5001

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparaffins, take back toner cartridges and drum from the customer.

Product performance

- Productive : 40/50 papers per minute.
- Efficient : application for personalized settings.
- Time-saving : (colour) scan and distribute in a single step.
- Professional : finishers, Super G3/IP fax, IPDS/Postscript 3TM options.
- Secure and flexible : data protection and handling of various media types.

RICOH (THAILAND) LIMITED

341 Onnuj Road, Prawet, Prawet, Bangkok, 10250, Thailand
 Tel +6627621111 Fax +6627621170
 E-mail siriprom.san@ricoh.co.th
 URL www.ricoh.com
 URL www.ricoh.co.th

Available in: Thailand



EP-3-024

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 1900

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparaffins, take back toner cartridges and drum from the customer.

Product performance

- Productivity : 19 pages per minute.
- Fast warm-up time : less than 10 seconds.
- Simplicity : clear and concise operation panel.
- Efficiency : electronic sorting & scan once, copy many.
- Flexibility : handles A6 to A3 paper, 52 to 162 g/m2

RICOH (THAILAND) LIMITED

341 Onnuj Road, Prawet, Prawet, Bangkok, 10250, Thailand
 Tel +6627621111 Fax +6627621170
 E-mail siriprom.san@ricoh.co.th
 URL www.ricoh.com
 URL www.ricoh.co.th

Available in: Thailand



EP-3-025

OA/IT equipment

multifunctional copy machines/printers

Aficio MP 2851, MP 3351

Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1,1,1 trichloro-ethane, carbon-tetrachloride, use recycled materials, non use PBB, PBDE and chloroparaffins, take back toner cartridges and drum from the customer.

Product performance

- Productive : 28/33 pages per minute.
- Efficient : applications for personalized settings.
- Time-saving : (colour) scan and distribute in a single step.
- Professional : finishers, Super G3/IP fax, IPDS/Postscript 3TM options.
- Secure and flexible : data protection and handling of various media types.

RICOH (THAILAND) LIMITED

341 Onnuj Road, Prawet, Prawet, Bangkok, 10250, Thailand
 Tel +6627621111 Fax +6627621170
 E-mail siriprom.san@ricoh.co.th
 URL www.ricoh.com
 URL www.ricoh.co.th

Available in: Thailand



EP-3-026

OA/IT equipment

printers

Environmentally-friendly double-sided label printer Scantronics (R) GN412T

Environmental performance

Bar-code printer that simultaneously prints on both sides of the label. Non-Sepa Combination Labels can be used as two separate labels by peeling the bonded sticky side. Since there is no liner waste, paper is saved and CO₂ emissions are reduced.

Product performance

The automatic document feeder requires no label indicators to show the position when setting the labels for printing, and labels can be printed clearly from the beginning, so no labels are wasted. The ability to print all labels clearly eliminates waste.

Sato's Ecomatch promotes the 3Rs (Reduce, Reuse, Recycle) to support the environmental conservation activities of customers.

For any query, send inquiry to the contact mentioned below.

SATO CORPORATION

7-1, Shimomeguro 1-chome, Meguro-ku, Tokyo, 153-0064, Japan
 E-mail sales@satogbs.com
 URL www.satoworldwide.com

Available in: Japan



EP-3-027

OA/IT equipment

printers

Business Inkjet Printer, PX-B510 (EPSON B-510DN/B-518DN)

Environmental performance

<Global warming impact>

The PX-B510 (B-510DN/B-518DN) saves energy in the office, generating 76% fewer CO₂ emissions than a laser printer LP-V500* from 2005.

<Energy saving>

The PX-B510 uses approximately 92% less energy than the LP-V500*. (Based on Japanese specifications.)

<Products that are focused on the effective use of resources>

Use of recycled materials: Uses recycled plastic for internal printer parts

High capacity ink cartridge (L, LL size)

Effective use of paper: Auto-duplex printing feature

<Elimination of hazardous substances>

The PX-B510 conforms to the EU RoHS Directive.

*Comparison with similar performance laser printer. (Calculated under Epson's test conditions.)

*This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation. The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation. For more information, see <http://www.epson.jp/>

Product performance

This product is a business-ready inkjet printer pursue high productivity and low running cost, mass color printing demand.



103kg-CO₂
not Inspection

Resource/Materials/Production/
Transfer/Use/End-of-Life



Available in: Japan, Oceania, Europe, North America, Central America, South America, Southeast Asia, Republic of Korea, Taiwan (Rep. of China), China

PX-B510 (EPSON B-510DN/B-518DN)

EP-3-028

OA/IT equipment

printers

Thermal Receipt Printer, TM-T88V

Environmental performance

<Global warming impact>

Generates 10% fewer life cycle CO₂ emissions than the previous model (TM-T88IV).

<Energy saving>

The TM-T88V uses 14% less total power than the TM-T88IV from 2006.

The move to a high-efficiency AC adapter and the use of a low-power ASIC chip that controls power so that it is supplied only when and where needed, help minimize power usage.

<Resource saving>

Paper-saving functions

- Top Margin-less function Through printing the top logo of receipts before cutting, the top margin has been reduced by 12mm.

- Automatic paper reduction function The amount of receipt margin reduction is specified and memorized on the printer side, and actual receipt length is reduced without altering the printing data.

<Elimination of hazardous substances>

The TM-T88V conforms to the EU RoHS Directive.

Product performance

High-speed, silent printing enables smooth output. With support for Asian and European languages, graphics and barcodes, this printer can be used for a wide variety of applications including receipts, coupons and tickets.



Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan

Tel +81-266-52-3131

URL <http://www.epson.co.jp/e/community/environment/>

URL <http://www.epson.com/>

URL <http://www.epson.co.jp/e/community/>

Available in: Japan, Oceania, Europe, North America, Central America, South America, Southeast Asia, Republic of Korea, Taiwan (Rep. of China)

Thermal Receipt Printer, TM-T88V

EP-3-029

OA/IT equipment

printers

Color Page Printer, LP-S7100

Environmental performance

<Global warming impact>
Biomass plastic is used in the cleansing bar of exposure window from material extraction to disposal, biomass plastics generate approximately 20% fewer carbon emissions than petroleum-based plastics.

<Energy saving>
The LP-S7100 uses 73% less total power than the LP-S7000 from 2006.

<Resource saving>
The LP-S7100 is 40% smaller and 27% lighter than the LP-S7000 (FY2006) by space-saving design. A significant downsizing of the cartridge was enabled by newly developed "Smart style cartridge". Big space is not necessary for stocking the toner cartridge.

<Elimination of hazardous substances>
The LP-S7100 conforms to the EU RoHS Directive.

*This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation. The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation. For more information, see <http://www.epson.jp/>

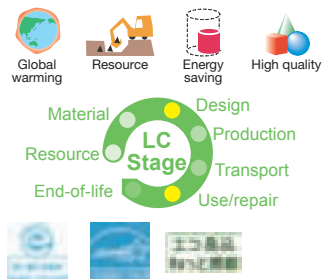
Product performance

This product is a high-performance laser printer will be possible to get 0.6 million total prints or a service life of 5 years and 30 sheets per minute high-speed printing.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan
Tel +81-266-52-3131
URL <http://www.epson.co.jp/e/community/environment/>
URL <http://www.epson.com/>
URL <http://www.epson.co.jp/e/community/>

Available in: Japan



Color Page Printer, LP-S7100

EP-3-030

OA/IT equipment

printers

Inkjet Digital Label Press, SurePress L-4033A

Environmental performance

<Resource saving>
- Not necessary the pre-treatments of standard label stock, SurePress AQ ink has good adhesion on variety of standard label stocks.
- Resource-saving, reduced pre-press process like plate making, eliminated use of developer and films.
- Less-wasteful, easy color-matching and the plate-replacing is unnecessary, these enables SurePress to reduce standard label stock and the ink consuming.
- Reduction in waste, the specific wash is unnecessary and eliminates waste fluid emissions for maintenance.

<Elimination of hazardous substances>
The product and SurePress AQ ink has qualified for RoHS Directive.

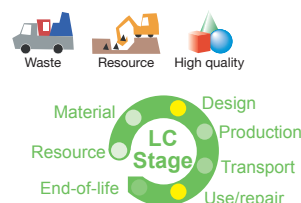
Product performance

The SurePress L-4033A is a short-run, digital label press. This highly versatile narrow-web press has been designed to print labels efficiently and profitably to meet the growing global demand for fast turnaround, low volume, and multiple version label jobs.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan
Tel +81-266-52-3131
URL <http://www.epson.co.jp/e/community/environment/>
URL <http://www.epson.com/>
URL <http://www.epson.co.jp/e/community/>

Available in: Japan, Asia, Oceania, Europe, North America, Central America, South America



Inkjet Digital Label Press, SurePress L-4033A

EP-3-031

OA/IT equipment

printers

Large Format Inkjet Printer PX-W8000/ Epson Stylus Pro WT7900/7910

Environmental performance

- Employing ultra low-odor water-based inks, the Epson Stylus Pro WT7900 does not require a special operating environment
- Low-power because there is no need for heaters, lamps, or ventilation equipment used with solvent-based or UV-curable ink printers
- Inkjet technology prints using precise amounts of material exactly where it's needed, which limits waste and uses resources efficiently

Newly developed water-based white ink enables an environmentally low-impact and efficient proofing process. Epson's newly developed white ink is made using special hollow resin particles. As well as having a low environmental impact thanks to being water-based, this ink is also easier to handle because it is lighter and less prone to settling than conventional white inks, which use titanium dioxide for color.

Product performance

A package proofing large format inkjet printer equipped with the world's first water-based white ink. With no need for a special operating environment, the Epson Stylus Pro WT7900 helps reduce the burden on the environment while offering improved operational flexibility and efficiency.

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan
 Tel +81-266-52-3131
 URL <http://www.epson.co.jp/e/community/environment/>
 URL <http://www.epson.com/>
 URL <http://www.epson.co.jp/e/community/>

Available in: Japan, Oceania, Europe, North America, Central America, South America, Southeast Asia, Republic of Korea, Taiwan (Rep. of China), China



Large Format Inkjet Printer PX-W8000/
Epson Stylus Pro WT7900/7910

EP-3-032

OA/IT equipment

printers

"Apply new Energy star High speed thermal printer"

Environmental performance

- Mitigation of climate change: .
- Efficient use of resources: Use of recycled plastic for the duster tray.
- Management of chemicals: Adoption of halogen-free material for printed circuit board.

Product performance

- High speed (14ips)
- Easy operation: Utilizing the Graphic LCD.



Barcode Printer B-EX

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo,
 141-8664, Japan
 Tel +81-3-6422-7164 Fax +81-3-6422-7121
 URL <http://www.toshibatec.co.jp/index.html.html>
 URL <http://www.toshibatec.co.jp/csr/report/index.html>

EP-3-033

OA/IT equipment

printer cartridge

Remanufactured Cartridge

Environmental performance

In recent years, the growth of new technology has helped to develop innumerable new toner cartridge that has been rushed into the market enormously. However, they result in large amount of waste that would damage to the earth. It is a big environmental trouble.

Green Device understands the harms and damages caused by waste pollution; she has developed the high quality remanufactured toner cartridges to reduce the waste by produce. From product development to manufacturing, Green Device's design not only focuses on satisfying customers but also cares seriously to make a good use of the resulting waste material and to avoid causing damage to the environments.

Product performance

Taiwan Green Device Co., Ltd. established in 1999, is a publicly traded company of 70+ employees in remanufacturing toner cartridge, and of four office (Taipei, Taichong, Tainan, Chai-I) in Taiwan. Green Device has been the largest remanufactured toner cartridge factory in Taiwan.

She not only marketing in Taiwan, she has developed products for US, Canada Market, and has adopted a SOP management style as well as its quality control and after-sale support.

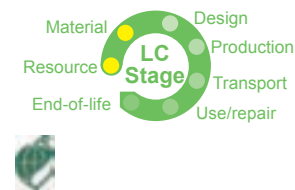
Green Device aims to be the best remanufactured toner cartridge manufacturer in the world. To achieve this goal, Green Device provides not only high quality products, but also superior after-sale support.

Green Device's promise to her customer: Green Device's products reduce costs with high quality while protecting the environments.

Taiwan Green Device Co., Ltd.

No. 108, Sec. 2, Chang-An Rd., Luzhu, 33843 Taoyuan, Taiwan R.O.C.,
33843, Republic of China
Tel +886-3-353-0954 Fax +886-3-353-0964
E-mail service@greendevic.com.tw
URL <http://www.greendevic.com.tw>

Available in: Japan, U.S.A, Taiwan (Rep. of China)



HP 38A Remanufactured Cartridge

EP-3-034

OA/IT equipment

scanners

Compact design Document scanner "imageFORMULA P-150"

Environmental performance

- High energy-efficient and compact design with CMOS CIS and light source of LED
- No wait-time to start scanning after pressing Power-Switch ON
- Automatic Power ON/OFF depending on the feeder tray
- Conforms to ENERGY STAR standards
- Sleep mode: 1W Power OFF: 0.1W (Official data of application for ECCJ) Scanning: With 1 USB 2.5W or less With 2 USB 5.0W or less
- Compliant with European RoHS Directive

Product performance

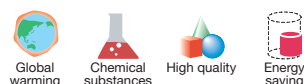
- The most compact and light weighted document scanner*1
- 1-pass duplex scanning
 - B&W/Color: 15/10ppm (A4/LTR portrait/200dpi/2USB or AC adapter) 12/10ppm (A4/LTR portrait/200dpi/1USB)
 - Plug & Scan function
- Can scan without installing Scanning Software onto PC
- BUS Power Drive
 - Advanced image processing functions
- Auto size detection, Deskew, Skip blank page, Text Orientation Recognition, Auto color detection, etc.

*Domestic A4 ADF Document Scanner (Based on research by CEI as of September 1, 2009)

CANON ELECTRONICS INC.

3-5-10, Shibakoen, Minato-ku, Tokyo, 105-0011, Japan
Tel +81-3-6910-4119 Fax +81-3-5472-7671
E-mail kankyo@canon-elec.co.jp
URL <http://www.canon-elec.co.jp/english/aboutus/index.html>
URL <http://www.canon-elec.co.jp/english/products/ims/en-p150/index.html>

Available in: Worldwide



Document Scanner P-150

EP-3-035

OA/IT equipment

scanners

Robust and high-speed A3 Document scanner "imageFORMULA DR-6050C/7550C/9050C"

Environmental performance

- High energy-efficient and compact design with CMOS 3-line CIS and light source of LED
- No wait-time to start scanning after pressing Power-Switch ON
- Conform to ENERGY STAR standards
- DR-6050C/7550C/9050C Sleep mode: 3.1W/3.2W/2.9W Power OFF: 0.5W/0.5W/0.5W (Official data of application for EECJ) Scanning: 82W/82W/83W
- Compliant with European RoHS Directive

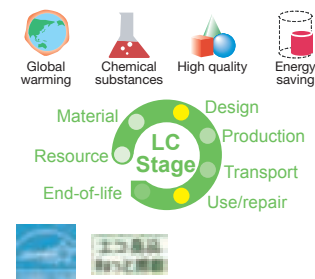
Product performance

- High speed A3 document scanner featuring reliable feeding
- B&W/Color: 60ppm (DR-6050C) 75ppm (DR-7550C) 90ppm (DR-9050C) (A4/LTR portrait, 200dpi)
 - Enhanced color accuracy with advanced 3-line CMOS sensor and 3D Color Correction
 - On board image processing chip for faster image processing
 - Staple detection feature
 - Front operation with U-Turn Path feeding
 - Ultrasonic Double Feed Detection
 - Advanced image processing functions
- Auto-paper size detection, Deskew, Skip blank page, Text Orientation Recognition, Auto Color Detection, etc.

CANON ELECTRONICS INC.

3-5-10, Shibakoen, Minato-ku, Tokyo, 105-0011, Japan
 Tel +81-3-6910-4119 Fax +81-3-5472-7671
 E-mail kankyo@canon-elec.co.jp
 URL <http://www.canon-elec.co.jp/english/aboutus/index.html>
 URL <http://www.canon-elec.co.jp/english/products/ims/en-dr9050-7550-6050/index.html>

Available in: Worldwide



Document Scanner DR-6050C/7550C/9050C

EP-3-036

OA/IT equipment

scanners

High-performance Network Scanner "imageFORMULA ScanFront 300/300P"

Environmental performance

- High energy-efficient and compact design with CMOS CIS and light source of LED (CMOS: Complementary Metal Oxide Semiconductor, CIS: Contact Image Sensor)
- Conforms to ENERGY STAR standards
- Sleep Mode: 1.0W Power OFF: 0.1W Scanning: 30W
- Compliant with European RoHS Directive
- Most compact and lightest Network Scanner (October, 2010)

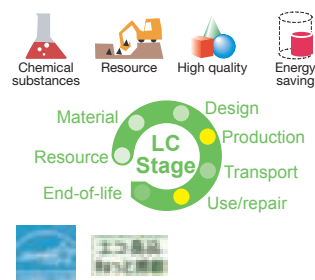
Product performance

- Touch panel
- Step-by-step program design and UI
- Max 60 ppm with compact body
- 6 means for data transfer -Scan to mail/ FTP/ Fax/ Printer/ USB memory/ Folder

CANON ELECTRONICS INC.

3-5-10, Shibakoen, Minato-ku, Tokyo, 105-0011, Japan
 Tel +81-3-6910-4119 Fax +81-3-5472-7671
 E-mail kankyo@canon-elec.co.jp
 URL <http://www.canon-elec.co.jp/english/aboutus/index.html>
 URL <http://www.canon-elec.co.jp/english/products/ims/en-p150/index.html>

Available in: Worldwide



Network Scanner ScanFront 300/300P

EP-3-037

OA/IT equipment

scanners

fi-6800 - The fastest and smallest A3 image scanner in its class

Environmental performance

- Resource saving: fi-6800 is smallest in its class (See Note) (Takes up 53% less space and is 72% lighter than its previous model (fi-4860C2)).
- Energy saving: Short recovery time (within 6 seconds). Low power consumption when in sleep mode (less than 4W without CGA board interface)
- Eco-efficiency factor: Enhanced performance improves scanning efficiency and reduces the size of body. The fi-6800 has an Eco-efficiency factor of 2.15.
- EU RoHS compliant.

Product performance

- The fi-6800 offers fast, 130ppm/260ipm, A4 landscape size color scanning (200/300dpi) with smallest body in the class.
- The fi-6800 supports new automatic functions that make scanner operating tasks even easier, faster and more energy efficient.

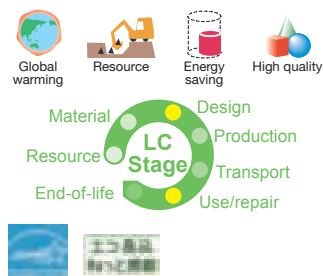
Note:Applies to business scanners priced between 1,170,000 and 4,400,000.

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan
 Tel +81-44-540-4668 Fax +81-44-540-4639
 E-mail scanners@pfu.fujitsu.com
 URL <http://www.fujitsu.com/global/about/environment/>
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide

fi-6800



EP-3-038

OA/IT equipment

scanners

fi-6240 - The smallest A4 ADF/ flatbed duplex color scanner in its class

Environmental performance

- Resource saving: The smallest and least resource demanding A4 scanner in its class (30ppm or faster, see note).
- Eco-efficiency factor: Multi-feed and document jam detection enhanced performance improves scanning efficiency. The lengthening of the fi-6240's product life enables users to operate it for longer, thus reducing their burden on the environment. The fi-6140 has an Eco-efficiency factor of 2.13.
- EU RoHS compliant.

Product performance

- The compact A4 ADF&flatbed color duplex high-speed fi-6240, which is capable of scanning an impressive 80ppm in color (120ppm in monochrome) (A4, portrait, 200dpi) is ideal for decentralized scanning.

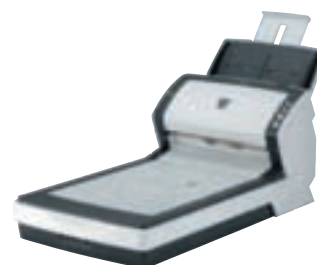
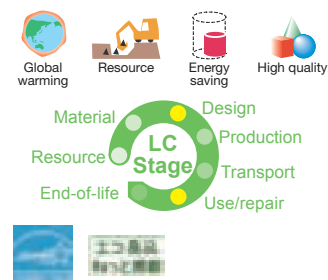
Note:Applies to A4 ADF&flatbed scanners that are capable of 40ppm/80ipm speeds (A4, monochrome, 200dpi) that sell for a retail price of 300,000 yen or less.

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan
 Tel +81-44-540-4668 Fax +81-44-540-4639
 E-mail scanners@pfu.fujitsu.com
 URL <http://www.fujitsu.com/global/about/environment/>
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide

fi-6240



EP-3-039

OA/IT equipment

scanners

fi-6140 - The smallest A4 ADF duplex color scanner in its class

Environmental performance

- Resource saving: The smallest and least resource demanding A4 scanner in its class (30ppm or faster, see note).
- Eco-efficiency factor: Multi-feed and document jam detection enhanced performance improves scanning efficiency. The lengthening of the fi-6140's product life enables users to operate it for longer, thus reducing their burden on the environment. The fi-6140 has an Eco-efficiency factor of 2.09.
- EU RoHS compliant.

Product performance

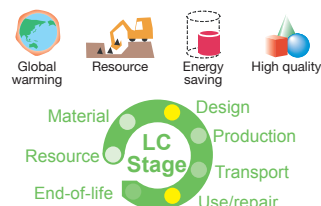
- The compact A4 ADF color duplex high-speed fi-6140, which is capable of scanning an impressive 80ppm in color (120ppm in monochrome) (A4, portrait, 200dpi) is ideal for decentralized scanning.

Note: Applies to A4 ADF scanners that are capable of 40ppm/80ipm speeds (A4, monochrome, 200dpi) that sell for a retail price of 300,000 yen or less.

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan
 Tel +81-44-540-4668 Fax +81-44-540-4639
 E-mail scanners@pfu.fujitsu.com
 URL <http://www.fujitsu.com/global/about/environment/>
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



fi-6140

EP-3-040

OA/IT equipment

scanners

fi-60F - Resource and energy saving A6 flatbed scanner

Environmental performance

- Resource saving: The smallest and fastest scanner in its class.
- Incorporated environmentally friendly material: The fi-60F has been painted with easy to recycle paint and makes use of a mercury-free light source.
- Energy saving: The fi-60F is one of the top performing international ENERGY STAR standards meeting scanners. (The fi-60F requires a mere 2W or less when in sleep mode.)
- Quiet performance: Operates at 42dB or lower.
- EU RoHS compliant.

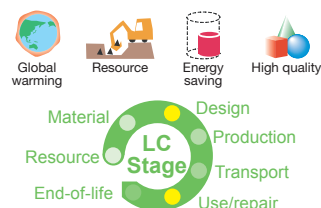
Product performance

- The fi-60F A6 flatbed color scanner offers first-rate speedy one-second scanning (200dpi, monochrome).

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan
 Tel +81-44-540-4668 Fax +81-44-540-4639
 E-mail scanners@pfu.fujitsu.com
 URL <http://www.fujitsu.com/global/about/environment/>
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide



fi-60F

EP-3-041

OA/IT equipment

scanners

ScanSnap S1100 - The world's smallest class document scanner

Environmental performance

- Resource saving: S1100 is the world's smallest class form factor (takes up 79.6% less space than its previous model (S1300)). Necessary parts for S1100 are reduced to 75.4%.
- Energy saving: Low power consumption (22.4% for the standard (sleep mode) in the International Energy Star Program)
- Eco-efficiency factor: Enhanced performance improves scanning efficiency and reduces the size of body. S1100 has an Eco-efficiency factor of 3.9.
- EU RoHS compliant.

Product performance

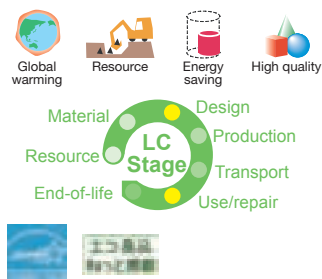
- S1100 delivers a snappy 7.5 seconds/page scanning for A4 color documents.
- Despite being a simplex sheet-feed document scanner, S1100 allows non-stop, smooth scanning of two sided, multi-page documents.
- Supports plastic card (ISO7810 ID-1 format compliant) scanning and other handy scanning features.

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan
 Tel +81-44-540-4668 Fax +81-44-540-4639
 E-mail scanners@pfu.fujitsu.com
 URL <http://www.fujitsu.com/global/about/environment/>
 URL <http://www.fujitsu.com/global/services/computing/peripheral/scanners/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide

ScanSnap S1100



EP-3-042

OA/IT equipment

scanners

Scanner

Environmental performance

Considering to lower the environmental impact, the device are compliant with EPA Energy Star Program, Sleep mode power consumption is 2.96W.

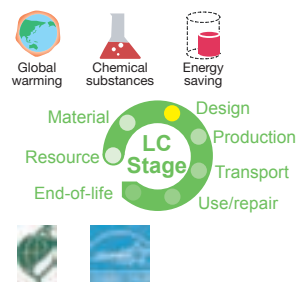
The plastic components of the product are also compliant chemical Substances requirements.

Also, the product are meet Eropean Union RoHS and WEEE directive, and Taiwan Green mark.

Avision Inc.

No. 20, Creation Rd., Science Park, Hsinchu, Taiwan, 300, Republic of China
 Tel +886-3-5782388
 URL <http://www.avision.com.tw/>
 URL <http://www.avision.com.tw/motion.asp?siteid=100407&lgid=2&menuid=10075&prodid=121242&cat=9>

Available in: Worldwide, Taiwan (Rep. of China)



EP-3-043

OA/IT equipment

scanners

Scanner

Environmental performance

Considering to lower the environmental impact, the device are compliant with EPA Energy Star Program, Sleep mode power consumption is 4.2W.

The plastic components of the product are also compliant chemical Substances requirements.

Also, the product are meet Eropean Union RoHS and WEEE directive, and Taiwan Green mark.

Product performance

For workgroups who frequently need to digitalize large sized documents, the Avision FB6000U is the answer. Supporting documents up to A3 sizes, it can complete scans in 7.6 seconds at 200 dpi in black and white. Built with a CCD sensor and a optical resolution of 600 dpi, you can depend on the FB6000U for quality scans.

Avision Inc.

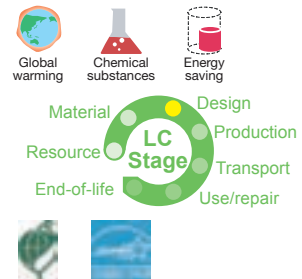
No. 20, Creation Rd., Science Park, Hsinchu, Taiwan, 300, Republic of China

Tel +886-3-5782388

URL <http://www.avision.com.tw/>

URL <http://www.avision.com.tw/motion.asp?siteid=100407&lgid=2&menuid=10075&prodid=121208&cat=13>

Available in: Worldwide, Taiwan (Rep. of China)



EP-3-044

OA/IT equipment

scanners

Desktop type OCR scanner S1500 for high-speed data entry from paper documents

Environmental performance

- Mitigation of climate change: Features an Energy Star compliant "low power consumption" mode.
- Efficient use of resources: About 40% reduction in total weight; using fewer, thinner components, made of lightweight materials.
- Management of chemicals: Uses a mercury-free, long-life light source; made of LED (Light-emitting Diodes) instead of fluorescent lamp.

Product performance

- High-speed scanning: High-speed scanning for OCR of 50 sheets per minute for A4-sized documents.
- Prevention of multi-feeding: Highly accurate double-feeding detection mechanism for trouble-free operation, even with mixed sheet thickness.
- Maintenance saving: Maintenance frequency is reduced by increasing the durability of rollers.

Toshiba Solutions Corporation

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan

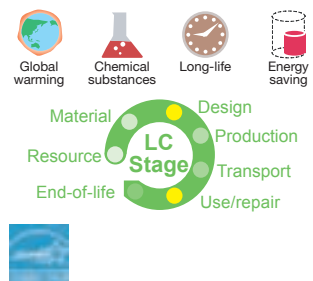
Tel +81-3-3457-3260 Fax +81-3-5444-9429

E-mail eco-info@toshiba-sol.co.jp

URL <http://www.toshiba-sol.co.jp/>

URL <http://www.toshiba.co.jp/index.htm>

Available in: Japan



Desktop type OCR scanner S1500

EP-3-045

OA/IT equipment

scanners

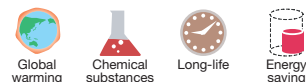
Desktop type OCR scanner S2500 for high-speed data entry from paper documents

Environmental performance

- Mitigation of climate change: Features an Energy Star compliant "low power consumption" mode.
- Efficient use of resources: About 40% reduction in total weight; using fewer, thinner components, made of lightweight materials.
- Elimination of harmful chemical substances: Uses a mercury-free, long-life light source; made of LED (Light-emitting Diodes) instead of fluorescent lamp.

Product performance

- High-speed scanning: High-speed scanning for OCR of 120 sheets per minute for A4-sized documents.
- Prevention of multi-feeding: Highly accurate double-feeding detection mechanism for trouble free operation, even with mixed sheet thickness.
- Duplex imprinting mechanism: OCR software for document format identification decides suitable imprinting side even for batch scanning with stacks of inter-mixed forms.
- Maintenance saving: Maintenance frequency is reduced by increasing the durability of rollers.



Toshiba Solutions Corporation

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan
 Tel +81-3-3457-3260 Fax +81-3-5444-9429
 E-mail eco-info@toshiba-sol.co.jp
 URL <http://www.toshiba-sol.co.jp/>
 URL <http://www.toshiba.co.jp/index.htm>

Available in: Japan

Desktop type OCR scanner S2500

EP-3-046

OA/IT equipment

personal computers

Endeavor ST150E ---Eco-friendly desktop PC that achieved high performance.

Environmental performance

- (1) Energy saving
Compliant with International ENERGY STAR Program, it achieves power consumption as low as 16W in idle state using MoDT (Mobile on Desk-Top) technology devices.
- (2) Space saving
Compact body of 195mm in width, 185mm in depth, and 75mm in height have high resource saving efficiency. It also makes it possible to be placed anywhere either vertically or horizontally.

Product performance

- 1) High performance
Comes with HM55 chipset where Intel Core i series processor can be installed. Endeavor ST150E achieves both high performance and lower cost operation.
- 2) Silent
System achieves less than 22dB idle state noise using an efficient cooling design. Silent, same as a notebook PC, providing comfortable working environment.
- 3) Multi monitor
This system is equipped with a DVI-D and VGA port, supports multi monitor function to extend working area on your display.



83.8kg-CO₂ Inspection Resource/Materials/Production/Transfer/Use/End-of-Life

EPSON DIRECT CORPORATION

2-21-45 Muraimachi Minami, Matsumoto-shi, Nagano-ken, 399-8703, Japan
 Tel +81-50-2000-3700 Fax +81-263-85-6100
 URL <http://shop.epson.jp>
 URL <http://shop.epson.jp/st150e>

Available in: Japan



Desktop computer "Endeavor ST150E"

EP-3-047

OA/IT equipment

personal computers

All-in-one, tough mobile with built-in optical drive: CF-S9 series

Environmental performance

- "Prevention of Global Warming" : Compliant with International Energy Star Program standards adopting long-life backlight to achieve low power consumption
- "Effective use of resources" : Lightweight machine equipped with unique shell drive and thin-wall molding with Magnesium Alloy case

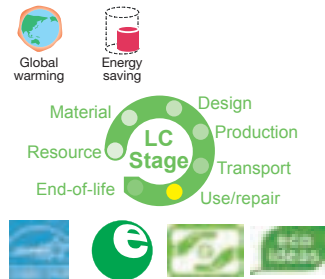
Product performance

- Easily portable, lightweight design : 1330g weight including a battery pack
- Designed to withstand rugged mobile : Free fall test at 76 cm height at development stage
- 12.1 inches Large wide screen for efficient operations : WXGA/1280X800 pixels

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/toughbook/>
 URL <http://panasonic.net/csr/>

Available in: Japan, Asia, Asia and Oceania, Europe, North America, Middle and Near East, Mexico



All-in-one, tough mobile with built-in optical drive : CF-S9 series

EP-3-048

OA/IT equipment

personal computers

Lightweight Mobile PC with high-speed CPU : CF-N9 series

Environmental performance

- "Prevention of Global Warming" : Compliant with International Energy Star Program standards adopting long-life backlight to achieve low power consumption
- "Effective use of resources" : Lightweight machine equipped with thin-wall molding with Magnesium Alloy case

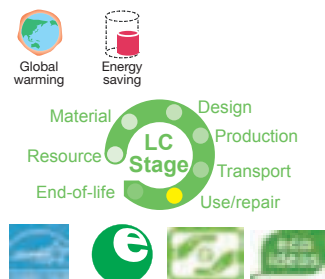
Product performance

- Easily portable, lightweight design: 1270g weight including a battery pack (*)
- Designed to withstand rugged mobile : Free fall test at 76 cm height at development stage
- 12.1 inches Large screen for efficient operations
- (*) CF-N9LWCJDS

Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan
 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.net/>
 URL <http://panasonic.net/avc/toughbook/>
 URL <http://panasonic.net/csr/>

Available in: Japan, Asia, Asia and Oceania, Europe, North America, Middle and Near East, Mexico



Lightweight Mobile PC with high-speed CPU : CF-N9 series

EP-3-049

OA/IT equipment

personal computers

ESPRIMO D570/B - Superior energy-saving desktop PC**Environmental performance**

1. More energy efficient
 - The PC leads the industry (*1) with a low power consumption of 14 W (*2) - 40% less than its predecessor. (*3)
 - It's compliant with the international Energy Star program.
 - The energy savings are greater when used together with a power interlock type of service outlet (*4) and our ECO plus display with a presence sensor (sold separately).
2. Housing made of halogen-free plastic
3. Recycled plastic used in parts of the PC body

*1 Based on our October 12, 2010 survey

*2 With the Intel® Core™ i5-520M

*3 Compared with the FMV-D5180

*4 No more forgetting to turn off the display: With power supplied from the PC unit to the display, the display is turned off when the PC is.

Product performance

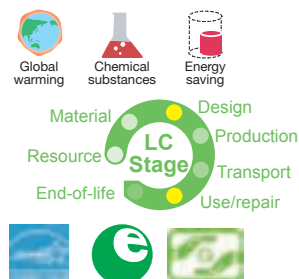
1. 24-hour operation supported
 - Designed to run continuously 24 hours a day with highly reliable long-life components
2. Multi-monitor feature
 - Easy-assembly multi-monitor feature with 2 display ports

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>URL <http://www.fmworld.net/biz/fmv/esprimo/d570b/>URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



ESPRIMO D570/B * Display sold separately

EP-3-050

OA/IT equipment

personal computers

High-performance, compact and lightweight slim compact note book PC**Environmental performance**

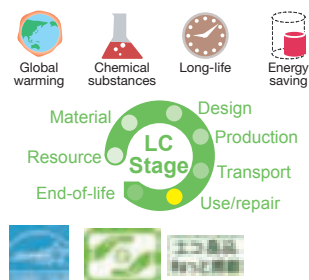
- Global Warming Mitigation : LED backlight LCD, SSD (Solid State Drive)
 - *in some models, Toshiba eco Utility.
- Resource Saving: magnesium casing, downsizing of printed circuit boards, etc.
- Chemical Substance Management: mercury-free PC, halogen and antimony compound-free materials in the main printed circuit board, etc.

Product performance

- Enhanced performance: Large-capacity flash memory drive for high-speed data storage. Long-lasting battery operation. Easy-to-view screen even in bright lighting conditions.
- High reliability: Principal components protected from external shock and structural design offering protection against liquid infiltration. Fingerprint sensor and TPM security prevent unauthorized access to HDD.

TOSHIBA CORPORATION Digital Products & Network Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Portege R700

EP-3-051

OA/IT equipment

personal computers

All in One PC/MS-6650 (AE2010) , MS-6657 (AE2220) , MS-AA1511 (AE2020) , MS-AE1111 (AE2400)

Environmental performance

1. Reduced energy consumption during use and stand-by
2. Limited use of substances harmful to the environment and health
3. Reduced use of natural resources by encouraging recycling
4. Extended product lifetime through easy up-upgrades
5. Reduced solid waste production through take-back policy



Global warming



Resource



Energy saving



MS-6650 (AE2010) , MS-6657 (AE2220) , MS-AA1511 (AE2020) , MS-AE1111 (AE2400)

MICRO-STAR INT'L CO.,LTD.

No.69, Lide St., Jhonghe City, Taipei County, Taiwan, 235, Republic of China

Tel +886-2-32345599 Fax +886-2-32345488

URL www.msi.comURL http://www.msi.com/index.php?func=prodpage2&maincat_no=654&cat2_no=666URL <http://www.msi.com/html/popup/csr/>

Available in: Japan, Worldwide, Oceania, Europe, North America, Central America, U.S.A, Singapore, Republic of Korea, Taiwan (Rep. of China) , China, Tokyo Metropolitan Area

EP-3-052

OA/IT equipment

personal computers

NB /MS-1453 (CX420)

Environmental performance

1. Decreased energy consumption during use and stand-by
2. Limited use of toxic heavy metals
3. Limited use of substances harmful to the environment and health
4. Reduction of the use of natural resources by encouraging recycling
5. Extended product lifetime through easy up-upgrades and availability of spare parts
6. Reduced solid waste production through take-back policy



Global warming



Resource



Energy saving



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Tel +886-2-32345599 Fax +886-2-32345488

URL www.msi.comURL http://www.msi.com/index.php?func=prodpage2&maincat_no=654&cat2_no=666URL <http://www.msi.com/html/popup/csr/>

Available in: Japan, Worldwide, Europe, North America, Central America, U.S.A, Singapore, Taiwan (Rep. of China) , China

MS-1453 (CX420)

EP-3-053

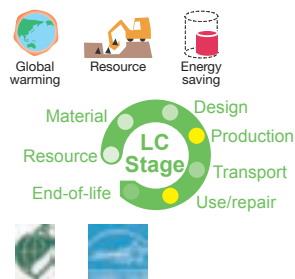
OA/IT equipment

personal computers

All in One PC/AP1900, AE1900

Environmental performance

1. Reduced energy consumption during use and stand-by
2. Limited use of substances harmful to the environment and health



AP1900 / AE1900

MICRO-STAR INT'L CO.,LTD.

No.69, Lide St., Jhonghe City, Taipei County, Taiwan, 235, Republic of China
 Tel +886-2-32345599 Fax +886-2-32345488
 URL www.msi.com
 URL http://www.msi.com/index.php?func=prodpage1&maincat_no=654
 URL <http://www.msi.com/html/popup/csr/>

Available in: Japan, Worldwide, Asia, Europe, North America, Central America, U.S.A, Republic of Korea, Taiwan (Rep. of China), China, Tokyo Metropolitan Area

EP-3-054

OA/IT equipment

personal computers

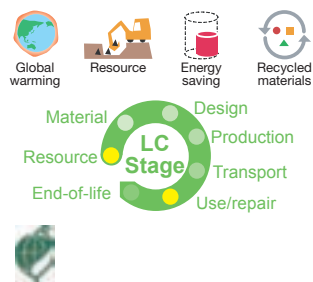
i221 Eco All-in-One PC

Environmental performance

- Made of maximum 25% recycling material.
- Designed to reduce harmful CO₂ emissions and system power consumption by 78% during its life cycle. (In comparison with traditional desktops)
- An 80% of recycling paper is used along with soy ink for all carton printing to eliminate toxins created during the manufacturing and packing processes.

Product performance

Made of maximum 25% recycling material, this 21.5" 16:9 Full HD LCD all-in-one PC is built to reduce CO₂ emissions and cut system power consumption by 78% during its life cycle- while giving you endless fun online! With the built-in 1.3M webcam, nScreen handset or Air Frame function, you'll find staying in touch with loved ones easier than ever!



i221 Eco

BenQ Corporation

No.16, Jihu Rd., Neihu Dist., Taipei, Taiwan
 Tel +886-2-27278899 Fax +886-2-26562438
 URL <http://www.benq.com/>

EP-3-055

OA/IT equipment

personal computers

Lite U121 Eco Notebook

Environmental performance

- Complying with internationally recognized eco-standards EPEAT and Energy Star.
- Draws 40% less power than the previous generation model, courtesy of Intel's least power-consuming processor, the Atom™, and the mercury-free, low-energy LED screen.
- 90% of the mechanical elements and 100% of the packaging materials are also recyclable or reusable.

Product performance

Featuring a 16:9 display, supreme battery performance, and an HDD/SSD-supported hard drive, the 11.6" BenQ Joybook Lite U121 Eco makes one true steal of a deal! It's just what you're lookin' for with a little more time, space, fun - and even style! With the BenQ Joybook Lite U121 Eco, you get to enjoy much more than you've bargained for!

BenQ Corporation

No.16, Jihu Rd., Neihu Dist., Taipei, Taiwan, Republic of China
Tel +886-2-27278899 Fax +886-2-26562438
URL <http://www.benq.com/>



Lite U121 Eco

EP-3-056

OA/IT equipment

personal computers

DreamSys-P229/C129/G5

Environmental performance

- This product has been designed taking into account energy saving, reducing hazard materials
- Attached a power switch to shut off the power completely
- The average noise in use is lower than [dB(A)]40
- A monitor screen has been treated with coating for preventing reflection



TRIGEM COMPUTER Co.,Ltd.

1125-1 Shingil-dong, Danwon-gu, Ansan-si, Gyeonggi-do, 425-839, Republic of Korea
Tel +82-31-489-3675 Fax +82-504-840-2924
E-mail kjhhe@trigem.co.kr
URL www.trigem.co.kr

Available in: Republic of Korea

EP-3-057

OA/IT equipment

personal computers

TS-42C/509/510

Environmental performance

- This product has been designed taking into account energy saving, reducing hazard materials
- Attached a power switch to shut off the power completely
- The average noise in use is lower than [dB(A)] 40
- A monitor screen has been treated with coating for preventing reflection



TRIGEM COMPUTER Co.,Ltd.

1125-1 Shingil-dong, Danwon-gu, Ansan-si, Gyeonggi-do, 425-839, Republic of Korea
 Tel +82-31-489-3675 Fax +82-504-840-2924
 E-mail kjhje@trigem.co.kr
 URL www.trigem.co.kr



Available in: Republic of Korea

EP-3-058

OA/IT equipment

displays

Information Display (PN-V601)

Environmental performance

- (1) The power consumption per 1 cd/m² is one of the lowest in the multi-screen display products.
- (2) Mercury-free because LED backlight is adopted.

Product performance

- (1) The width of the bezels between neighboring displays is a mere 6.5 mm, making the seams where individual LCD monitors join unobtrusive. This enables various practical applications by configuring a large multi-screen.
- (2) LED backlight gives more uniform brightness when configuring multi-screen display systems. LED elements are positioned across the entire panel directly behind the liquid crystal layers.



Sharp Corporation

22-22 Nagaïke-cho, Abeno-ku, Osaka, 545-8522, Japan
 Tel +81-6-6625-0438 Fax +81-6-6625-0153
 E-mail eco-info@sharp.co.jp
 URL http://sharp-world.com/
 URL http://sharp-world.com/corporate/eco/



PN-V601

EP-3-059

OA/IT equipment

displays

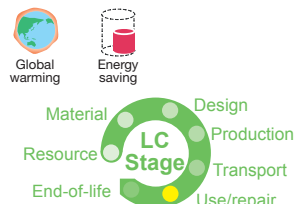
LTN101AT03

Environmental performance

This product is applied to LED backlight to reduce power consumption.

Product performance

the display component for Lap top computer

**LCD Division, SAMSUNG Electronics**

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>



TFT LCD module for Desktop computer monitor.
Various size are available which are
17.0", 18.5", 19.0", 20.0", 21.5", 22.0", 23.0", 24.0" etc.

Available in: Worldwide

EP-3-060

OA/IT equipment

displays

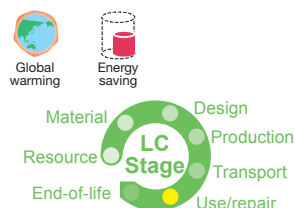
LTM170ET01

Environmental performance

This product is applied to LED backlight to reduce power consumption.
Also, it can meet Energy Star and EuP criteria.

Product performance

the display component for Desktop computer monitor

**LCD Division, SAMSUNG Electronics**

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>



TFT LCD module for Desktop computer monitor.
Various size are available which are
17.0", 18.5", 19.0", 20.0", 21.5", 22.0", 23.0", 24.0" etc.

Available in: Worldwide

EP-3-061

OA/IT equipment

displays

LTN173KT01

Environmental performance

This product is applied to LED backlight to reduce power consumption. Also, it can meet Energy Star and EuP criteria.

Product performance

the display component for Desktop computer monitor

Global warming

Energy saving

Material

Resource

End-of-life


Design

Production

Transport

Use/repair

LC Stage



TFT LCD module for Lap top computer.
Various size are available which are
9.7",10.1",11.6",13.3",14.0",15.6",17.3" etc.

LCD Division, SAMSUNG Electronics

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>

Available in: Worldwide

EP-3-062

OA/IT equipment

displays

LTM270HT03

Environmental performance

This product is applied to LED backlight to reduce power consumption. Also, it can meet Energy Star and EuP criteria.

Product performance

the display component for Desktop computer monitor

Global warming

Energy saving

Material

Resource

End-of-life

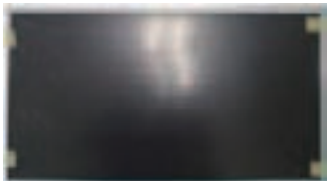
Design

Production

Transport

Use/repair

LC Stage



TFT LCD module for Desktop computer monitor.
Various size are available which are
17.0",18.5",19.0",20.0",21.5",22.0",23.0",24.0" etc.

LCD Division, SAMSUNG Electronics

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>

Available in: Worldwide

EP-3-063

OA/IT equipment

displays

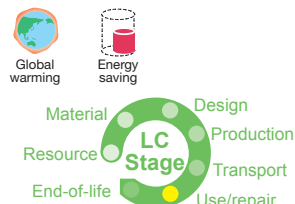
LTA320AP18

Environmental performance

This product is applied to LED backlight to reduce power consumption. The power consumption of this model is only 45W (50% lower than Energy Star criteria). Also it can meet Energy Star and EuP criteria.

Product performance

the display component for TV



LCD Division, SAMSUNG Electronics

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>



TFT LCD module for Television. Various size are available which are 32",40",46",52",55" etc.

Available in: Worldwide

EP-3-064

OA/IT equipment

displays

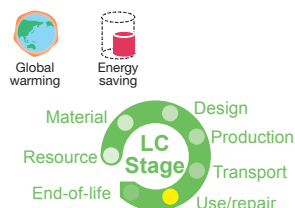
LTA550HJ04

Environmental performance

This product is applied to LED backlight to reduce power consumption. The power consumption of this model is only 130W (54% lower than Energy Star criteria). Also it can meet Energy Star and EuP criteria.

Product performance

The display component for TV



LCD Division, SAMSUNG Electronics

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>



TFT LCD module for Television. Various size are available which are 32",40",46",52",55" etc.

Available in: Worldwide

EP-3-065

OA/IT equipment

displays

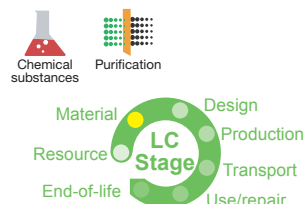
TFT LCD Module for Lap top computer

Environmental performance

- Compliant with RoHS directive
- Halogen Substances Free
- Arsenic Free
- PVC Free
- Mercury Free in case of LED Backlight model.

Product performance

The display component for Lap top computer



TFT LCD module for Lap top computer.
Various size are available which are
9.7",10.1",11.6",13.3",14.0",15.6",17.3" etc.

LCD Division, SAMSUNG Electronics

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>

Available in: Worldwide

EP-3-066

OA/IT equipment

displays

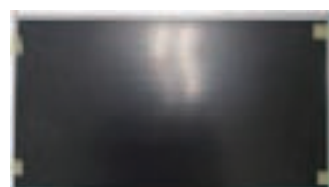
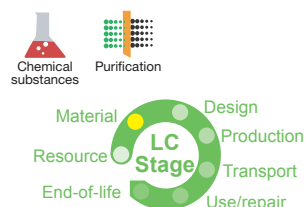
TFT LCD Module for Desk top computer monitor

Environmental performance

- Compliant with RoHS directive
- Halogen Substances Free
- Arsenic Free
- PVC Free
- Mercury Free in case of LED Backlight model.

Product performance

The display component for Desktop computer monitor



TFT LCD module for Desktop computer monitor.
Various size are available which are
17.0",18.5",19.0",20.0",21.5",22.0",23.0",24.0" etc.

LCD Division, SAMSUNG Electronics

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
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E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>

Available in: Worldwide

EP-3-067

OA/IT equipment

displays

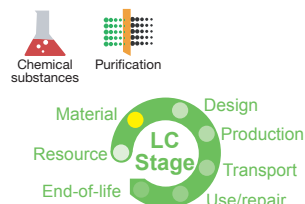
TFT LCD Module for Television

Environmental performance

- Compliant with RoHS directive
- Arsenic Free
- PVC Free
- Mercury Free in case of LED Backlight model

Product performance

The display component for TV



LCD Division, SAMSUNG Electronics

#200, MYEONGAM-RI, TANGJEONG-MYEON, ASAN-CITY,
CHUNGCHEONGNAM-DO, KOREA, 336-741, Republic of Korea
Tel +82-41-535-1676 Fax +82-41-535-1111 (1676)
E-mail dongsun.yoon@samsung.com
URL <http://www.samsung.com/sec>
URL <http://www.samsung.com/global/business/lcdpanel/>



TFT LCD module for Television. Various size are available which are 32",40",46",52",55" etc.

Available in: Worldwide

EP-3-068

OA/IT equipment

displays

TFT-LCD Module

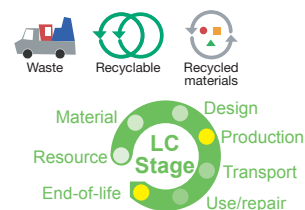
Environmental performance

The main parts suitable for recycling are:

- Front and back bezel assembly
- Diffuser sheet and plate
- Reflector
- Optical membrane
- Lamp support
- Plate shielding
- PCB
- Box

Product performance

According to the definition of EU WEEE Directive, the recovery rate of this TFT-LCD is approximately 82%. (for 42" TFT-LCD Module)



AU Optronics Corp.

No. 1, Li-Hsin Rd. 2, Hsinchu Science Park, Hsinchu, Taiwan, R.O.C., 30078,
Republic of China
Tel +886-3-500-8899
URL AUO.com



Available in: Japan, Asia, Europe, North America, U.S.A, Republic of Korea, Taiwan (Rep. of China), China

42" TFT-LCD Module

EP-3-069

OA/IT equipment

displays

TGL 2210G

Environmental performance

- This product has been designed taking into account energy saving, reducing hazard materials, improving life cycle
- Attached a power switch to shuts off the power completely
- The average noise in use is lower than [dB (A)]40
- A monitor screen has been treated with coating for preventing reflection

Resource

Energy saving

Material

Design

Production


Transport


Use/repair

End-of-life

Resource

LC Stage





Available in: Republic of Korea

TGL 2210G

EP-3-070

OA/IT equipment

displays

TGL 177G

Environmental performance

- This proudct has been designed taking into account energy saving, reducing hazard materials, improving life cycle
- Attached a power switch to shuts off the power completely
- The average noise in use is lower than [dB (A)]40
- A monitor screen has been treated with coating for preventing reflection

Resource

Energy saving

Material

Design

Production


Transport


Use/repair

End-of-life

Resource

LC Stage





Available in: Republic of Korea

TGL 177G

Eco-product // OA/IT equipment

1

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231

EP-3-071

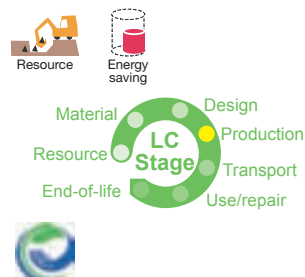
OA/IT equipment

displays

TGL 192G

Environmental performance

- This product has been designed taking into account energy saving, reducing hazard materials, improving life cycle
- Attached a power switch to shut off the power completely
- The average noise in use is lower than [dB(A)]40
- A monitor screen has been treated with coating for preventing reflection



TRIGEM COMPUTER Co.,Ltd.

1125-1 Shingil-dong, Danwon-gu, Ansan-si, Gyeonggi-do, 425-839, Republic of Korea
 Tel +82-31-489-3675 Fax +82-504-840-2924
 E-mail kjhje@trigem.co.kr
 URL www.trigem.co.kr

Available in: Republic of Korea

TGL 192G



EP-3-072

OA/IT equipment

displays

V2400 Eco LED Monitor

Environmental performance

- Energy-efficient LED panels are used to reduce power consumption by 56%*.
- With the Eco Mode on, another 30% of energy can be saved.
- Recycled paper is used for 80% of packing to save trees.
- With LED panels, monitors are made thinner to reduce packing materials and increase cargo room by 56%*.
- Mercury-free LED panels are used to make the monitors, so water resources can be kept clean and pure.
- The monitors are made coating-free and 100% recyclable.
- 28% of the monitor frame is made of recycled plastics to save Earth's resources.
- Soybean ink is used for all printing to improve the recyclability of the printed materials produced, saving 70% on ink usage.

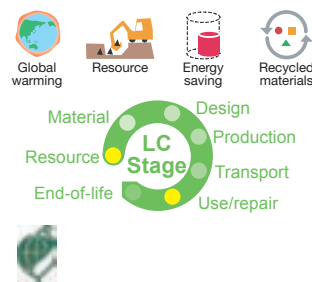
*In comparison to the last generation model - E2400HD

Product performance

Green matters! Enjoy the ultimate Full HD experience with BenQ's V2400 Eco LED monitor! Featuring an LED backlit panel to create the 2.1cm slim and elegant shape and Full HD 1080p 16:9 resolution, the V2400 Eco brings you the highest picture quality and honors it with its eco-friendly design - saving power and keeping the Earth lookin' great!

BenQ Corporation

No.16, Jihu Rd., Neihu Dist., Taipei, Taiwan
 Tel +886-2-27278899 Fax +886-2-26562438
 URL http://www.benq.com/



V2400 Eco

EP-3-073

OA/IT equipment

displays

V2200 Eco LED Monitor

Environmental performance

- Energy-efficient LED panels are used to reduce power consumption by 48.6%*.
- With the Eco Mode on, another 30% of energy can be saved.
- Recycled paper is used for 80% of packing to save trees.
- With LED panels, monitors are made thinner to reduce packing materials and increase cargo room by 56%*.
- Mercury-free LED panels are used to make the monitors, so water resources can be kept clean and pure.
- The monitors are made coating-free and 100% recyclable.
- 28% of the monitor frame is made of recycled plastics to save.
- Soybean ink is used for all printing to improve the recyclability of the printed materials produced, saving 70% on ink usage.

*In comparison to the last generation model-E2400HD

Product performance

Behold the world's first 21.5"W Full HD 16:9 LED monitor! The BenQ V2200 Eco is built with an LED-backlit panel to create the 2.1cm slim and elegant shape and recyclable materials to keep the Earth lookin' great! With its revolutionary Full HD 1080p 16:9 picture quality, the V2200 Eco unveils the natural beauty of this world in its true colors!

BenQ Corporation

No.16, Jihu Rd., Neihs Dist., Taipei, Taiwan, Republic of China
Tel +886-2-27278899 Fax +886-2-26562438
URL <http://www.benq.com/>



V2200 Eco

EP-3-074

OA/IT equipment

displays

G2020HD Monitor

Environmental performance

- Complying with the requirements of the ENERGY STAR Program for Computer Monitors, Version 5.0, the G2020HD is built to save you energy and money as well as keeping the Earth lookin' great!
- Non-Use of specified hazardous substances designated by EU RoHS Directive.
- Taiwan Product Carbon Footprint Label acquired.

Product performance

The BenQ G2020HD features a large 20"W 16:9 display, an impressive dynamic contrast ratio of 40000:1, a superior response time of 5ms, BenQ's very own Senseye +Photo Image Technology, and a whole lot of multimedia fun via the DVI-D connector. All of this is just to bring you a viewing quality that you'll never forget!

BenQ Corporation

No.16, Jihu Rd., Neihs Dist., Taipei, Taiwan, Republic of China
Tel +886-2-27278899 Fax +886-2-26562438
URL <http://www.benq.com/>



443kg-CO₂
Inspection

Resource/Materials/Production/
Transfer/Use/End-of-Life



G2020HD

EP-3-075

OA/IT equipment

projectors

The PT-DZ110XE 3-chip DLP (TM) projector

Environmental performance

The Panasonic PT-DZ110X series of 3-chip DLP(TM) projectors combine high levels of picture quality, reliability, function and system expandability into a compact body. Packed with original, advanced Panasonic technology, these projectors produce a full 10,600 lumens of brightness, and their dual lamp system and Auto Cleaning Filter (ACF) greatly boost reliability.

Product performance

Higher Brightness, Picture Quality and Reliability-All in a Compact Body
:Brightness & Picture Quality

- Compact Yet Bright
- New Dynamic Iris for a High 10,000:1 Contrast Ratio
- Detail Clarity Processor 3 Brings Depth and Clarity to Details
- System Daylight View 2 for Enhanced Colour Perception
- Full-HD Ready WUXGA resolution

:Reliability & Stability

- Panasonic's Original Dual Lamp System
 - Auto Cleaning Filter Reduces Maintenance Hassles
 - Quiet 37dB Operation
- :Enhanced Installation Flexibility
- Flexible Installation
 - Geometric Adjustment for Specially Shaped Screens
 - Multi-Screen Support System Seamlessly Connects Multiple Screens
 - Direct Power Off
 - Standby Mode: Eco

Panasonic Corporation, AVC Networks Company

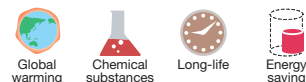
1-15 Matsuo-cyo, Kadoma, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL <http://panasonic.net/>

URL <http://panasonic.net/avc/projector/>

URL <http://panasonic.net/csr/>



Available in: Japan, Worldwide

The PT-DZ110XE 3-chip DLP (TM) Projector

EP-3-076

OA/IT equipment

projector

Ultra-short throw projector

Environmental performance

- Compliance with the RoHS* Directive:restriction and prohibition of the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).
- Energy saving : reduce by the use of materials , CO₂ emission during distribution, annual power consumption.
- Reduction of waste : saving of resources by using recycled materials for packing , by nonuse of styrene foam for packing , by saving time for uninstallation by compact body structure.

* RoHS: Restriction of the use of certain hazardous substances

Product performance

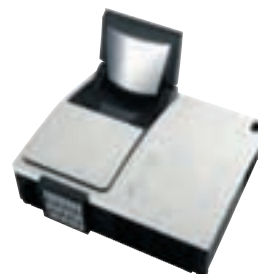
- High performance lens with free-shaped surface
- Ultra short throw projection with 80" at 63cm
- Adopting optical mechanism that correct the distortion of screen image by free shaped mirror.
- Mirror is on the top of the projector and able to open/close.

Hitachi Consumer Electronics Co., Ltd.

292 Yoshida-cho , Totsuka-ku , Yokohama, Kanagawa, 244-0817, Japan

URL <http://www.hitachi-ce.co.jp>

URL <http://av.hitachi.co.jp>



Available in: Japan

CP-A200

EP-3-077

OA/IT equipment

projectors

The PT-DS100XE 3-chip DLP (TM) Projector

Environmental performance

The Panasonic PT-DS100X series of 3-chip DLP (TM) projectors combine high levels of picture quality, reliability, function and system expandability into a compact body. Packed with original, advanced Panasonic technology, these projectors produce a full 10,600 lumens of brightness, and their dual lamp system and Auto Cleaning Filter (ACF) greatly boost reliability.

Product performance

Higher Brightness, Picture Quality and Reliability-All in a Compact Body
:Brightness & Picture Quality

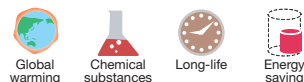
- Compact Yet Bright
- New Dynamic Iris for a High 10,000:1 Contrast Ratio
- Detail Clarity Processor 3 Brings Depth and Clarity to Details
- System Daylight View 2 for Enhanced Colour Perception

:Reliability & Stability

- Panasonic's Original Dual Lamp System
- Auto Cleaning Filter Reduces Maintenance Hassles
- Quiet 37dB Operation

:Enhanced Installation Flexibility

- Flexible Installation
- Geometric Adjustment for Specially Shaped Screens
- Multi-Screen Support System Seamlessly Connects Multiple Screens
- Direct Power Off
- Standby Mode: Eco



Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cyo, Kadoma, Osaka, 571-8504, Japan

Tel +81-6-6905-4356 Fax +81-6-6905-4755

URL <http://panasonic.net/>

URL <http://panasonic.net/avc/projector/>

URL <http://panasonic.net/csr/>

Available in: Japan, Worldwide

The PT-DS100XE 3-chip DLP (TM) Projector

EP-3-078

OA/IT equipment

projectors

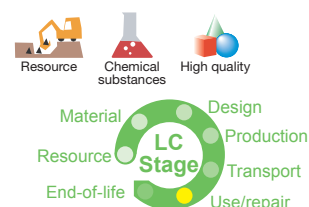
POWER PROJECTOR SX80 MarkII

Environmental performance

- (1) Compact body and weight of only 5.2 kg contribute to resource savings.
- (2) A variety of interfaces for direct connection to digital camera, USB thumb drive, or HD digital video camera, without using PC, reduce power consumption when used.
- (3) Compliance with the RoHS Directive.
- (4) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) Various interfaces can be directly connected to the state-of-the-art digital devices.
- (2) SXGA + (1,400 x 1,050)/for high-definition offers realistic projection of high-resolution images.
- (3) Reflective LCD Panel, LCOS (Liquid Crystal On Silicon) achieves lattice-free, seamless images



Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan

Tel +81-3-3758-2111 Fax +81-3-3758-8225

URL <http://www.canon.com/environment/>

Available in: Worldwide

SX80 MarkII

EP-3-079

OA/IT equipment

projectors

POWER PROJECTOR WUX10 MarkII

Environmental performance

- (1) This model features 0.71-inch Reflective LCD Panel, LCOS and Canon's proprietary AISYS (Aspectual Illumination System) optical system, and its newly developed lamp contributes to resource savings by improving light-use efficiency and lamp efficacy.
- (2) Compact body and weight of only 5.0kg contribute to resource savings.
- (3) Compliance with the RoHS Directive.
- (4) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) WUXGA wide screen eclipses conventional full HD screens.
- (2) World's smallest 0.71-inch high-resolution LCOS panel developed by Canon.
- (3) High brightness 3,200lm, High contrast 1000:1.
- (4) Newly designed projection lens with high-performance contributes to less distortion and high resolution.

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
 Tel +81-3-3758-2111 Fax +81-3-3758-8225
 URL <http://www.canon.com/environment/>

Available in: Worldwide

WUX10 MarkII



EP-3-080

OA/IT equipment

projectors

POWER PROJECTOR SX7 MarkII

Environmental performance

- (1) Compact body and weight of only 4.8 kg contribute to resource savings.
- (2) A variety of interfaces for direct connection to digital camera, USB thumb drive, or HD digital video camera, without using PC, reduce power consumption when used.
- (3) Compliance with the RoHS Directive.
- (4) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) Various interfaces can be directly connected to the state-of-the-art digital devices.
- (2) SXGA + (1,400 x 1,050)/for high-definition offers realistic projection of high-resolution images.
- (3) Reflective LCD Panel, LCOS (Liquid Crystal On Silicon) achieves lattice-free, seamless images

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
 Tel +81-3-3758-2111 Fax +81-3-3758-8225
 URL <http://www.canon.com/environment/>

Available in: Worldwide

SX80 MarkII



EP-3-081

OA/IT equipment

projectors

Casio Mercury-free high bright Projector : Green Slim XJ-A150V/155V/250V/255V

Environmental performance

- * Realizing World First High-Brightness, over 2000 ANSI lm, thanks to an original Mercury-free Hybrid Light Source which combines Laser and LED technology.
- * Adopting a new semiconductor-based system has enabled to realize 10 times of longer light source life of approximately 20,000 hours, and cuts the running and maintenance cost dramatically.

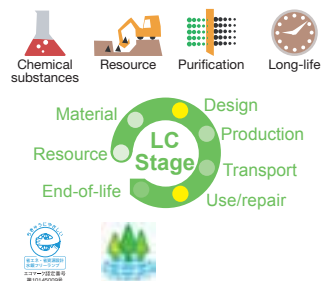
Product performance

- * It measures just thickness 43 mm and 2.3 kg in an A4-size, slim and mobile size with advanced feature, will make your travels easier.
- * 8 seconds quick startup to maximum brightness and immediate shutdown without warm-up and cool-down, will make you feel so comfortable.
- * Thanks to the Hybrid Light Source which combines Laser and LED technology, Color Purity is amazingly increased realizing a consistent brightness and superior color.
- * Optimum adjustment of pictures to the size of the projection screen to match distance from the screen: the wide angle 2x optical zoom make this possible.

CASIO COMPUTER CO. LTD

6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543, Japan
 Tel +81-3-5334-4111
 URL <http://world.casio.com/>
 URL <http://world.casio.com/csr/>

Available in: Japan, Worldwide



Green Slim XJ-A155V

EP-3-082

OA/IT equipment

projectors

MP575 Projector

Environmental performance

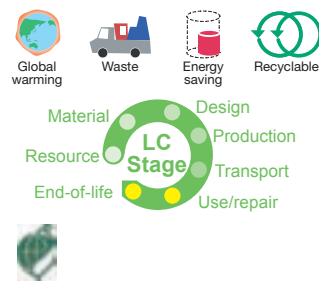
- Operation mode 275W and Standby mode < 1W power consumption. Complying with Taiwan Green Mark.
- Non-Use of specified hazardous substances designated by EU RoHS Directive.
- Design to be easy disassembled with regular tools and include labels on all major plastic parts, indicating the composition code to facilitate future recycling. (meet ISO 11469 requirements)
- Corrugated cartons used for packaging are made from recycled pulp with at least 80% recycled paper content. Plastic packaging does not contain PVC and other chlorine containing plastics.

Product performance

Check out the best choice for your classroom! Built with 3000 ANSI lumen brightness, 5500:1 high contrast ratio, and XGA resolution, BenQ's MP575 offers top quality projection even under ambient lighting. The BenQ MP575 DLP projector also features a filter-free design and is virtually immune to color decay which saves you money!

BenQ Corporation

No.16, Jihu Rd., Neihsu Dist., Taipei, Taiwan
 Tel +886-2-27278899 Fax +886-2-26562438
 URL <http://www.benq.com/>



MP575

EP-3-083

OA/IT equipment

projectors

MP772 ST Projector

Environmental performance

- Operation mode 295W and Standby mode < 1W power consumption. Complying with Taiwan Green Mark.
- Non-Use of specified hazardous substances designated by EU RoHS Directive.
- Design to be easy disassembled with regular tools and include labels on all major plastic parts, indicating the composition code to facilitate future recycling. (meet ISO 11469 requirements)
- Corrugated cartons used for packaging are made from recycled pulp with at least 80% recycled paper content. Plastic packaging does not contain PVC and other chlorine containing plastics.
- Taiwan Product Carbon Footprint Label acquired.

Product performance

The MP772 ST is the best IWB partner for your small-sized classrooms. Designed to engage students in learning, this DLP projector optimizes interactive whiteboard use with its short-throw design. The MP772 ST takes learning to a whole new dimension of enjoyment with 3D instruction! Learning can't get more exciting than this!

BenQ Corporation

No.16, Jihu Rd., Neihu Dist., Taipei, Taiwan, Republic of China
Tel +886-2-27278899 Fax +886-2-26562438
URL <http://www.benq.com/>

813kg-CO₂

Inspection

Resource/Materials/Production/
Transfer/Use/End-of-Life

MP772 ST

EP-3-084

OA/IT equipment

household electric appliances

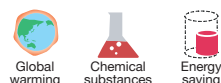
Network Camera VB-C500VD

Environmental performance

- (1) Compliance with the RoHS Directive.
- (2) Lead-free glass is utilized as the environmentally sound lenses.

Product performance

- (1) An image compression and transmission engine, DIGIC NET, achieves high image quality.
- (2) Smart Shade Control to make easier to see the subject even if the background of the subject is too bright.
- (3) Shutter Priority AE to achieve blur-free images of fast-moving subjects.
- (4) Simultaneously distribution of JPEG and MPEG-4.



VB-C500VD

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
Tel +81-3-3758-2111 Fax +81-3-3758-8225
URL <http://www.canon.com/environment/>

Available in: Worldwide

EP-3-085

OA/IT equipment

hard disk drive

Halogen- and antimony-free 2.5-type HDD with 750 GB Capacity

Environmental performance

- Mitigation of climate change: Improvement of the energy consumption efficiency to 1/47 compared with the benchmark model.
- Efficient use of resources: Weight is less than 1/5 that of a 3.5-type HDD with the same capacity.
- Management of chemicals: Bromine-, chlorine- and antimony-free HDD.

*Benchmark model: MK2016GAP

Product performance

- Large capacity: Storage capacity of 750 GB thanks to improvement of the magnetic head and disk. Plenty of capacity for the storage of video and photos on a notebook PC, TV and game machine.
- Low noise: Reduction of acoustic noise during data seek by 2dB compared with the previous model (MK3252GSX).

TOSHIBA CORPORATION Storage Products Company

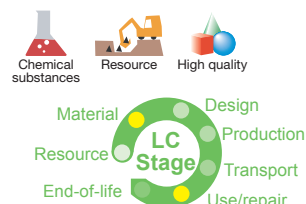
1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www3.toshiba.co.jp/storage/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Worldwide



2.5-type Hard Disk Drive MK7559GSXP

EP-3-086

OA/IT equipment

hard disk drive

High capacity and high performance hard disk drive for Enterprise.

Environmental performance

- The advanced power management implementation in the Ultrastar C10K600 delivers an industry-leading random read/write power of 5.6 watts and idle *power of 3.1 watts.
- Downsizing to 2.5inches by record density improvement, Material saved by approx.70% compared to 3.5inch HDD with same capacity for enterprise servers. (Parallel between Ultrastar 15K600 (YR2009) and Ultrastar C10K600)
- Halogen-reduced design

*Idle:Standby system. waiting for command processing.

Product performance

- Industry-best performance in a 10,000 RPM 2.5-inch form factor. (as of October.12, 2010)
- 6Gb/s Serial Attached SCSI (SAS) interface
- 64MB cache buffer, Maximum capacity 600GB

Hitachi Global Storage Technologies

1 Kiriara-cho, Fujisawa-shi, kanagawa, 252-8588, Japan

URL <http://www.hitachigst.com/>

URL <http://www.hitachigst.com/internal-drives/enterprise/ultrastar/ultrastar-c10k600>



Ultrastar C10K600

EP-3-087

OA/IT equipment

mid-range computers

PRIMERGY TX100 S2 - One-way entry-level server delivering good cost performance

Environmental performance

1. Energy savings

- 0-watt PC power supply

With the power turned off, power consumption is zero, so there is no need to pull the plug from the outlet.

- Some products in the PRIMERGY TX100 S2 lineup comply with the international Energy Start program (in the small scale server category).

- The server achieved energy ratings of A or AA in the fiscal 2011 standards of the Japanese Energy Saving Law (the Law Concerning the Rational Use of Energy)

2. RoHS Directive compliant

Product performance

1. Quiet

- Normally at 24 dB, about as loud as rustling tree leaves, the server when set up in an office is conducive to a low-stress environment.

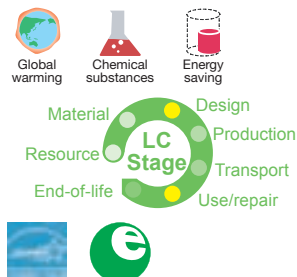
2. Space-saving installation

- The small form factor, 20.3 cm wide and 38.8 cm deep, makes it an ideal desktop device.

3. High speed, high performance

- CPU: Intel® Xeon® processor, Intel® Pentium® processor

- HDD: 3.5-inch hard disk (SATA) with excellent cost performance, expandable to up to 8 TB



PRIMERGY TX100 S2

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>

URL http://ts.fujitsu.com/products/standard_servers/tower/primergy_tx100s2.html

URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Worldwide

EP-3-088

OA/IT equipment

mid-range computers

BladeSymphony 2000/320

Environmental performance

The BladeSymphony product family has two powerful, flexible and reliable models available.

"BladeSymphony 2000" is the high-end model focused on core computing system and "BladeSymphony 320" is small-space and highly-integrated model. "BladeSymphony 320" is 24% power-saving, 40% space-saving, and 50% lightweight compared with the rack mount server. (comparison with Hitachi PC server: at the time of November, 2009) Moreover, BladeSymphony possesses Hitachi virtualization feature "Virtage" is provided. BladeSymphony comply with EU RoHS Directive.

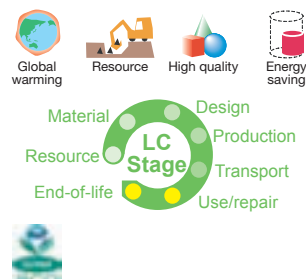
Product performance

"BladeSymphony 2000"

8 blades/10 U (the number of units according to EIA standards), a power supply module: The 80PLUS GOLD® certified

"BladeSymphony 320"

10 blades/6 U (the number of units according to EIA standards), a power supply module: The 80PLUS SILVER® certified



BladeSymphony 2000, BladeSymphony 320

Hitachi,Ltd.

1, Horiyamashita, Hadano-shi, Kanagawa-ken, 259-1392, Japan

URL <http://www.hitachi.com/>

URL http://www.hitachi.co.jp/products/blade_symphony_global/index.html

URL <http://www.hitachi.com/csr/>

Available in: World Wide

EP-3-089

OA/IT equipment

parts of personal computers

IA Server with a Built-in Intelligent Battery

Environmental performance

- Efficient use of resources: 40% reduction in footprint compared with the use of an external UPS thanks to the built-in battery. The battery life is 5 years whereas an external UPS must be replaced every 2 years.
- Management of chemicals: Use of a nickel-metal-hydride battery instead of a battery containing lead.

Product performance

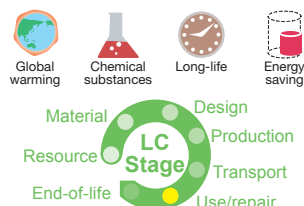
- Countermeasures for power outage and instantaneous power failure: Power supply with a built-in battery for data protection during power outage and instantaneous power failure.
- Scheduled operation: Intelligent battery for automatic start-up and shut-down.

TOSHIBA CORPORATION Digital Products & Network Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



EP-3-090

OA/IT equipment

ip private branch exchange

HITACHI IP Telephony Server IPTOWER-SP Series

Environmental performance

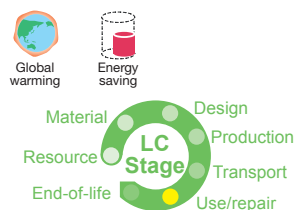
Reduction of the total power consumption by 44% compared with the conventional product (2002 year model) by adopting low voltage devices as well as FPGA to the maximum extent.

Reduction of the total volume of the product by 34% and the weight by 34% compared to the conventional product (2002 year model), which can be achieved by reducing the number of components.

* FPGA(Field Programmable Gate Array)

Product performance

- Improves the efficiency of your business by using IPTOWER-SP together with a variety of business application software
- Supports mobile phones that can be used inside or outside the company
- Offers a wide variety of features including maintenance functions and traditional PBX functions
- Offers various options and survival features to ensure reliability that is absolutely essential for company's network infrastructure
- Supports small to large scale network



Hitachi, Ltd., Telecommunications & Network Systems Division

216, Totuka-cho, Totuka-ku, Yokohama-shi, Kanagawa, 244-8567, Japan

Tel 81- 45- 881- 1221 Fax 81- 45- 865 - 7106

E-mail ad-info@ml.itg.hitachi.co.jp

URL <http://www.hitachi.co.jp/>

URL <http://www.hitachi.co.jp/network/>

Available in: Japan

IPTOWER-SP Series TM-II TypeM

EP-3-091

OA/IT equipment

communication related products

SH1516ATC switching hub

Environmental performance

1. Energy savings
 - The hub consumes 50% less power than its predecessor. (*1)
 - It achieved the fiscal 2011 standards of the Japanese Energy Saving Law (the Law Concerning the Rational Use of Energy)
2. Fewer hazardous substances
 - All printed circuit boards use lead free solder.
3. Lightweight
 - The hub is 40% lighter than its predecessor. (*1)

*1 Compared with the SH1516AT

Product performance

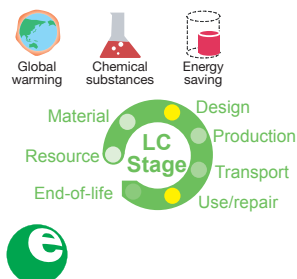
1. All ports: 10/100/1000BASE-T interfaces
2. Security slot mounted as standard
3. Wall mountable (optional magnetic sheet required)

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan
 URL <http://www.fujitsu.com/global/>
 URL <http://fenics.fujitsu.com/products/sw-hub/sh1516atc/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan

SH1516ATC



EP-3-092

OA/IT equipment

terminal units

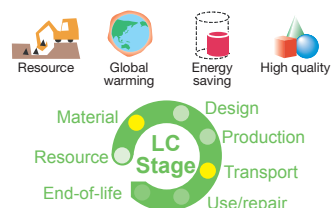
Mobile POS with built-in printer where battery operation is achieved

Environmental performance

- Mitigation of climate change: To Reduce power consumption around half.
- Management of chemicals: Green procurement.

Product performance

- Reducing power consumption, Small footprint
- Battery Operation
- Fan less, Silent



TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664, Japan
 Tel +81-3-6422-7164 Fax +81-3-6422-7121
 URL <http://www.toshibatec.co.jp/index.html.html>
 URL <http://www.toshibatec.co.jp/csr/report/index.html>

Available in: Worldwide

Mobile POS Terminal ST-C10



EP-3-093

OA/IT equipment

disk arrays

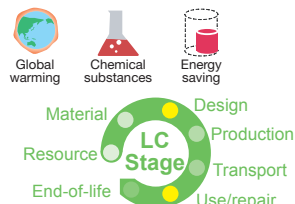
Disk Storage System Operating with Power Saving by "Storage Virtualization Technologies"

Environmental performance

- Mitigation of climate change: Energy consumption efficiency 0.11W/GB (Standard energy consumption efficiency is 0.63W/GB).
- Efficient use of resources: Reduction of number of parts.

Product performance

- Fast Speed Transactions: Improvement of throughput.
- Storage Virtualization Technologies: Easy planning of volume capacity by "Storage Virtualization Technology".



ArrayFort AF7500

Toshiba Solutions Corporation

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan
 Tel +81-3-3457-3260 Fax +81-3-5444-9429
 E-mail eco-info@toshiba-sol.co.jp
 URL <http://www.toshiba-sol.co.jp/>
 URL <http://www.toshiba.co.jp/index.htm>

Available in: Japan

EP-3-094

OA/IT equipment

disk arrays

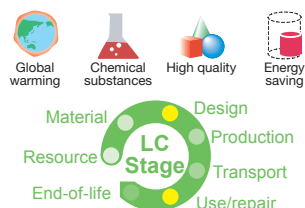
Hitachi Storage Solutions

Environmental performance

- Power consumption is reduced by 7 to approx. 50 percent compared with the previous model.
- Lead-free solder (paste and flow) is used in circuit board.
- Fully compliant with RoHS (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) regulation, which limits the use of hazardous materials in electronic equipment.

Product performance

- The storage solution unifies your storage infrastructure in optimal consolidation of and provides top-level availability and performance in the class to meet your business needs.

Enterprise Disk Array system in Hitachi Storage Solutions
"Hitachi Virtual Storage Platform"

Hitachi, Ltd., / Hitachi Data Systems

6-26-2 Minami-ooi, Shinagawa-ku, Tokyo, 140-0013, Japan
 Tel 81-3-5471-2201 Fax 81-3-5471-2549
 E-mail www-info-hss@ml.itg.hitachi.co.jp
 URL <http://www.hds.com/products/storage-systems/>

Available in: Worldwide

EP-4-001

Office supplies/furniture

desks

FURSYS multifunctional desk "USD desk series"

Environmental performance

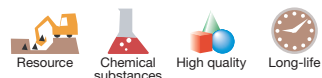
"USD desk" is made of wood, steel and plastic. 1) Less than 1.5PPM of formaldehyde and lower level of heavy-metal than environmental standard are used for this desk. 2) The coating materials and processes of "USD desk" are eco-friendly. These coating materials are also authorized by KOREA Eco-labeling Program. 3) The product life is long. The safety and durability of this desk was verified through experiments.

Product performance

The USD desk series is designed for students to give them the utmost comfort and efficiency to study. It has adjustabilities of height and tilt and antikid function. It also has had a patent registration in Korea.

FURSYS,INC.

Fursys Bldg., 45-1, OGEum-Dong, Songpa-Gu, Seoul, 138-130, Korea
Tel +82-2-443-2818 Fax +82-2-443-3814
E-mail mrbear@fursys.com
URL <http://www.fursys.com>



EP-4-002

Office supplies/furniture

desks

CX office desk made in the pursuit of simplified design

Environmental performance

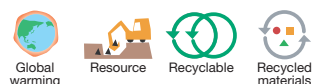
CX desk has the following eco-friendly features.
Simplified design: The desk's weight was reduced by approximately 13% compared with our company's conventional products through simplified design to eliminate duplicated desk legs and modestly panels and downsized basic parts (in case of an island-type, face-to-face layout for 8 people).
Improved recyclability: Metals (steel, aluminum) are used for 96% of the total weight of the product (in case of non-pedestal desk).
Use of an eco-melamine desktop: The surface material of the desktop is made of originally developed eco-melamine using 52% waste paper.
Use of recycled materials: Recycled materials are used for 43% of the resin parts (in case of pedestal desk).

Product performance

CX desk is a neo-standard desk that meets a variety of office needs through the pursuit of simplified design for improved functionality and simplified structure.

ITOKI CORPORATION

4-12, Imafukuhigashi, 1-chome, Joto-ku, Osaka, 536-0002, Japan
Tel +81-6-6935-2200 Fax +81-6-6935-2268
URL <http://www.itoki.jp/>
URL <http://www.itoki.jp/products/desk/cx/>
URL <http://www.itoki.jp/udeco/communication/erreports.html>



CX DESK

Available in: Japan

EP-4-003

Office supplies/furniture

chairs

Highly functional and eco-friendly office chair "Spina"

Environmental performance

Use of recycled materials: Parts made from 100% recycled polypropylene out of recovered battery cases are used for the mechanism cover, levers, etc.

Reduction of material use: The inner shell with numerous slits in the seat pan provides a cushion effect, reducing the amount of urethane compared with conventional products.

Material labeling: The materials used in most plastic parts are labeled to facilitate separation and recycling at the time of disposal.

Product performance

With the passive slide seat (PSS) system that makes the seat sink and slide back when seated, and the active lumbar support (ALS) system that makes the lumbar part of the chair's backrest push forward, Spina chair supports the user's back properly even when sitting back and leaning or sitting forward. This human-friendly Spina chair won the Gold Prize of the Good Design Award in 2007.



Spina Chair

ITOKI CORPORATION

4-12, Imafukuhigashi 1-chome, Joto-ku, Osaka, 536-0002, Japan

Tel +81-6-6935-2200 Fax +81-6-6935-2268

URL <http://www.itoki.jp/>

URL <http://www.itoki.jp/spina/>

URL <http://www.itoki.jp/udeco/communication/erreports.html>

Available in: Japan

EP-4-004

Office supplies/furniture

chairs

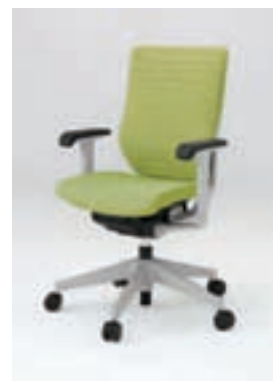
Epios Chair

Environmental performance

- Use of recycled materials: Reprocessed materials are used as much as possible, and roughly 60% of the resin is made with reclaimed materials.
- Reduction of material use: The number of the chair's parts is reduced and the product is made using only three screws.
- Material labeling: The materials used in most resin parts are labeled to facilitate separation and recycling at the time of disposal.

Product performance

The ladder shell structure on the back, which moves flexibly according to your movements, and the sympathetic reaction, with which the reaction force of rocking is controlled automatically according to the user's weight, brings ideal comfort.



ITOKI CORPORATION

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Tel +81-6-6935-2200 Fax +81-6-6935-2268

URL <http://www.itoki.jp/>

URL <http://www.itoki.jp/products/chair/epios/>

URL <http://www.itoki.jp/udeco/communication/erreports.html>

Available in: Japan

EP-4-005

Office supplies/furniture

chairs

FURSYS multifunctional chair "REPLY"

Environmental performance

REPLY is ergonomic and eco-friendly. 1) The plastic recycling rate is more than 63%. 2) It doesn't use PVC but contains regulated chemical elements which are much less than standard quantity. 3) It is used for a long period of time because the mesh parts of the back and the seat are replaceable when contaminated or worn.

Product performance

1) Fursys' unique "dynamically-fitting back system" allows the user to adjust the backrest curvature to fit the individual body type. This helps to prevent the musculoskeletal problems that can occur from prolonged sitting in awkward postures. 2) Its various control levers are all within easy reach from the standard seated work position.

FURSYS,INC.

Fursys Bldg., 45-1, OGEum-Dong, Songpa-Gu, Seoul, 138-130, Korea
Tel +82-2-443-2818 Fax +82-2-443-3814
E-mail mrbear@fursys.com
URL <http://www.fursys.com>



EP-4-006

Office supplies/furniture

office partitions

FURSYS stand-alone panel "Spine" for working environment

Environmental performance

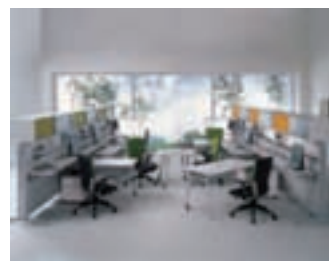
The spine panel of this product consists of steel, aluminum and plastic. It is an eco-product; it made by harmless and recycled materials. 1) Manufacturing process is eco-friendly; it keeps exactly environmental regulations of various fields. 2) It doesn't use PVC. 3) The plastic recycling rate is up to 87%.

Product performance

"Espace" series is an office furniture system that adopts new approach to cable management called "Spine". 1) This Spine houses numerous cables (140mm wide); the panels provide independent access to electrical power and computer networks. 2) It is also the spatial boundaries in the open-plan office; desks and other furniture can be laid out in various configurations within this framework; the workspace can be altered as needs arise.

FURSYS,INC.

Fursys Bldg., 45-1, OGEum-Dong, Songpa-Gu, Seoul, 138-130, Korea
Tel +82-2-443-2818 Fax +82-2-443-3814
E-mail mrbear@fursys.com
URL <http://www.fursys.com>



EP-4-007

Office supplies/furniture

clipboards

CLIP BOARD**Environmental performance**

Our CLIP BOARD is made of recycled materials.
The ratio between raw materials and recycled ones is 60 : 40.

**Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-do, Korea
E-mail kkkon@unitel.co.kr



EP-4-008

Office supplies/furniture

file folders

File Folders with 20-pocket / 40-pocket / 80-pocket display book**Environmental performance**

Our file folders are made of recycled materials based on the recycling and reuse methods.
The ratio between raw materials and recycled ones is 60 : 40.

Product performance

Key Specifications/Special Features:

20/40/80 -pocket display book
A4 size
Various colors are available

**Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-do, Korea
Tel +82-31-318-3157 Fax +82-31-318-3170
E-mail kkkon@unitel.co.kr



EP-4-009

Office supplies/furniture

file folders

File Folders with Clip, Lever Clip

Environmental performance

Our file folders are made of recycled materials based on the recycling and reuse method.

The ratio between raw materials and recycled ones is 60 : 40.



Elite Information Industry

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-do, Korea

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail kkkon@unitel.co.kr

EP-4-010

Office supplies/furniture

file folders

File Folders with Ring Binder (2, 3, 4 Ring)

Environmental performance

Our File Folders are made of recycled materials based on the recycled and reuse method.

The ratio between raw materials and recycled ones is 60 : 40.

Product performance

SIZE : 255×310mm

TRIGGER TYPE - 2-D/3-D/4-D RING



Elite Information Industry

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-do, Korea

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail kkkon@unitel.co.kr

EP-4-011

Office supplies/furniture

calendar

Eco-Mark-certified Green Calendar**Environmental performance**

An Eco-Mark-labeled calendar. All the paper used in the product is 100% recycled. The packaging of the calendars is made from milk cartons. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO₂.

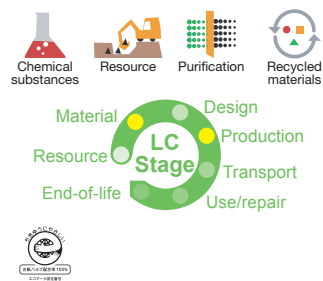
Product performance

Size: 119 x 150 mm, 12-page main text, Logotype (No VOC, waterless printing)

Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan



EP-4-012

Office supplies/furniture

calendar

Ecology Carbon Offset Calendar**Environmental performance**

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO₂.

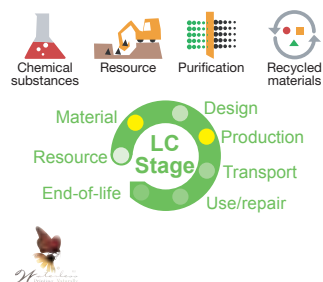
Product performance

The Ecology calendar is compact, and features a large space for making notes.
Size: 119 x 150 mm, 1 cover + 12 main sheets, logo (VOC free, waterless printing)

Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan



Ecology Carbon Offset Calendar

EP-4-013

Office supplies/furniture

calendar

Window Memo Carbon Offset Calendar

Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO₂.

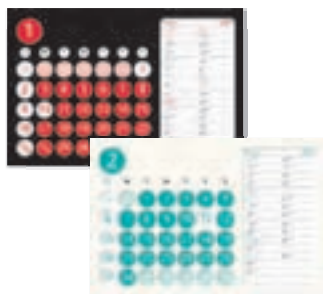
Product performance

The Window Memo is a fun calendar with a colorful and stylish design. Size: 120 x 180 mm, 12 main sheets, logo (VOC free, waterless printing)

Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan



Window Memo Carbon Offset Calendar

EP-4-014

Office supplies/furniture

calendar

Index Carbon Offset Calendar

Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO₂.

Product performance

The Index Calendar has outstanding functionality and features easy-to-use tabs and a large space for making notes. Size: 140 x 180 mm, 1 cover + 6 main sheets, logo (soy ink)

Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan



Index Carbon Offset Calendar

EP-4-015

Office supplies/furniture

calendar

The Earth FSC, calendar using paper certified by the FSC

Environmental performance

An eco-friendly calendar that uses paper certified by the FSC and is made with waterless printing and soy ink. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO₂.

Product performance

The simple and stylish design allows users ample space for writing memos, making the calendar functionable. Each page features a silhouetted image of something in danger of extinction accompanied by an environmental message.

Size: 600 x 425 mm, The products are bound using the hot-melt binding method., Cover + 13-page main text (No VOC, waterless printing)



Pripress Center Corporation

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan

The Earth FSC

EP-4-016

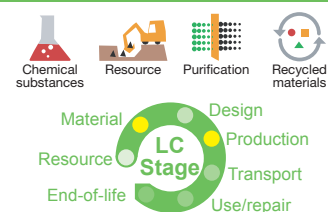
Office supplies/furniture

new year's cards

Eco Green New Year's Cards (postcards)

Environmental performance

When we initiated a carbon offset business in 2008, we launched carbon offset-type Green Eco New Year's Cards in bags- a conventional way of selling cards - along with an opportunity for consumers to participate in afforestation initiatives. Specifically, we sold sets of three ecologically designed New Year's cards with lottery numbers and QR codes. The QR codes enable card recipients to see that approximately 400 grams of CO₂ is absorbed per card through afforestation. In 2008, 2,500 sets were sold at supermarkets, bookstores, fancy goods stores, etc. nationwide with a projected offset of about 30 tons of CO₂ by the autumn of 2010.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan

Green Eco New Year's Cards

EP-4-017

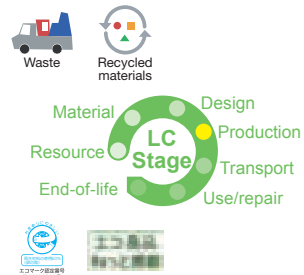
Office supplies/furniture

office supplies

Chalk using recycled eggshells discarded by food processing companies

Environmental performance

Eggshells discarded by food processing companies were heated, sterilized, crushed and ground up, and chalk was manufactured by substituting 60% of the raw material in regular calcium carbonate chalk (i.e., calcium carbonate) with the ground eggshells. Discarded eggshells were recycled into chalk raw materials for use at schools, construction sites, etc. Sprinkling chalk powder generated from chalk use also leads to soil improvement.



NIHONHAKUBOKU INDUSTRY CO.,LTD.

3-43 KAMIGUCHI MISATO-SHI SAITAMA-KEN, 341-0055, Japan
 Tel +81-48-952-7171 Fax +81-48-952-7175
 E-mail junji@tenjin-chalk.co.jp
 URL <http://www.tenjin-chalk.co.jp/>



Available in: Japan, Indonesia, Singapore, Thailand, Philippines, Malaysia, Republic of Korea, Taiwan (Rep. of China), China

ECO Chalk 72

EP-5-001

Apparel/textiles

apparel

Police Vest**Environmental performance**

Reduction of Hazardous Materials

"-No halogen synthetic resins such as PVC in the manufacturing process

"-Odor-free operation



Chemical substances



Purification

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea

Tel +82-2-775-3811 Fax +82-2-774-5588

E-mail parkcs6a@naver.com

URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-002

Apparel/textiles

apparel

Military Raincoat**Environmental performance**

Reduction of Hazardous Materials

Product performance

"-No halogen synthetic resins such as PVC in the manufacturing process

"-Odor-free operation



Chemical substances



Purification

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea

Tel +82-2-775-3811 Fax +82-2-774-5588

E-mail parkcs6a@naver.com

URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-003

Apparel/textiles

apparel

Military Vest**Environmental performance**

Reduction of Hazardous Materials

Product performance

"-No halogen synthetic resins such as PVC in the manufacturing process
 "-Odor-free operation



Chemical substances



Purification

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of China
 Tel +82-2-775-3811 Fax +82-2-774-5588
 E-mail parkcs6a@naver.com
 URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-004

Apparel/textiles

apparel

Military winter clothes**Environmental performance**

Reduction of Hazardous Materials

Product performance

"-No halogen synthetic resins such as PVC in the manufacturing process
 "-Odor-free operation



Chemical substances



Purification

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea
 Tel +82-2-775-3811 Fax +82-2-774-5588
 E-mail parkcs6a@naver.com
 URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-005

Apparel/textiles

apparel

Military Pancho Liner**Environmental performance**

Reduction of Hazardous Materials

Product performance

"-No halogen synthetic resins such as PVC in the manufacturing process

"-Odor-free operation

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127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea

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E-mail parkcs6a@naver.com

URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-006

Apparel/textiles

apparel

Sleeping Bag**Environmental performance**

Reduction of Hazardous Materials

Product performance

"-No halogen synthetic resins such as PVC in the manufacturing process

"-Odor-free operation

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea

Tel +82-2-775-3811 Fax +82-2-774-5588

E-mail parkcs6a@naver.com

URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-007

Apparel/textiles

apparel

Military Winter Cap**Environmental performance**

Reduction of Hazardous Materials

Product performance

"-No halogen synthetic resins such as PVC in the manufacturing process
 "-Odor-free operation

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea
 Tel +82-2-775-3811 Fax +82-2-774-5588
 E-mail parkcs6a@naver.com
 URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-008

Apparel/textiles

apparel

Military Winter Hood**Environmental performance**

Reduction of Hazardous Materials

Product performance

"-No halogen synthetic resins such as PVC in the manufacturing process
 "-Odor-free operation

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of China
 Tel +82-2-775-3811 Fax +82-2-774-5588
 E-mail parkcs6a@naver.com
 URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-009

Apparel/textiles

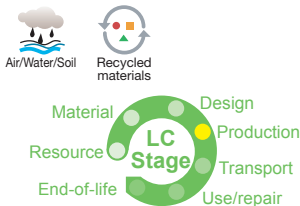
apparel

DAAI TECH ECO FUNCTIONAL three in one SHIRT

Environmental performance

100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.

100% Recycled Fiber - Made from recycled PET bottles



Da Ai Technology Co.

5F, NO.69, Zhouzi St. Neihu District, Taipei City 114-93, Taiwan (R.O.C)

EP-5-010

Apparel/textiles

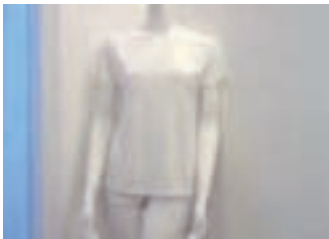
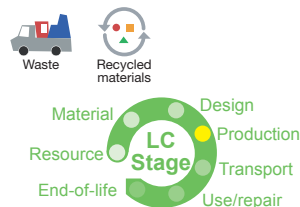
apparel

DAAI TECH ECO ICECOOL CREW NECK SHIRT (Short Sleeve/White)

Environmental performance

100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.

100% Recycled Fiber - Made from recycled PET bottles



Da Ai Technology Co.

5F, NO.69, Zhouzi St. Neihu District, Taipei City 114-93, Taiwan (R.O.C)

Eco-product // Apparel/textiles

1
2
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9

EP-5-011

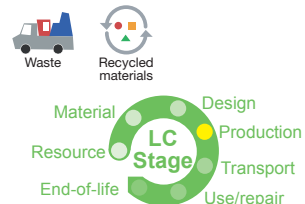
Apparel/textiles

apparel

DAAI TECH ECO Scarf (Green/White/Navy)**Environmental performance**

100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.

100% Recycled Fiber - Made from recycled PET bottles

**Da Ai Technology Co.**

5F, NO.69, Zhouzi St. Neihu District, Taipei City 114-93, Taiwan (R.O.C)



EP-5-012

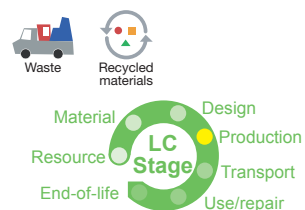
Apparel/textiles

apparel

DAAI TECH ECO Pants (White)**Environmental performance**

100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.

100% Recycled Fiber - Made from recycled PET bottles

**Da Ai Technology Co.**

5F, NO.69, Zhouzi St. Neihu District, Taipei City 114-93, Taiwan (R.O.C)

EP-5-013

Apparel/textiles

apparel

DA AI shirt

Environmental performance

100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.
100% Recycled Fiber - Made from recycled PET bottles

Waste

Recycled materials

Material

Resource

End-of-life


Design

Production

Transport

Use/repair

LC Stage



Da Ai Technology Co.

5F, NO.69, Zhouzi St. Neihu District, Taipei City 114-93, Taiwan (R.O.C)

EP-5-014

Apparel/textiles

apparel

100% Eco Stripped Polo shirt

Environmental performance

100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.
100% Recycled Fiber - Made from recycled PET bottles

Waste

Recycled materials

Material

Resource

End-of-life


Design

Production

Transport

Use/repair

LC Stage



Da Ai Technology Co.

5F, NO.69, Zhouzi St. Neihu District, Taipei City 114-93, Taiwan (R.O.C)

EP-5-015

Apparel/textiles

bags

Military Toiletry Kit Bag

Environmental performance

Reduction of Hazardous Materials

"-No halogen synthetic resins such as PVC in the manufacturing process

"-Odor-free operation



Samduk Commercial Co., Ltd.

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea

Tel +82-2-775-3811 Fax +82-2-774-5588

E-mail parkcs6a@naver.com

URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-016

Apparel/textiles

bags

Military Clothing Bag

Environmental performance

Reduction of Hazardous Materials

"-No halogen synthetic resins such as PVC in the manufacturing process

"-Odor-free operation



Samduk Commercial Co., Ltd.

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea

Tel +82-2-775-3811 Fax +82-2-774-5588

E-mail parkcs6a@naver.com

URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-017

Apparel/textiles

bags

Military Backpack**Environmental performance**

Reduction of Hazardous Materials

"-No halogen synthetic resins such as PVC in the manufacturing process

"-Odor-free operation

**Samduk Commercial Co., Ltd.**

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea

Tel +82-2-775-3811 Fax +82-2-774-5588

E-mail parkcs6a@naver.com

URL <http://www.kimbulls.com>

Available in: Republic of Korea

EP-5-018

Apparel/textiles

bags

DAAI TECH ECO Handy Bag (Khaki/Ocean Blue)**Environmental performance**

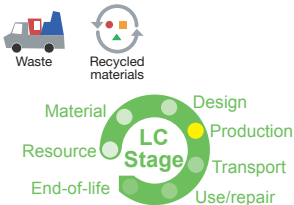
100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.

100% Recycled Fiber - Made from recycled PET bottles

**Da Ai Technology Co.**

5F, NO.69, Zhouzi St. Neihs District, Taipei City 114-93, Taiwan (R.O.C)

EP-5-019	Apparel/textiles
	blanket
DAAI TECH ECO Blanket	
<div>Environmental performance</div> <div><p>100% ECO Production - To ensure the best quality of DAAI Re-PET materials, volunteers in Tzu Chi recycling stations attentively collect and sort the recyclable PET bottles by varied color and remove the caps and the bottle neck rings.</p><p>100% Recycled Fiber - Made from recycled PET bottles</p></div> <div>Da Ai Technology Co.</div> <div><p>5F, NO.69, Zhouzi St. Neihu District, Taipei City 114-93, Taiwan (R.O.C)</p></div>	



EP-6-001

Household goods and equipment

dishwashing liquid

Boomgreen Natural Dish Washing Liquid

Environmental performance

- Save water , Energy
- Production line safe toxic and chemicals.
- Raw material from Pure Natural
- Leaves no toxic residue

Product performance

- Raw Material From Pure Natural only.
- Free total toxic heavy metals
- Free LAS NaOH4
- Total phosphate , EDTA , Zeolite < 0.05%
- Received the Green Label from Thailand Environment Institute since 2004.
- pH 5.5-6.5
- No toxic residue
- Biodegradable > 96%

Bio-Bright (Thailand) Co.,Ltd.

1/50 Moo2 Trang-Palian Rd, Koklor Muang Trang, 92000, Thailand
Tel 0-7522-5091 Fax 0-7521-0795
E-mail kittipon@boomgreen.net
URL www.greenqualityproduct.com
URL www.boomgreen.net

Available in: Worldwide



Boomgreen Natural Dishwashing Liquid. With lemon Enzyme that uses multiple fruit acids, not chemical cleaning acids, it is the safest, most environmentally responsible dishwashing liquid. Perfectly suitable for cleaning baby bottles, glasses. Contains NO

EP-6-002

Household goods and equipment

cleaning liquid

Boomgreen Natural Multi-Purpose Liquid

Environmental performance

- Save water , Energy
- Production line safe toxic and chemicals.
- Raw material from Pure Natural
- Leaves no toxic residue

Product performance

- Raw Material From Pure Natural only.
- Free total toxic heavy metals
- Free LAS NaOH4
- Total phosphate , EDTA , Zeolite < 0.05%
- Received the Green Label from Thailand Environment Institute since 2004.
- pH 5.5-6.5
- No toxic residue
- Biodegradable > 96%

Bio-Bright (Thailand) Co.,Ltd.

1/50 Moo2 Trang-Palian Rd, Koklor Muang Trang, 92000, Thailand
Tel 0-7522-5091 Fax 0-7521-0795
E-mail kittipon@boomgreen.net
URL www.greenqualityproduct.com
URL www.boomgreen.net

Available in: Worldwide



Super Concentrated and Free-rinsing Formula. Boomgreen Natural Multi-purpose Liquid Cleaner features a unique blend of multiple fruit acids and essential oils extracted from fruit peels Safe for even the most delicate surfaces like marble, granite, funit

EP-6-003

Household goods and equipment

soap

Facial wash - for combination skin

Environmental performance

- Raw Material From Pure Natural only.
- Biodegradable



A Gentle Formula suitable for even the most sensitive skin. Features a premium blend of pomegranate, tomato, lime, tangerine, gotu kola, and siam weed. This special soap is full of natural AHAs like glycolic, lactic, and tartaric, which have been used in

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 URL www.greenqualityproduct.com
 URL www.boomgreen.net

Available in: Worldwide

EP-6-004

Household goods and equipment

soap

Facial wash - for oily skin

Environmental performance

- Raw Material From Pure Natural only.
- Biodegradable



A Gentle Formula suitable for even the most sensitive skin. Features a premium blend of pomegranate, tomato, lime, tangerine, gotu kola, and siam weed. This special soap is full of natural AHAs like glycolic, lactic, and tartaric, which have been used in

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 URL www.greenqualityproduct.com
 URL www.boomgreen.net

Available in: Worldwide

EP-6-005

Household goods and equipment

soap

Facial wash - for dry+sensitive skin

Environmental performance

- Raw Material From Pure Natural only.
- Biodegradable



A Gentle Formula suitable for even the most sensitive skin. Features a premium blend of pomegranate, tomato, lime, tangerine, gotu kola, and siam weed. This special soap is full of natural AHAs like glycolic, lactic, and tartaric, which have been used sin

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 URL www.greenqualityproduct.com
 URL www.boomgreen.net

Available in: Worldwide

EP-6-006

Household goods and equipment

soap

Boomgreen Pure Honey Botanical Soap

Environmental performance

- Raw Material From Pure Natural only.
- Biodegradable



Pure Honey ripened for more than 2 year.
 Nurturing & Strengthening Skin. No toxic residue

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 Tel 0-7522-5091 Fax 0-7521-0795
 E-mail kittipon@boomgreen.net
 URL www.greenqualityproduct.com
 URL www.boomgreen.net

Available in: Worldwide

EP-6-007

Household goods and equipment

detergents

Boomgreen Natural Laundry Liquid**Environmental performance**

- Save water , Energy
- Production line safe toxic and chemicals.
- Raw material from Pure Natural
- Leaves no toxic residue

Product performance

- Raw Material From Pure Natural only.
- Free total toxic heavy metals
- Free LAS NaOH4
- Total phosphate , EDTA , Zeolite < 0.05%
- Received the Green Label from Thailand Environment Institute since 2004.
- pH 5.5-6.5
- No toxic residue
- Biodegradable > 96%

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 Tel 0-7522-5091 Fax 0-7521-0795
 E-mail kittipon@boomgreen.net
 URL www.greenqualityproduct.com
 URL www.boomgreen.net

Available in: Worldwide



Boomgreen Natural Laundry Liquid derives its cleaning power from multiple fruit enzymes. Contains No fluorescent whitening agent, Zeolite, or carcinogens. Non-irritating to the skin and the lung. Suitable for all delicate items, such as baby clothes, ling

EP-6-008

Household goods and equipment

detergents

Boomgreen Botanical Lingerie**Environmental performance**

- Save water , Energy
- Production line safe toxic and chemicals.
- Raw material from Pure Natural
- Leaves no toxic residue

Product performance

- Raw Material From Pure Natural only.
- Free total toxic heavy metals
- Free LAS NaOH4
- Total phosphate , EDTA , Zeolite < 0.05%
- Received the Green Label from Thailand Environment Institute since 2004.
- pH 5.5-6.5
- No toxic residue
- Biodegradable > 96%

Bio-Bright (Thailand) Co.,Ltd.

1/50 Moo2 Trang-Palian Rd, Koklor Muang Trang, 92000, Thailand
 Tel 0-7522-5091 Fax 0-7521-0795
 E-mail kittipon@boomgreen.net
 URL www.greenqualityproduct.com
 URL www.boomgreen.net

Available in: Worldwide



A result of continuing research, Botanical Detergent for Lingerie is specially formulated with fruits and herbs to clean gently and effectively. It is an ideal product for your health and especially suitable for people with allergies and chemical sensitiv

EP-6-009

Household goods and equipment

detergents

2POINT DTG - Multi-purpose powder detergent [GreenLabel]

Environmental performance

- ENVIRONMENTAL CHARACTERISTICS -
- 1. Phosphate 0.24%
- 2. Biodegradability 91%
- PRODUCT IS EXCLUDED FROM FORMULATION INDUCING AGENT -
- 1. Carcinogen
- 2. Genotoxic and Mutagen
- 3. Toxic to Reproduction
- 4. Reactive Chlorine Compounds
- 5. Organic Chlorine compounds
- 6. Ethylene Diamine Tetraacetic Acid (EDTA)
- 7. Alkyl Phenol Ethoxylates (APEO)
- 8. Nitrilotriacetic Acid (NTA)
- 9. Halogenated Hydrocarbon
- 10. Formalin
- PERFUME -
- Certified by International Fragrance Raw Material Association or Research Institute for Fragrance Material
- PACKAGING -
- 1. There shall not be any pigment or additive containing the following heavy metals:- lead, mercury, cadmium and chromium or their combined contamination not over 250 ppm.
- 2. There is no use of Polyvinylchloride (PVC)
- 3. Carton board is from the mixture of recycled pulp paper of at least 70% by weight



Only Green Co., Ltd.

7/17 Moo 21, Ramintra Soi 127 Road, Minburi, 10510, Thailand
 Tel +662-907-4383 Fax +662-907-4384
 E-mail onlygreenemail@yahoo.com
 URL <http://www.onlygreen.co.th>
 URL http://www.onlygreen.co.th/EN/products/2p_dtg.htm

Available in: Worldwide

EP-6-010

Household goods and equipment

detergents

Attack Neo

Environmental performance

CO₂ emission within the process of raw procurement, production, distribution, and final disposal is reduced by approx. 21% (*1) compared with conventional products, owing to the product size reduction that has contributed to save package resin and to enhance transport efficiency. By setting washing machine to a single-rinse mode, users can save water and electricity to reduce CO₂ emission by approx. 22% (*2), compared with double-rinse mode. All in all, CO₂ emission throughout laundry is reduced by approx. 21% (from a viewpoint of lifecycle assessment).

*1 Compared with Kao's conventional liquid detergent, bottle: refill = 2:8

*2 Kao's survey, conducted in June 2009, automatic washing machine (capacity 8 kg), amount of clothes 4 kg, quantity of water 47 L

Product performance

Attack Neo has realized detergent concentration up to 2.5 times* higher than conventional products, to reduce the product weight from 1kg to 400g. Less amount of detergent guarantees high washing performance. Since washing components are less clingy to fibers, rinsing process can be saved once. Amounts of detergent residues on laundry after rinsing once are almost the same as those after rinsing twice.*

*Compared with Kao's conventional liquid detergents.



Attack Neo

Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan
 URL http://www.kao.com/index_en.html
 URL http://www.kao.com/jp/en/corp_csr/pdf_reports.html

Available in: Japan

EP-6-011

Household goods and equipment

detergents

Attack Instant Clean Liquid

Environmental performance

Attack Instant Clean Liquid is a laundry detergent specially formulated to save water.

It enables to save water in rinsing process for laundering in China, in which approx. 80% of water is used for rinsing.

It contains high cleansing ability which enable a small amount to attack stains more efficiently, so that users can reduce rinsing times and save approx. 15% of laundering water.

Product performance

Attack Instant Clean Liquid is a laundry detergent specially formulated to save water.

It contains high cleansing ability which enable a small amount to attack stains more efficiently.

Also its components are less clingy to fibers, so that at one time rinsing leaves less detergent on laundry than rinsing twice with conventional liquid detergent.

Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan

URL http://www.kao.com/index_en.html

URL http://www.kao.com/cn/attack/atk_liquid_01.html

URL http://www.kao.com/jp/en/corp_csr/pdf_reports.html



Global warming



Energy saving



Available in: China

Attack Instant Clean Liquid

EP-6-012

Household goods and equipment

cationic surface-active agents

Humming Neo

Environmental performance

CO₂ emission within the process of raw procurement, production, distribution, and final disposal is reduced by approx. 32% (*) compared with conventional fabric softener, owing to the product size reduction that has contributed to save package resin and to enhance transport efficiency.

*Compared with Kao's conventional fabric softener, bottle: refill = 2:8 by sales amount.

Product performance

Humming Neo fabric softener contains newly developed polymer.

This formula helps softening ingredients adsorb 1.5 times(*) more onto fabric (than conventional fabric softeners), which enable a small amount to make clothes even softer and more comfortable to wear every time you use it. (**)

*When washing with less water (using less than 12L of water for 1kg of clothes).

**Compared with conventional Kao's Humming Concentrated fabric softener, used under the (standard OR recommended) usage.



Global warming



High quality



Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan

URL http://www.kao.com/index_en.html

URL http://www.kao.com/jp/en/corp_csr/pdf_reports.html

Available in: Japan

Humming Neo

EP-6-013

Household goods and equipment

mattresses

Frei Green Environmental Natural Latex Mattress

Environmental performance

Frei is produced through the use of the green method which is practically free from emissions, especially for formaldehyde. Therefore, this revolutionary method and the product itself won the Environmental Award of the Green Mark.

Product performance

Unlike any other latex mattress on the market, our natural latex mattress is the only mattress that has earned the national toxic-free certification. We are using 100% pure natural latex with highest standards of excellence are held for Function, Quality, and Safety. After an exhausting day of working, lying on Frei Green Latex Mattress relaxes your entire body through the unique design of breathable bubble-structure supporting your waist. Coupled with the soft, luxurious, and biodegradable TENCEL mattress cover. The delicate texture and the non-toxic properties make the ultimate transparency, comfort, and softness.

Acircle Corporation

No. 69, Anle Rd., Jhonghe City, Taipei County, 23573, Republic of China
Tel +886-2-8941-2421 Fax +886-2-8941-2411
E-mail brandon.kao@a-circle.com.tw
URL <http://www.a-circle.com.tw>
URL http://www.a-circle.com.tw/en_page/en_home.html

Available in: Japan, North America, U.S.A, Taiwan (Rep. of China)



Using Tencel™ as the mattress cover and 100% natural latex providing additional comfort

EP-6-014

Household goods and equipment

mattresses

Frei Green Environmental Spring Mattress

Environmental performance

Consist high volume of 77% high-carbon steel provides extra product life cycle. All springs sustain up to maximum 190kgf/mm². The product's volatile formaldehyde concentration is only 0.01mg/m³ with TVoC 0.005mg/m³.

Product performance

The veterbra is the most important part supporting the entire body. Frei Green Spring Mattress is the best place offer of rest for your vertebra. Two main layers of Frei Green Spring Mattress:

1. The middle section: With the high-carbon steel of the springs plus the "Steel Net", it maintains the shape of your vertebra; in order to relax and recover your exhausting body.
2. The upper and lower sections: The green latex forms as a buffer to take the body weight. It relaxes every inch of our muscle and joints.

Acircle Corporation

No. 69, Anle Rd., Jhonghe City, Taipei County, 23573, Republic of China
Tel +886-2-8941-2421 Fax +886-2-8941-2411
E-mail brandon.kao@a-circle.com.tw
URL <http://www.a-circle.com.tw>
URL http://www.a-circle.com.tw/en_page/en_home.html

Available in: Japan, North America, U.S.A, Taiwan (Rep. of China)



Using Tencel™ as the mattress cover providing additional comfort

EP-6-015

Household goods and equipment

mattresses

Frei Green Environmental Euro-Top Pocket-Spring Mattress

Environmental performance

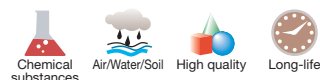
Consist high volume of 72% high-carbon steel provides extra product life-cycle. With 100% pure natural latex on the top provides a better and comfortable sleep. The product's volatile formaldehyde concentration is only 0.01mg/m³ with TVOC 0.005mg/m³.

Product performance

The hand-made and delicate pocket-spring couples with the comfortable 100% pure green environmental natural latex on the top provides extra comfort. The pocket-springs efficiently absorb the shake of changing sleep postures. Feel free to change your posture without disturbing your partner's sleep. Average the weight of each parts of your body, relieve your stresses to fall in a deep and comfortable sleep.

Acircle Corporation

No. 69, Anle Rd., Jhonghe Ciry, Taipei County, 23573, Republic of China
Tel +886-2-8941-2421 Fax +886-2-8941-2411
E-mail brandon.kao@a-circle.com.tw
URL <http://www.a-circle.com.tw>
URL http://www.a-circle.com.tw/en_page/en_home.html



Available in: Japan, North America, U.S.A, Taiwan (Rep. of China)

All materials do not consist any of carcinogenic chemical substances

EP-6-016

Household goods and equipment

cleaning and scouring preparations

The sndek spray-type cleaner series

Environmental performance

The sndek spray-type cleaner series uses soda electrolysis water (an aqueous solution obtained by electrolyzing sodium hydrogen carbonate (NaHCO₃) solution) and malic acid electrolysis water (an aqueous solution obtained by electrolyzing malic acid water solution). Both types of water constitute safe materials, with neither containing any synthetic surface-active agents. This cleaning product, which is friendly to both the human body and the environment, is available in original sndek bottles that can be reused by refilling.

Product performance

sndek spray-type cleaner for the kitchen and living room uses soda electrolysis water, and completely removes persistent greasy stains, finger marks, etc. sndek spray-type cleaner for windows uses malic acid electrolysis water, which prevents smearing and cleans glass. The safety of both materials means that double wiping is not needed.



HATTORI PAPER MFG.Co.,Ltd.

171-1 Yamadai, Kinsei-cho, Shikokuchuo-city, Ehime, 799-0112, Japan
Tel +81-896-58-3005 Fax +81-896-58-3048
E-mail info@sndek.com
URL <http://www.hattoripaper.co.jp>
URL <http://www.sndek.com>



EP-6-017

Household goods and equipment

cleaning and scouring preparations

furomizu-wonder

Environmental performance

Users can reduce water by approx.120L~160L by reused with reheated mineral bath.

※condition:bath, be equipped with reheating sysytem

Product performance

Furomizu-wonder keeps bath clean, owing to be compounded with purifier ingredient.

Purifier ingredient is Sodium Dichloroisocyanurate, which prevents the various germs breeding.

It can be keep off slimy dirt and bad smell when users reheat mineral bath.

Kao Corporation

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan

URL http://www.kao.com/index_en.html

URL http://www.kao.com/jp/en/corp_csr/pdf_reports.html

Available in: Japan



furomizu-wonder

EP-6-018

Household goods and equipment

adhesives

Adhesive for interior decoration

Environmental performance

- Environmentally friendly adhesive
- Plasticizer-free water based adhesive
(Plasticizers are essentially VOC components, and such VOC components particularly in adhesives for use in housing are suspected to be causative substances for Sick House Syndrome.)

Product performance

- Excellent bond strength and fast setting
- Good compatibility with urea resin
- Adaptable to spreading machines
- No contamination or damage to substrates and mechanical devices
- Adaptable to hot and cold press

OKONG CORP.

621-7 Namchon-dong, Namdong-gu, Incheon, 405-846, Korea

Tel +82-32-822-5050 Fax +82-32-817-5061

E-mail okskjg@hanafos.com



EP-6-019

Household goods and equipment

paper products

The sndek cleaning cloth series

Environmental performance

The sndek cleaning cloth series is a range of environmentally friendly cleaning cloths (primarily selected from natural materials such as pulp, cotton and eucalyptus fiber) impregnated with NaHCO_3 electrolysis water. Biodegradable materials are used due to the disposable nature of these cloths, which can wipe off large amounts of dirt before being composted (excluding SN-W3W9W11W13).

Product performance

The sndek cleaning cloth series offers a variety of cleaning sheets to deal with various types of household dirt and stains. Their attractive, compact packaging means they can be kept in a handbag for use while out and about as well as in the home. The safety of the materials used means that double wiping is not needed. The sndek brand is aimed at keeping both houses and the earth clean.

HATTORI PAPER MFG.Co.,Ltd.

171-1 Yamadai, Kinsei-cho, Shikokuchuo-city, Ehime, 799-0112, Japan
Tel +81-896-58-3005 Fax +81-896-58-3048
E-mail info@sndek.com
URL <http://www.hattoripaper.co.jp>
URL <http://www.sndek.com>



EP-6-020

Household goods and equipment

pulp, paper and paper worked products

Ecora pack kraft tape No.501 More than 40% of the base material is recycled paper

Environmental performance

The product maintains the same performance, appearance and quality as conventional kraft tape.

This high-standard ecological tape responds to today's environmental trends, while allowing you to imagine that recycled paper is not being used.

Product performance

Excellent holding power and stable quality. It is easy to tear by hand, providing excellent workability. It is most frequently used as general-purpose tape for sealing cardboard boxes. A special resin treatment makes it highly moisture-proof and highly durable at high or low temperatures.

Main applications: For sealing cardboard boxes (medium and light weight)



SEKISUI CHEMICAL CO., LTD.

2-3-17 Toranomon, Minato-ku, Tokyo, 105-8450, Japan
Tel +81-3-5521-0562
E-mail ctk01@sekisui.jp
URL <http://www.tutuminet.com/eng/index.html>
URL http://www.tutuminet.com/eng/product/kraft/product/1182530_4666.html

EP-6-021

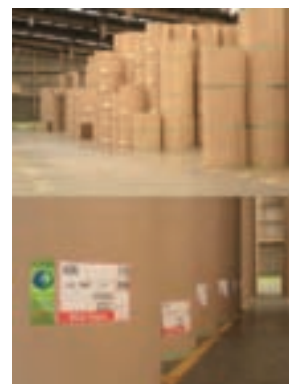
Household goods and equipment

paper boards

Test liner (paperboard)

Environmental performance

UPPC has one of the most environmentally-sound proper manufacturing operations in the Philippines. It uses 100% recycled paper; it has an Effluent Treatment Plant which is among the most advanced in the Philippines and lastly the manufacturing plant itself is powered by 24-megawatt cogeneration facility and 130 tons/hr state-of-the-art Circulating Fluidized Bed Boiler utilizing coal, waste paper, sludge and biofuels like corn cob and saw dust for energy efficiency and less used of natural resources. The Green Choice Certification was endowed to UPPC Linerboard for being less harmful to the environment and also for attesting of being a high quality paper product.



United Pulp and Paper Corporation

9/F Fort Legend Towers 3rd Ave. cor 31st St. Bonifacio Global City, Taguig
Philippines, Philippines
Tel (+632) 9081701 Fax (+632) 9081703
E-mail piao@uppc.com.ph
URL www.scg.co.th

EP-6-022

Household goods and equipment

recycled paper

CLEAR LOTUS RECYCLED PAPER (OA)

Environmental performance

This product is certified by FSC™ and PEFC™. Use part of the Waste/ Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 60% recycled paper content.

Product performance

Basis weight: 45~180gsm
Format: Rolls/Sheets
End-use: Copy paper, Dot matrix printer paper, General Writing and printing, Direct mail.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of
China
Tel +886-89-382250 Fax +886-89-382256
E-mail billyyang@yfy.com
URL www.yfy.com

EP-6-023

Household goods and equipment

recycled paper

RECYCLED TWO SIDES COATED SOLID CARD BOARD

Environmental performance

This product is certified by FSC™ and PEFC™. Use part of the Waste/ Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 40% recycled paper content.

Product performance

Basis weight: 190~450gsm

Format: Rolls/Sheets

End-use: Business cards, Calendars, Compliment slips, Covers, Envelopes, text and cover, Folders, General printing, Greeting cards, Inserts, Invitations, Leaflets, Letterheads, Menus, Posters.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of China
Tel +886-89-382250 Fax +886-89-382256
E-mail billyang@yfy.com
URL www.yfy.com

EP-6-024

Household goods and equipment

recycled paper

CLEAR LOTUS RECYCLED PAPER

Environmental performance

This product is certified by FSC™ and PEFC™. Use part of the Waste/ Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 50% recycled paper content.

Product performance

Basis weight: 45~180gsm

Format: Rolls/Sheets

End-use: Books, Brochures, Business forms, Calendars, Catalogues, Direct mail, General printing, Inserts, Leaflets, Magazines, Posters.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of China
Tel +886-89-382250 Fax +886-89-382256
E-mail billyang@yfy.com
URL www.yfy.com

EP-6-025

Household goods and equipment

recycled paper

CLEAR LOTUS RECYCLED PAPER BOARD

Environmental performance

This product is certified by FSC™ and PEFC™. Use part of the Waste/ Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 40% recycled paper content.

Product performance

Basis weight: 160~450gsm

Format: Rolls/Sheets

End-use: Business cards, Calendars, Clothing tags, Compliment slips, Covers, Envelopes, text and cover, Folders, General printing, Greeting cards, Inserts, Invitations, Leaflets, Menus, Posters, General printing.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of China

Tel +886-89-382250 Fax +886-89-382256

E-mail billyyang@yfy.com

URL www.yfy.com

Available in: Worldwide

EP-6-026

Household goods and equipment

recycled paper

RECYCLED KRAFT PAPER BOARD

Environmental performance

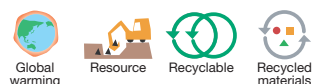
This product is certified by FSC™ and PEFC™. Use part of the Waste/ Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 40% recycled paper content.

Product performance

Basis weight: 60~190gsm

Format: Rolls/Sheets

End-use: Carrier bags, Flat bags, Wrappers, Gift Wrap, Interleave.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of China

Tel +886-89-382250 Fax +886-89-382256

E-mail billyyang@yfy.com

URL www.yfy.com

EP-6-027

Household goods and equipment

recycled paper

COATED DUPLEX BOARD WITH WHITE/GREY BACK**Environmental performance**

This product is certified by FSC™ and PEFC™. Use part of the Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Has least 80% post-consumer waste paper.

Product performance

Basis weight: 200~550gsm
Format: Rolls/Sheets
End-use: Packaging, Lightweight packaging, Box lamination.

**YUEN FOONG YU PAPER MFG. CO., LTD.**

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of China
Tel +886-89-382250 Fax +886-89-382256
E-mail billyyang@yfy.com
URL www.yfy.com

EP-6-028

Household goods and equipment

recycled paper

CHIP BOARD**Environmental performance**

This product is certified by FSC™ and PEFC™. Use 100% Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Use 100% post-consumer waste paper.

Product performance

Basis weight: 312~2106gsm
Format: Rolls/Sheets
End-use: Cover liner, Box lamination, Packaging.

**YUEN FOONG YU PAPER MFG. CO., LTD.**

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of China
Tel +886-89-382250 Fax +886-89-382256
E-mail billyyang@yfy.com
URL www.yfy.com

EP-6-029

Household goods and equipment

recycled paper

CORE BOARD

Environmental performance

This product is certified by FSC™ and PEFC™. Use 100% Waste/Recycled pulp. Conservation and effective utilization of Forestry Resource. Components: Use 100% post-consumer waste paper.

Product performance

Basis weight: 300~500gsm

Format: Rolls/Sheets

End-use: High strength chemical fiber tubes, Yarn bobbins, Industrial paper tubes for paper milling and plastic film.



YUEN FOONG YU PAPER MFG. CO., LTD.

371, SEC. 4, CHUNG HSING RD., TAITUNG, TAIWAN, R.O.C., Republic of China
Tel +886-89-382250 Fax +886-89-382256
E-mail billyang@yfy.com
URL www.yfy.com



EP-6-030

Household goods and equipment

manufacturing products

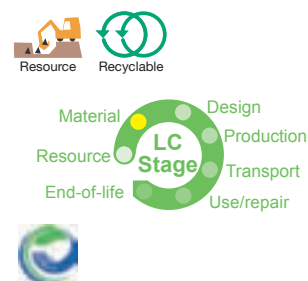
neo-clean-polaris 100,180gsm

Environmental performance

1. Recycle waste galaxy paper as a value-added raw material.
2. No use of toxic chemicals, leading to no environmental pollution.
3. Minimize water pollution through biological/chemical treatment of wastewater

Product performance

We produce papers for various types of product including premium cards, envelopes, catalogues.



Moorim Paper

505 Sinsa-dong, Gangnam-gu, Seoul., 135-887, Republic of Korea
Tel +82-2-3485-1671 Fax +82-2-3485-1566
E-mail brianjung@moorim.co.kr
URL www.moorim.co.kr
URL http://moorim.co.kr/product/product.asp?pNum=MR04020504
URL http://www.moorim.co.kr/about/status.asp



Available in: Asia, Europe, U.S.A, Republic of Korea, South Africa

Premium fancy paper having both luxuriousness of pearl paper and decorativeness of traditional Korean paper.

EP-6-031

Household goods and equipment

toilet paper

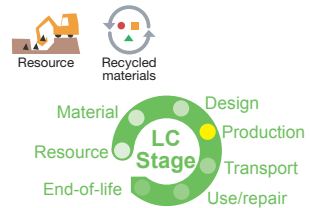
CELLOX SPECIAL (TOILET)**Environmental performance**

CELLOX SPECIAL (Toilet Tissue) are produced by tissue production process that has an environmental effect control. This process is not only without colored additive but also no chlorine and halogen during bleaching process. Furthermore, the water used in the process is treated by highly efficient water treatment system before recycled to process. For energy conservation and environmental friendliness, we use natural gas in place of bunker oil, and recover heat waste to save natural resource.

Berli Jucker Cellox Limited

330 Moo 9 Bangna-Trad Rd., Bangchaloang, Bangplee, Samutprakarn, 10540, Thailand
 Tel (66) 023126115-8 Fax (66) 023126173
 E-mail pisit@bjc.co.th
 URL www.bjc.co.th

Available in: Southeast Asia, Thailand



EP-6-032

Household goods and equipment

toilet paper

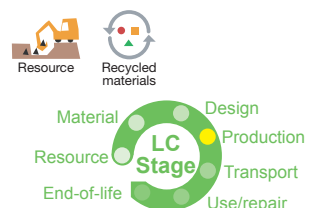
CELLOX BRT ECONOMY 600 m (Toilet Tissue)**Environmental performance**

CELLOX BRT ECONOMY 600 m (Toilet Tissue) are produced by tissue production process that has an environmental effect control. This process is not only without colored additive but also no chlorine and halogen during bleaching process. Furthermore, the water used in the process is treated by highly efficient water treatment system before recycled to process. For energy conservation and environmental friendliness, we use natural gas in place of bunker oil, and recover heat waste to save natural resource.

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 E-mail pisit@bjc.co.th
 URL www.bjc.co.th

Available in: Southeast Asia, Thailand



EP-6-033

Household goods and equipment

toilet paper

CELLOX ECONOMY 24 ROLLS**Environmental performance**

CELLOX ECONOMY 24 ROLLS (Toilet Tissue) are produced by tissue production process that has an environmental effect control. This process is not only without colored additive but also no chlorine and halogen during bleaching process. Furthermore, the water used in the process is treated by highly efficient water treatment system before recycled to process. For energy conservation and environmental friendliness, we use natural gas in place of bunker oil, and recover heat waste to save natural resource.

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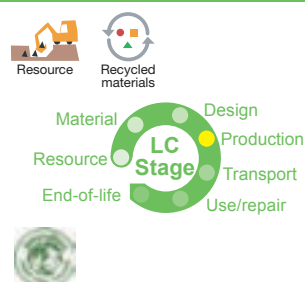
EP-6-034

Household goods and equipment

toilet paper

CELLOX MRT ECONOMY 800 m (Toilet Tissue)**Environmental performance**

CELLOX MRT ECONOMY 800 m (Toilet Tissue) are produced by tissue production process that has an environmental effect control. This process is not only without colored additive but also no chlorine and halogen during bleaching process. Furthermore, the water used in the process is treated by highly efficient water treatment system before recycled to process. For energy conservation and environmental friendliness, we use natural gas in place of bunker oil, and recover heat waste to save natural resource.

**Berli Jucker Cellox Limited**

330 Moo 9 Bangna-Trad Rd., Bangchaloang, Bangplee, Samutprakarn, 10540, Thailand
 Tel (66) 023126115-8 Fax (66) 023126173
 E-mail pisit@bjc.co.th
 URL www.bjc.co.th

Available in: Southeast Asia, Thailand

EP-6-035

Household goods and equipment

tissue

CELLOX FOLDED TISSUE 1 PLY 500 SHEETS

Environmental performance

CELLOX FOLDED TISSUE 1 PLY 500 SHEETS are produced by tissue production process that has an environmental effect control. This process is not only without colored additive but also no chlorine and halogen during bleaching process. Furthermore, the water used in the process is treated by highly efficient water treatment system before recycled to process. For energy conservation and environmental friendliness, we use natural gas in place of bunker oil, and recover heat waste to save natural resource.



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 E-mail pisit@bjc.co.th
 URL www.bjc.co.th



Available in: Southeast Asia, Thailand

EP-6-036

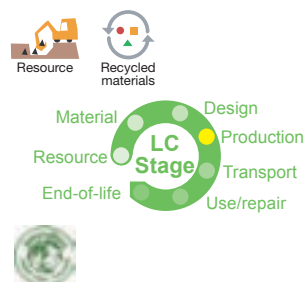
Household goods and equipment

tissue

CELLOX FOLDED TISSUE 2 PLY 250 SHEETS

Environmental performance

CELLOX FOLDED TISSUE 2 PLY 250 SHEETS are produced by tissue production process that has an environmental effect control. This process is not only without colored additive but also no chlorine and halogen during bleaching process. Furthermore, the water used in the process is treated by highly efficient water treatment system before recycled to process. For energy conservation and environmental friendliness, we use natural gas in place of bunker oil, and recover heat waste to save natural resource.



Berli Jucker Cellox Limited

330 Moo 9 Bangna-Trad Rd., Bangchaloang, Bangplee, Samutprakarn, 10540, Thailand
 Tel (66) 023126115-8 Fax (66) 023126173
 E-mail pisit@bjc.co.th
 URL www.bjc.co.th



Available in: Southeast Asia, Thailand

EP-6-037

Household goods and equipment

cutlery

L'earth Wheat composite cutlery

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or or required deforestation. High content of recycled and certified food-safe plastic used. This helps in the lowering of greenhouse emissions and slowdown of global warming. Less toxic gases are being emitted when incinerated.

Product can also be made oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and Certifications for wheat-composite material:

1. Singapore Green Label certified
2. SEC-Senoko Power Green Innovation Award Winner 2010
3. SMA Sustainable Manufacturing Certified 2010-2012

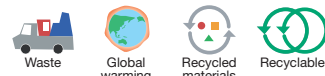
Product performance

Food safe and non-toxic
Microwave and dishwasher safe
Withstand temperatures -20 to 160 deg celsius
Durable and sturdy
Lightweight
Reusable

L'earth S Pte Ltd

21 Toh Guan Road East, Toh Guan Centre, Singapore 608609, Singapore
Fax +6565154557
E-mail marketing@myleearth.sg
URL <http://www.myleearth.sg>

Available in: Worldwide



EP-6-038

Household goods and equipment

lunch box

L'earth wheat composite lunch box

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or or required deforestation. High content of recycled and certified food-safe plastic used. This helps in the lowering of greenhouse emissions and slowdown of global warming. Less toxic gases are being emitted when incinerated.

Product can also be made oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and Certifications for wheat-composite material:

1. Singapore Green Label certified
2. SEC-Senoko Power Green Innovation Award Winner 2010
3. SMA Sustainable Manufacturing Certified 2010-2012

With L'earth, it is simple, enjoyable, and sustainable embracing an eco-conscious and modern lifestyle.

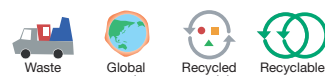
Product performance

Food safe and non-toxic (FDA/EC Directive)
Microwave and dishwasher safe
Withstand temperatures -20 to 160 deg celsius
Durable and sturdy
Lightweight
Reusable

L'earth S Pte Ltd

21 Toh Guan Road East, Toh Guan Centre, Singapore 608609, Singapore
Fax +6565154557
E-mail marketing@myleearth.sg
URL <http://www.myleearth.sg>

Available in: Worldwide



L'earth wheat composite lunch box

EP-6-039

Household goods and equipment

lunch box

L'earth wheat composite bento lunch box

Environmental performance

Product is made of wheat by-product which does not compete with a food supply, and is abundant in nature and thus a renewable source. High content of recycled and certified food-safe plastic are used. As such, both agricultural waste and plastic waste are not only being reduced but put into better use as well. Together, this helps in the lowering of greenhouse emissions and thus slowing down global warming. Use of wheat by-products also ensures that less toxic gases are being emitted when incinerated.

Product can also be made oxo-biodegradable, and thus helping to reduce landfill problems. Oxo-biodegradation leaves no harmful residues and fragments, and period of time can be programmed between 6 months to 5 years.

Product performance

Food safe and non-toxic
Microwave and dishwasher safe
Withstand temperatures -20 to 160 deg celsius
Durable and sturdy
Lightweight
Reusable

L'earth S Pte Ltd

21 Toh Guan Road East, Toh Guan Centre, Singapore 608609, Singapore
Fax +6565154557
E-mail marketing@mylearth.sg
URL <http://www.mylearth.sg>



Available in: Worldwide

L'earth wheat composite bento lunch box

EP-6-040

Household goods and equipment

cups, mugs

L'earth wheat composite drinking mug

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food-safe plastic used. This helps in the lowering of greenhouse emissions and slowdown of global warming. Less toxic gases are being emitted when incinerated.

Product can also be made oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and Certifications for wheat-composite material:

1. Singapore Green Label certified
2. SEC-Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012

With L'earth, it is simple, enjoyable, and sustainable embracing an eco-conscious and modern lifestyle.

Product performance

Food safe and non-toxic (FDA/EC Directive)
Microwave and dishwasher safe
Withstand temperatures -20 to 160 deg celsius
Durable and sturdy
Lightweight
Reusable

L'earth S Pte Ltd

21 Toh Guan Road East, Toh Guan Centre, Singapore 608609, Singapore
Fax +6565154557
E-mail marketing@mylearth.sg
URL <http://www.mylearth.sg>



Available in: Worldwide

L'earth wheat composite drinking mug

EP-6-041

Household goods and equipment

cups, mugs

L'earth wheat composite cup**Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food-safe plastic used. This helps in the lowering of greenhouse emissions and slowdown of global warming. Less toxic gases are being emitted when incinerated.

Product can also be made oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and Certifications for wheat-composite material:

1. Singapore Green Label certified
2. SEC-Senoko Power Green Innovation Award Winner 2010
3. Sma Sustainable Manufacturing Certified 2010-2012

With L'earth, it is simple, enjoyable, and sustainable embracing an eco-conscious and modern lifestyle.

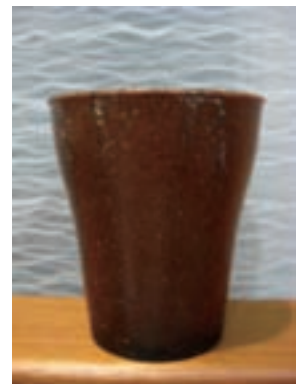
Product performance

Food safe and non-toxic (FDA/EC Directive)
Microwave and dishwasher safe
Withstand temperatures -20 to 160 deg celsius
Durable and sturdy
Lightweight
Reusable/ disposable

L'earth S Pte Ltd

21 Toh Guan Road East, Toh Guan Centre, 608609, Singapore
Fax +65154557
E-mail marketing@myleearth.sg
URL <http://www.myleearth.sg>

Available in: Worldwide



L'earth wheat composite cup

EP-6-042

Household goods and equipment

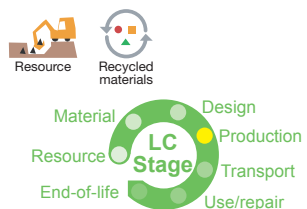
plastic products

Fit light tape No.738 Environmentally-considerate Tape for Moving and Construction Curing**Environmental performance**

Uses PET products such as PET bottles and clothes as raw materials.
Segmented and recycled at the molecular level.
Uses recycled PET fiber in the vertical threads.

Product performance

Flexible and sticks well even on uneven surfaces.
Can stick on polyethylene and polypropylene laminated paper and is also stackable. Easy to write on with oil-based ink.
Can be removed completely with special glue.

**SEKISUI CHEMICAL CO., LTD.**

2-3-17 Toranomon, Minato-ku, Tokyo, 105-8450, Japan
Tel +81-3-5521-0563
E-mail ctk01@sekisui.jp
URL <http://www.tutuminet.com/eng/index.html>
URL <http://www.tutuminet.com/eng/product/cloth/index.html>

EP-6-043

Household goods and equipment

cultivators

Honda Pianta FV200 Gas-Powered Mini-Tiller

Environmental performance

The Pianta FV200 is designed to provide easy fuel handling and operation, and for easy transport and storage. Designed to use butane gas canisters, widely available for home-use portable stoves, it enables easy engine startup and refueling so that even a novice can enjoy flower and vegetable gardening more casually. It comes with a carrying box to help keep the storage area clean and a carrying stand with built-in wheels (standard equipment), to ensure easy transport and storage for outstanding all-round convenience. The Pianta's butane-powered engine emits 10% less CO₂* than a gasoline engine of the same displacement.

* Honda calculations

Product performance

Length:1,055mm
Width:485mm
Height:990mm

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL <http://world.honda.com/>

URL <http://world.honda.com/CSR/>



Global warming



High quality



Available in: Japan

Honda Pianta FV200 Gas-Powered tiller

EP-6-044

Household goods and equipment

engine generators

Honda EU26i Ultra-Quiet Generator equipped with Sine-wave Inverter

Environmental performance

The EU26i employs Honda's original sine-wave inverter technology to deliver high-quality electrical output in a compact, low-noise design. Honda's high-efficiency inverter combines with the Eco-Throttle system to allow engine speed to be adjusted automatically for an optimum match with the power requirements of the device in use.

Product performance

Rated AC Output (50/60Hz) : 100V 2.6kVA
Continuous Operating Hours (hr) : 7.7*1 ~4.3 (1/4 load~Rated load)
Overall Length (mm) : 622*2 /913
Overall Width (mm) : 379
Overall Height (mm) : 489*2 /538
overall Equipment Weight (kg) : 40.1
Effective Fuel Tank Capacity (L) : 5.9
Displacement (cm³) : 163
Starting system : Manual

*1 During operation with Eco-Throttle

*2 With handle folded down



Global warming



Energy saving



Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL <http://world.honda.com/>

URL <http://world.honda.com/CSR/>

Available in: Japan

Honda EU26i

EP-6-045

Household goods and equipment

engine generators

Honda ENEPO EU9iGB Generator

Environmental performance

Compact and offering output of 900 VA, the ENEPO EU9iGB generator is accessible in three ways. One, its butane fuel is easy to handle and manage. Two, it is easy to transport and store. Three, the generator itself is very easy to use and reasonably priced.

Outstanding environmental performance

- 1) The Eco-Throttle function automatically optimizes engine rpm's based on the power consumption of powered devices, contributing to enhanced fuel economy and reduced noise.
- 2) As compared to Honda gasoline-powered generators of identical output, the ENEPO EU9iGB produces approximately 10 percent lower CO₂ emissions per hour of work performed.
- 3) The standard silent muffler and engine cover reduce noise, allowing for early morning operation.
- 4) The ENEPO EU9iGB is officially designated as ultra-low-noise construction equipment under Japanese Ministry of Land, Infrastructure, and Transport noise regulations.

Product performance

Rated AC Output (50/60Hz) : 100V 2.6kVA
 Continuous Operating Hours (hr) : 7*1 ~4.3 (1/4 load~Rated load)
 Overall Length (mm) : 622*2/913
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 Starting system : Manual

*1 During operation with Eco-Throttle

*2 With handle folded down

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL <http://world.honda.com/>

URL <http://world.honda.com/CSR/>

Available in: Japan



Global warming



Energy saving



ENEPO EU9iGB

Honda EU9iGB

EP-6-046

Household goods and equipment

photovoltaic modules

Highly Efficient Photovoltaic Module

Environmental performance

The high output modules achieve a power output of up to 235W per module, by incorporating four bus-bar cells and a larger module size.

-----<< Energy saving >>-----

By increasing the number of bus bars from two to four, the internal resistance in each PV cell has been reduced, increasing individual cell output by 3% compared to those used in previous Mitsubishi Electric models.

Increasing the number of cells in each module from 50 to 60 has also contributed to the increased output per module.

-----<< Material / Resource saving >>-----

The Width of the new bus bars used in the cells are half that of our previous bus bars, delivering greater efficiency without increasing the amount of material used. A newly designed frame allows the module to pass the IEC static load test of 5400Pa, even with the larger module size.

-----<< Toxicity / Chemical substances reduction >>-----

Uses lead-free solder to lessen impact on the environment.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

Available in: Asia, North America



Global warming



Resource



Energy saving



High quality



PV-UJ235GA6

EP-6-047

Household goods and equipment

photovoltaic modules

CIGS thin-film solar module

Environmental performance

Honda solar module uses a power generation layer of a compound semiconductor made from copper, indium, gallium and selenium (CIGS). The electric power generation layer has only 2 to 3 μm thickness. By manufacturing solar cells using fewer raw materials, effective use of precious earth resources and reduction of both fossil fuel consumption and CO₂ emissions is made possible.

Product performance

Honda solar modules deliver stable output power even if the modules are partially shaded without causing a large drop in voltage thanks to the original electrical connecting structure. The color of the compound semiconductor gives the Honda solar modules a stylish black surface that suits various styles of houses and also harmonizes with the town landscape.

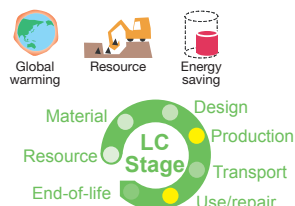
Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL <http://world.honda.com/>

URL <http://world.honda.com/CSR/>

Available in: Japan



CIGS thin-film solar module

EP-6-048

Household goods and equipment

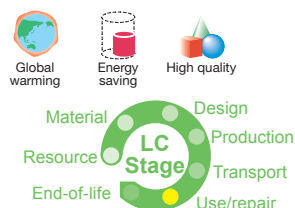
photovoltaic inverter

Photovoltaic Inverter with Industry's Highest Power Conversion Efficiency

Environmental performance

----<< Energy saving >>----

This photovoltaic inverter for house use in Japan realizes the industry's highest 97.5% power conversion efficiency (at rated power input/output of PV-PN40G) in our investigation at September 2010. The industry's first "gradation control inverter method" generates pseudo sine wave nearly the same as alternating current using three inverter units. Newly developed MOSFET module for the gradation control reduces 44% of power conversion loss from conventional models.



Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

PV-PN40G

EP-6-049

Household goods and equipment

kitchen ware

Gas Cooking Stove with High-efficiency Burners

Environmental performance

This burner with 56% thermal efficiency has produced economic and energy-saving advantages over conventional cookers. The safety has been improved by being equipped with sensors for preventing overheating in all burners. The glass or double-coated surface reduces the cleaning time and labor.

The introduction of a new type of burner which prevents the flame from spreading has enabled the thermal efficiency of 56%.

Compared with induction heating cookers, the gas cooking stove emits 60% less annual CO₂ emissions (336kg-CO₂), which is equivalent to the effect of planting 20 cypress trees.

Product performance

The safety has been improved by installing sensor-equipped burners that enable the safety features to control or put out flames to prevent overheating in all models. With the help of the sensor, automatic cooking, such as rice cooking and fish grilling, are possible.

Osaka Gas Co., Ltd.

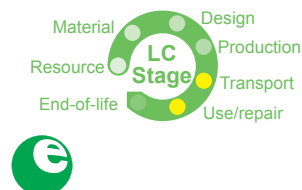
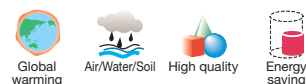
4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL http://www.osakagas.co.jp/csr_e/index.html

Available in: Japan



Sensor-equipped cooking stove

EP-6-050

Household goods and equipment

kitchen ware

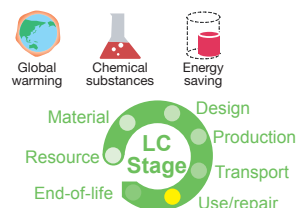
The suitable temperature is kept by detection of bottom temperature of pan, using DSP & infrared sensor. All of three heaters are using IH heater, without conventional heater.

Environmental performance

- Mitigation of climate change: Heat efficiency of 85% is achieved by the adoption of a high-efficiency inverter and improved heating coil. Auto power-off function achieves zero stand-by power consumption.

Product performance

- Large buttons: Universal design with large operation buttons and large letters, numbers etc. for easy operation.
- Low-noise design: Improved cooling fan performance for quiet operation (25 dB) at a gentle heat.
- Smooth open/close: Counter-top heater equipped with a slide rail door open/close mechanism.



IH Cooking Heater BHP-V732S

TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-6-051

Household goods and equipment

kitchen ware

Visualization of Electricity Consumption and Charges at Home to Contribute to the Reduction of CO₂ Emissions

Environmental performance

- Mitigation of climate change: Visualization of power consumption allows users to recognize which appliances use a lot of electricity because CO₂ emissions, electricity charges, etc. are indicated. 6%* reduction of CO₂ emissions.

*Target at the time of commercialization

Product performance

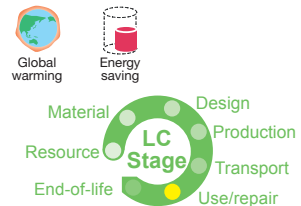
- Visualization of electricity consumption: Electricity consumption, CO₂ emissions, and electricity charges are displayed for each circuit breaker.
- Batch control of home appliances: Capable of batch control of air conditioners, lighting equipment, floor heating, etc.
- Control via a mobile phone: Check the operation of home appliances via a mobile phone and control them from a remote location.

TOSHIBA HOME APPLIANCES CORPORATION

2-15, Sotokanda 2-chome, Chiyoda-ku, Tokyo, 101-0021, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Feminity with an IT unit for electricity measurement

EP-6-052

Household goods and equipment

ventilators

Energy Recovery Ventilator: Recycling Air-conditioning Energy by Heat Exchange Ventilation

Environmental performance

----<< Energy saving >>----

- "Lossnay" is an energy-saving ventilation system using a specially treated paper heat exchanger that recycles heat energy which is normally wasted by ventilation.
- DC brushless motors powered by a DC power source, significantly reducing power consumption compared with conventional models.
- "Hyper Eco", our original efficient heat exchanger greatly boosts heat exchange efficiency to realize even further energy savings.

----<< Toxicity / Chemical substances reduction >>----

Eliminated the use of the six substances specified by the EU's RoHS directive.

Product performance

This system is a single unit that ventilates an entire household. The heat exchanger ensures ventilation without sacrificing the comforts of air-conditioning, and its large air flow ensures that even in large housing complexes and cluster housing with numerous rooms, a single system suffices for one floor ventilation.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

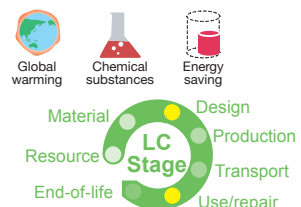
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URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>



VL-20ZMH3-L/R

Available in: Japan

EP-6-053

Household goods and equipment

ventilators

Energy Recovery Ventilator (LOSSNAY) for Commercial Use

Environmental performance

----<< Material / Resource saving >>----
Saving industrial resources.

----<< Energy saving >>----
Total heat exchange efficiency of over 66%.

----<< Toxicity / Chemical substances reduction >>----
Eliminated the use of the six substances specified by the EU's RoHS directive.

Product performance

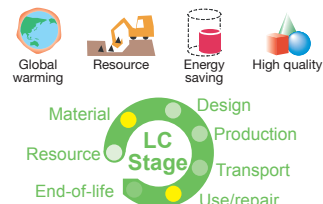
Loaded with the Hyper Eco Element which offers high total heat exchange efficiency, the Energy Recovery Ventilator realizes an energy saving ventilation. Thanks to the new ventilation pattern function, microcomputer type offers more precise control of ventilation to reduce the air conditioning/heating load caused by ventilation.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
Tel +81-3-3218-9024 Fax +81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://global.mitsubishielectric.com/index.html>
URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Asia, Europe

LGH-50RX5



EP-6-054

Household goods and equipment

hot water floor heating systems

"Econucool Pico" Heat Pump-type Hot water Floor Heating System for Energy Saving

Environmental performance

----<< Material / Resource saving >>----
Succeeded in 67% of weight reduction (36kg to 12kg) from our previous model (made in the year 2001) by optimizing layout of component parts, making thinner heat exchange unit, and lightening its pump.

----<< Energy saving >>----
The rating COP is improved by 30% from our previous model (made in the year 2001) by making thinner heat exchange plate, adoption of DC motor for outer unit fan and circulating pump, and optimizing refrigeration cycle control.

----<< Toxicity / Chemical substances reduction >>----
R410A refrigerant does not deplete ozone layer.
Eliminated the use of the six substances specified by the EU's RoHS directive.

Product performance

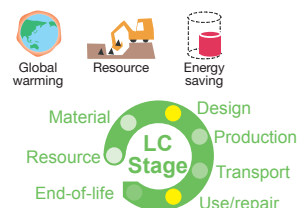
"Econucool Pico" is a heat source for hot water heat radiators such as floor heating panel.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
Tel +81-3-3218-9024 Fax +81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
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URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

VEH-406HCA-K



EP-6-055

Household goods and equipment

air conditioners

Replacement Multi Air Conditioner Reusing Existing Refrigerant Tubing

Environmental performance

----<< Material / Resource saving >>----

Compact design in outdoor unit enables to be carried by an elevator for 6 people. Automatic refrigerant charge and automatic mineral oil collection enables great shortening of term of construction. It collects oil through general air conditioning operation.

----<< Toxicity / Chemical substances reduction >>----

R410 refrigerant is zero ODP (Ozone Depletion Potential)

Product performance

"Replace Multi" is an air conditioning system for building using existing refrigerant tubing, which basically contributes to resource saving.

The Prize of the Chairman of JIII, 2007

(JIII: Japan Institute of Invention and Innovation)

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

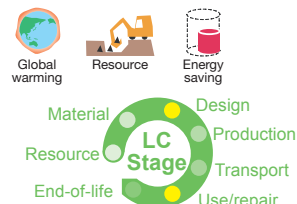
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URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



Replace Multi E ECO

EP-6-056

Household goods and equipment

air conditioners

Compact Design "City Multi" Air Conditioner

Environmental performance

----<< Material / Resource saving >>----

The manageability of the outdoor unit has been improved due to a drastic reduction in weight, leading to easy transportation, installation, and reduction in withstand load.

----<< Energy saving >>----

VRF (Variable Refrigerant Flow) is a multi and direct expansion type air conditioning system whereby one outdoor unit can be connected to multiple indoor units.

The amount of refrigerant can be regulated freely according to the load on the indoor unit by the inverter driven compressor in the outdoor unit.

Energy conservation is easily handled because individual indoor units can stop and start as needed.

----<< Toxicity / Chemical substances reduction >>----

R410 refrigerant is zero ODP (Ozone Depletion Potential)

Product performance

Due to the compact design of the outdoor unit, industry leading space saving is realized.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

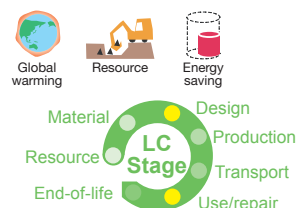
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URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Asia, Oceania, Europe, South America



PUHY-P250YJM-A

EP-6-057

Household goods and equipment

air conditioners

Energy-Efficient Package Air Conditioners: Mr Slim ER Clean Plus Series

Environmental performance

-----<< Material / Resource saving >>-----

- Pipe cleaning and pipe replacement has become unnecessary.
- Frictional heat from the compressor's moving parts has been reduced.
- An originally developed highly stable alkylbenzene refrigerant oil (Models P40-P63).

-----<< Energy saving >>-----

<Indoor Unit>

- The "Move Eye 360" determines radiant floor temperature.
- The "Area Move Eye" and unique air-flow control delivers energy-efficient operation with minimal unnecessary running.
- The "Automatic Filter Cleaning Unit" cuts power consumption by 10% (Slim ER Clean Plus).

<Outdoor Unit>

- The scroll compressor with an original "frame compliance mechanism" greatly reduces refrigerant gas leakage and friction loss (Slim ER Models P112-P240).
- A cross-stair fin heat exchanger and large-diameter fan improves performance (Slim ER Models P112-P240).



Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

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URL <http://global.mitsubishielectric.com/company/csr/index.html>



Available in: Japan

MPLZ-ERP140BECM

EP-6-058

Household goods and equipment

air conditioners

High performance, energy-saving air conditioner

Environmental performance

Daikin's SUPER MULTI NX with DC inverter offers energy savings, quiet operation, and a wide range of models to provide you with maximum comfort while respecting homes and people. Furthermore, the wall-mounted type D series won the prestigious Good Design Award in Japan.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan

Tel +81-6-6374-9304 Fax +81-6-6373-4380

E-mail kankyo@daikin.co.jp

URL <http://www.daikin.com>

URL http://www.daikin.com/global_ac/products

URL <http://www.daikin.com/csr>



SUPER MULTI NX

EP-6-059

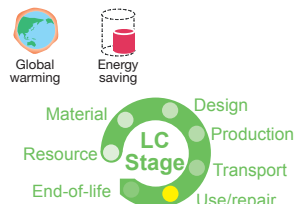
Household goods and equipment

air conditioners

High performance, energy-saving air conditioner

Environmental performance

Daikin's Super Multi Plus D and E series is now connectable to up to 8 indoor units and offers you a richer choice of indoor units to coordinate with individual room decors. Advanced technology from Daikin has improved COP and reduced sound levels to suit today's modern living environment.



Super Multi Plus D

DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL http://www.daikin.com/global_ac/products
 URL <http://www.daikin.com/csr>

EP-6-060

Household goods and equipment

heat pump water heating systems

RESIDENTIAL FUEL CELL ENE FARM

Environmental performance

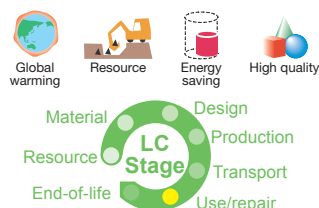
Residential fuel cell ENE FARM extracts hydrogen from city gas, generates electricity and produces hot water by using the waste heat from power generation. Tokyo Gas commenced sales of residential fuel cell cogeneration system ENE FARM, jointly developed with Panasonic Corporation. Compared with conventional thermal power plant and hot water boiler, residential fuel cell cogeneration system contributes to reduction of approximately 31% in primary energy consumption and to approximately 45% reduction in the amount of CO₂ emissions, 1.5t/y.

Product performance

Power output: 1kW
 Rated power efficiency: 37% (in low heat value), 33% (in high heat value)
 Rated heat recovery efficiency: 52% (in low heat value), 47% (in high heat value)

Tokyo Gas Co., Ltd.

1-5-20 Kaigan, Minato-ku, Tokyo, 105-8527, Japan
 Tel +81-3-5400-7669 Fax +81-3-3432-5509
 URL http://www.tokyo-gas.co.jp/index_e.html



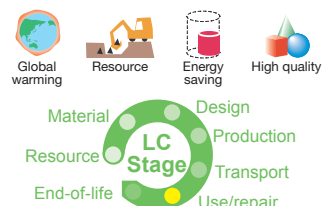
EP-6-061

Household goods and equipment

heat pump water heating systems

CO₂ refrigerant heat pump water heater (Eco Cute)**Environmental performance**

Eco Cute is a household water heater that offers dramatic energy savings on the use of hot water, which normally accounts for about a third of a household's entire energy consumption. It generates hot water using atmospheric heat by means of a heat pump system and offers energy savings compared with a conventional combustion type water heater together with drastic reduction in green house gas emission. The use of natural refrigerant CO₂ means less damage to the ozone layer.

**Tokyo Electric Power Company**

1-1-3 Uchisaiwai-cho Chiyoda-ku, Tokyo, 100-8560, Japan
 Tel +81-3-6373-1111 Fax +81-3-3596-8517
 URL <http://www.tepco.co.jp/>
 URL <http://www.tepco-switch.com/know/ecocute/index-j.html>
 URL <http://www.tepco.co.jp/csr/tools/download-j.html>

CO₂ refrigerant heat pump water heater (Eco Cute)

Available in: Japan, Europe

EP-6-062

Household goods and equipment

heat pump water heating systems

ECOWILL - energy-saving gas cogeneration system**Environmental performance**

ECOWILL is an energy-efficient household-use cogeneration system fueled by environmentally-friendly natural gas. It generates electricity and supplies hot water by utilizing waste heat from the gas engine. It boasts an outstanding energy-saving effect with a generation efficiency of 22.5% and exhaust heat efficiency of 63%. The total energy efficiency reaches 85.5% (LHV basis).

By utilizing waste heat associated with generation for hot water supply and space heating, it reduces the primary energy consumption by 21%* and CO₂ emissions by 32%*. The system offers higher level of comfort while contributing to environmental conservation.

* Per kWh of energy generated by ECOWILL compared to conventional systems (thermal power and water heater systems)

Product performance

The most energy-efficient generation is realized by a learning function which records and analyzes the status of generation and hot water utilization at home. The hot water is also utilized for the floor heating and bath room heater/dryer.



ECOWILL

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka, 541-0046, Japan
 Tel +81-6-6205-4605 Fax +81-6-6202-1040
 URL <http://www.osakagas.co.jp/indexe.html>
 URL http://www.osakagas.co.jp/csr_e/index.html

Available in: Japan

EP-6-063

Household goods and equipment

heat pump water heating systems

Polymer Electrolyte Fuel Cell (PEFC) Cogeneration System for residential use

Environmental performance

The PEFC Cogeneration Systems, which Osaka Gas has developed jointly with Toshiba Fuel Cell Power Systems Corp and ENEOS Celltech Corp and released in the market in FY2009, generates electricity through the electro-chemical reaction of oxygen in the air and hydrogen extracted from natural gas.

It is a highly energy-saving system which has realized total energy efficiency of more than 80% (*1) by utilizing the exhaust heat from generation for heating water. It reduces CO₂ emissions by approximately 1.3 ton per annum (*2).

*1: LHV

*2: When introduced at a resident of 4 people, replacing the conventional system

Product performance

Power generation capacity: 700 - 250W

Power generation efficiency (700W): 31.5% (HHV), 35% (LHV)

Total energy efficiency (700W): more than 72% (HHV), more than 80% (LHV)

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL http://www.osakagas.co.jp/csr_e/index.html



Available in: Japan

ENEFARM - Toshiba, ENEOS Celltech

EP-6-064

Household goods and equipment

heat pump water heating systems

Solid Oxide Fuel Cell (SOFC) for residential use

Environmental performance

SOFC consists of a generation unit and an exhaust heat utilization unit. Osaka Gas works on the development of these units jointly with Kyocera Corp. / Toyota Motor Corp. / Aisin Seiki Co., Ltd. and Chofu Seisakusho Co., Ltd., respectively. The compact size of each unit makes the system suited for residential use. Osaka Gas strives toward the commercialization of this system by making use of the experiences and results of the field test conducted by NEDO and The New Energy Foundation.

The generating efficiency of this system is higher than that of the average thermal power plant: maximum energy saving of 36% and maximum CO₂ emission reduction of 50%.

Product performance

Power generation efficiency (700W): 40.6% (HHV), 45% (LHV)

Total energy efficiency (700W): more than 77% (HHV), more than 85% (LHV)

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL http://www.osakagas.co.jp/csr_e/index.html



Available in: Japan

Solid oxide fuel cell

EP-6-065

Household goods and equipment

heat pump water heating systems

Heat Pump Water Heater for Commercial Use (Eco Cute for commercial applications)

Environmental performance

----<< Energy saving >>----

- A newly developed inverter-type scroll CO₂ compressor is adopted.
- Thermal energy absorbed from the atmosphere heats the water that passes through the heat exchanger. The system produces approximately three to four times the amount of electrical energy used (high efficiency).

----<< Toxicity / Chemical substances reduction >>----

- The CO₂ natural refrigerant has an ozone depletion potential of zero and a global warming potential of one.

Product performance

- The CO₂ heat pump and inverter capacity control technologies facilitate an optimum hot water output of up to 90°C.
- 10th Electric Load Leveling System Awards (Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy Director-General's Prize)

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

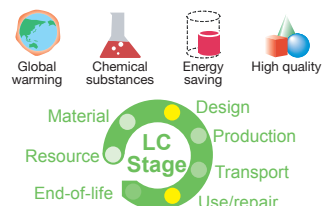
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URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



QAHV-N560B

EP-6-066

Household goods and equipment

heat pump water heating systems

Heat Pump Water Heater for Domestic Use

Environmental performance

This heat pump water heater makes use of ambient heat in the air to attain energy savings of one-third compared with Mitsubishi Electric's conventional electrical water heaters. As this model uses natural CO₂ as a refrigerant, it causes no damage to the ozone layer and has a global warming potential 1/1700 of that posed by CFC refrigerants. Moreover, it does not produce CO₂ emissions because it does not require the combustion of fuel. The heat pump unit features an original rotary compressor* for CO₂ refrigerant hot-water supply. In addition, it incorporates Mitsubishi Electric's unique open core coil-wound "Poki Poki Motor". This high-density coil technology helps to realize significant performance improvements.

*The high-efficiency rotary compressor was awarded the fiscal 2007 Technology Prize of the Japan Society of Refrigerating and Air Conditioning Engineers (JSRAE).

Product performance

The Eco Check Function is adopted on the remote control devices with the aim of showing the degree of contribution to the environment.

The function allows users to recognize the degree of contribution to the environment by pushing a button to learn the ideal mode for heating water and the amount of emission cuts.

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2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

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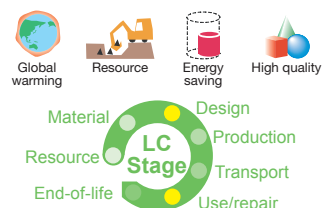
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Available in: Japan



SRT-HP46W5

EP-6-067

Household goods and equipment

heat pump water heating systems

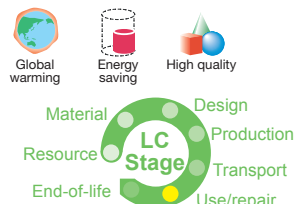
Heat pump hot-water supply system

Environmental performance

"Daikin's Eco-cute" is a heat pump type boiler using natural refrigerant (CO₂).

Achieving a high efficiency of heat transfer by cutting grooves in pipes of water heat exchanger, in addition to the existing dimple work, to improve the level of agitation.

Furthermore, the hot water storage unit is covered by foamed material as its insulation depending on the shape of tanks, which enable to reduce heat radiation loss by approximately 15% compared with the conventional model.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL <http://www.daikin.com/csr>

Available in: Japan

EP-6-068

Household goods and equipment

heat pump water heating systems

Home Heating and Cooling Solution

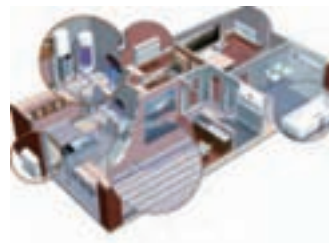
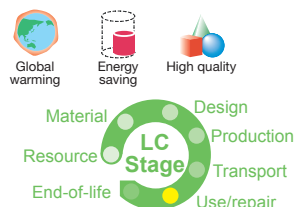
Environmental performance

This product is an air to water heat pump type boiler consisting of an outdoor unit, hydro-box and secondary equipment, researched and developed by Daikin Europe. N.V.

In the system, hot water is circulated to secondary equipment such as under floor heating and radiators to warm rooms. Air to water heat pump type boilers provide energy efficient heating and are getting famous in the European heating market.

Heat pump type boilers are cheaper and less laborious than the alternatives such as combustion type boilers. 66 to 80% of the heat produced by this heat pump comes from the ambient air and is free of charge.

With this heat pump, you can personally contribute to a better environment because heat pumps consume little energy. This heat pump emits no direct CO₂ and also, emits far less CO₂ than fossil fuel boilers.



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Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL <http://www.daikin.com/csr>

Available in: Europe

EP-6-069

Household goods and equipment

heat pump water heating systems

EcoCute Featuring Silver Ionizer - Unprecedented in the Industry

Environmental performance

- Mitigation of climate change: The use of CO₂, a natural refrigerant, has successfully reduced GWP to about 1/1700.
- Mitigation of climate change: The unit learns the usage patterns to heat a certain volume of water as required by user.
- Raising users' consciousness on energy-saving: The remote controller displays a real-time report on water usage, the availability of hot water at a set temperature, in order to raise users' consciousness on energy-saving.
- Raising users' consciousness on energy-saving: The silver ion's anti-bacterial and deodorant effects minimize dirt and smell in the hot water used in a bathtub on the previous day, and helps the water to be reused for laundry or other day-to-day applications.
- Efficient use of resources: The tank weighs only 66kg, the lightest in the industry.

Product performance

- Clean energy: Heat Pump system, heating the water with heated air, achieves highly efficient operation.
- The APF is 3.3, about three times as high as a heater-type unit.
- Visible remote controller: This feature displays a real-time report on hot wa

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan

Tel +81-3-6409-1735 Fax +81-3-5447-8101

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>

Available in: Japan



Heat Pump Water Heater using CO₂ Refrigerant ECO CUTE
(left) HWH-451CU (right) HWH-FB371CT

EP-6-070

Household goods and equipment

water/space heaters

Prior Eco-Jozu - Highly-efficient Central Heating Boiler

Environmental performance

Employing a latent heat recovery-type heat exchanger, the system utilizes the thermal energy of exhaust gas which was previously wasted, achieving a high thermal efficiency of 95%*¹ in hot water supply and 89%*² in space heating.

*1: 135-N460 hot water supply capacity

*2: 135-N460 at low temperature combustion

With its smaller energy consumption, Eco-Jozu has reduced annual CO₂ emissions by 238kg, which is equal to the amount of CO₂ absorbed by 24 eucalyptus trees.*³

*3: 135-N460 data compared to conventional systems. CO₂ emission factor of gas: 2.29kg-CO₂/m³ (Osaka Gas data)

Product performance

It produces enough hot water for the bathroom and kitchen. It is equipped with an automatic control system for hot water supply and additional boiling and its boiling capacity is sufficient for floor heaters and/or bathroom heaters/dryers.

Osaka Gas Co., Ltd.

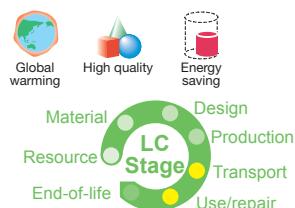
4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL http://www.osakagas.co.jp/csr_e/index.html

Available in: Japan



Eco-Jozu

EP-6-071

Household goods and equipment

pumps

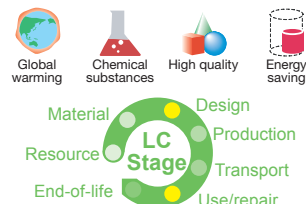
Inverter Water Pump

Environmental performance

- Energy saved by PAM inverter power control.
- RoHS* Directive compliant.
- * RoHS: Restriction of the use of certain hazardous substances

Product performance

- Inverter control keeps water pressure constant. Quiet, non-disturbing operation and greater energy efficiency.



Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
 Tel 81-3-3502-2111 Fax 81-3-3506-1442
 URL <http://www.hitachi-ap.com/>



Available in: Thailand, Malaysia

WM-P400GX

EP-6-072

Household goods and equipment

bath supplies

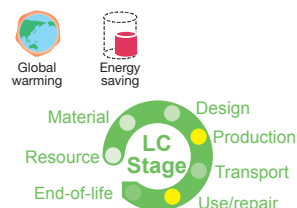
Air-in shower

Environmental performance

The air in shower by TOTO enabled the supreme water saving performance while maintaining the pleasant water touch. In this new mechanism, small air bubbles are efficiently mixed into each water drop. The users can enjoy sufficient water impulse and volume while saving as much as 35% of water compared to the products in the past.

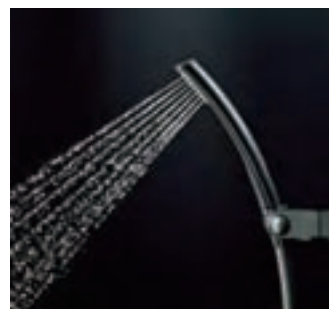
Product performance

6.5 ℓ /minuts



TOTO Ltd.

1-1, Nakashima 2-chome, Kokurakita-ku, Kitakyushu, Fukuoka, 802-8601, Japan
 Tel 0120-03-1010 Fax 0120-09-1010
 URL <http://www.toto.co.jp/en/index.htm>



Available in: Japan

Air-in shower

EP-6-073

Household goods and equipment

bath supplies

COTTO Showers

Environmental performance

Water flow rate less than 7 L/min at operating pressure 0.1 Mpa



The Siam Sanitary Fittings CO.,Ltd.

60/57 Navanakorn Industrial Park, Zone 2, 13rd Side-street, Khlongnueng,
Klongluang, Pathumthani, 12120, Thailand
Tel +66 2529 0561
E-mail jetsadas@scg.co.th
URL www.cotto.co.th



Available in: Worldwide

COTTO Showers

EP-6-074

Household goods and equipment

bath supplies

COTTO Rinsing Sprays

Environmental performance

Water flow rate less than 5 L/min at operating pressure 0.1 Mpa



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Available in: Worldwide

COTTO Rinsing Sprays

EP-6-075

Household goods and equipment

bath supplies

TOTO Showers

Environmental performance

Water flow rate less than 7 L/min at operating pressure 0.1 Mpa



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URL www.cotto.co.th



Available in: Worldwide

TOTO Showers

EP-6-076

Household goods and equipment

bath supplies

PREMA Showers

Environmental performance

Water flow rate less than 7 L/min at operating pressure 0.1 Mpa



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URL www.cotto.co.th



Available in: Asia

PREMA Showers

EP-6-077

Household goods and equipment

bath supplies

PREMA Rinsing Sprays**Environmental performance**

Water flow rate less than 5 L/min at operating pressure 0.1 Mpa

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E-mail jetsadas@scg.co.th
URL www.cotto.co.th

Available in: Asia

PREMA Rinsing Sprays



EP-6-078

Household goods and equipment

bath supplies

Water-saving showerhead**Environmental performance**

- It usually save the water 30% and also save the energy (Gasoline, Gas and electricity) by 10% up to 15% per year which is for using heating water.
- Reduced water use can also save costs for wastewater treatment and waterworks.

Product performance

- Airjet showerhead can save water consumption during shower by 30% to 70%. (Usually suggest to save water up to 50%)
- There is a water flow control kit in the bottom of showerhead.
- There is a vacuum valve which acquired related patents and it is built at inside of showerhead body to increase the water pressure.
- This vacuum valve sucks in outside air through atmospheric pressure differences and make tiny bubbles.
- And inside structure of showerhead body make these bubbles compressed, expanded and exploded and it generate high water pressure while using half of water.
- More than 3-times strong durability than regular showerheads.
- Certified WaterSense label on the products from EPA (Environmental Protection Agency), US.

KOSDO Co., Ltd.

302 Namkyoung Bldg, 453-5, Sinkil-Dong, Youngdeungpho-Gu, Seoul, 150-853, Republic of Korea, 150-853, Republic of Korea
Tel +82-2-844-1243 Fax +82-2-849-0626
E-mail lim_kisoo@yahoo.co.kr
URL <http://www.ekosdo.com> (in Eng)
URL <http://www.kosdo.co.kr> (in Kor)

Available in: Worldwide



EP-6-079

Household goods and equipment

faucets

Eco single faucet

Environmental performance

This is our new technology to reduce the use of hot water and save the energy. When the handle is set to the central area, previous single lever faucets wasted unnecessary hot water without noticing it; on the other hand, TOTO's eco single faucet uses only cold water. The secret is the "click" to tell the user when hot water is mixed. It is calculated that 66Kg of CO₂ /year will be reduced at residential kitchen. (single faucet and comparison)

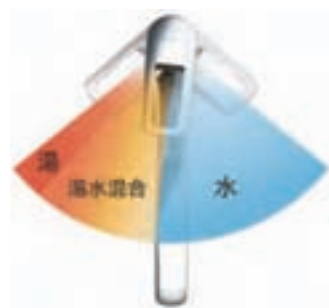
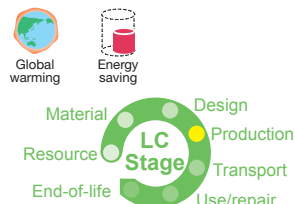
Product performance

The quantity consumed of the hot water is reduced by the period average by about 16%.
(single faucet and comparison)

TOTO Ltd.

1-1, Nakashima 2-chome, Kokurakita-ku, Kitakyushu, Fukuoka, 802-8601, Japan
Tel 0120-03-1010 Fax 0120-09-1010
URL <http://www.toto.co.jp/en/index.htm>

Available in: Japan



Eco single faucet

EP-6-080

Household goods and equipment

faucets

Water-saving faucet WELSTAR

Environmental performance

Saving water maximum 40%

Advantages of using WELSTAR-Water Saving Faucet

- You can save water in your daily life.
- It reduce greenhouse gas that is made by using hot water.
- It is convenient to use because it looks like just normal faucets.
- It is semi-permanent and there is no additional expenses for keeping normally.
- You can control amount of water properly by saving water dial.
- It is economically practical so it's going to reduce the water bill.

HOW TO USE

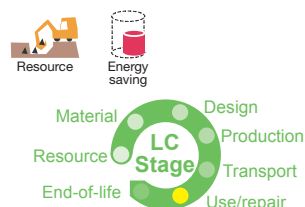
You can control water quantity by turning a water saving dial.
The numbers 0-40 (marked on the dial) represent the water saving percentage.

Product performance

1. Semi-permanent
2. Easy to use
3. Water-saving dial use

SAMLIP ENGINEERING CO., LTD.

270, GEUMGOK-DONG, SEO-GU, INCHEON, 404-330, KOREA
Tel +82-32-562-4401 Fax +82-32-562-3602
E-mail samlip11@hotmail.com
URL <http://www.samlipeng.com>
URL <http://samlipeng.com/main.htm>



EP-6-081

Household goods and equipment

faucets

COTTO Self-Closing faucets

Environmental performance

Water flow rate 0.2 - 0.5 Lpf(Liters per flow) at operating pressure 0.1 Mpa

Resource

Material

Resource

End-of-life

Design

Production

Transport

Use/repair

LC Stage





Available in: Worldwide

COTTO Self-Closing faucets

EP-6-082

Household goods and equipment

faucets

TOTO Self-Closing faucets

Environmental performance

Water flow rate 0.2 - 0.5 Lpf(Liters per flow) at operating pressure 0.1 Mpa

Resource

Material

Resource

End-of-life

Design

Production

Transport

Use/repair

LC Stage





Available in: Worldwide

TOTO Self-Closing faucets

EP-6-083

Household goods and equipment

faucets

COTTO Faucets for wash basins,Faucet for sinks**Environmental performance**

Water flow rate less than 6 L/min at operating pressure 0.1 Mpa

**The Siam Sanitary Fittings CO.,Ltd.**

60/57 Navanakorn Industrial Park, Zone 2, 13rd Side-street, Khlongnueng,
Klongluang, Pathumthani, 12120, Thailand
Tel +66 2529 0561
E-mail jetsadas@scg.co.th
URL www.cotto.co.th



Available in: Worldwide

COTTO Faucets for wash basins,Faucet for sinks

EP-6-084

Household goods and equipment

faucets

TOTO Faucets for wash basins,Faucet for sinks**Environmental performance**

Water flow rate less than 6 L/min at operating pressure 0.1 Mpa

**The Siam Sanitary Fittings CO.,Ltd.**

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Klongluang, Pathumthani, 12120, Thailand
Tel +66 2529 0561
E-mail jetsadas@scg.co.th
URL www.cotto.co.th



Available in: Worldwide

TOTO Faucets for wash basins,Faucet for sinks

EP-6-085

Household goods and equipment

faucets

PREMA Faucets for wash basins, Faucet for sinks**Environmental performance**

Water flow rate less than 6 L/min at operating pressure 0.1 Mpa

**The Siam Sanitary Fittings CO.,Ltd.**

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Klongluang, Pathumthani, 12120, Thailand
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URL www.cotto.co.th



PREMA Faucets for wash basins, Faucet for sinks

Available in: Asia

EP-6-086

Household goods and equipment

manufacturing products

Automage-e : automatic sensor faucet with hydraulic power generation**Environmental performance**

Automage-e, a sensor-equipped faucet, supplies water automatically when the user places his or her hands in front of it. This sensor faucet also has a built-in waterpower generator that effectively converts spouting power into electrical energy, enabling it to operate using the energy from this self-power generation. Additionally, the use of a water-saving spray flow for the spout means that less water splashes around the faucet, enabling hands to be washed thoroughly with less water. Automage-e reduces water usage up to 80% compared with two handle faucets (comparison with this company's products).

Product performance

Automage-e automatically supplies water when the user places his or her hands near it thanks to sensor-based detection. This hands-free operation keeps the faucet and the area around the basin clean, thus maintaining the level of hygiene in the washbasin area.

INAX Corporation

Tornare Nihombashihama-cho Office Tower 7F, 3-3-2, Nihombashihama-cho,
Chuo-ku, Tokyo, 103-0007, Japan
Tel +81-3-4332-5161 Fax +81-3-4335-7519
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>



Available in: Japan

Automage:AM-91K

EP-6-087

Household goods and equipment

toilets

SATIS:the water-saving ECO5toilet

Environmental performance

SATIS, tankless toilet, is a super water-saving ECO5 toilet, full flush (5 liters) and partial flush (4 liters) product line, it cleans the entire bowl and provides water savings of about 67% and electrical savings of 61% compared with existing products. With Progura treatment surface, prevents inorganic scale accumulating and drastically lowers water volume for cleaning. Also due to easily decomposable design and marking of materials it contains, easy recycling is possible when it reaches the end of its service life.

Product performance

Tankless toilet "SATIS" has a sophisticated design, making it more aesthetically pleasing, comfortable, and high quality. As the compact and simple form, it helps to free up space in the surrounding area. It is also equipped with a function to electronically move the hygienic function unit up and down to ensure easy cleaning.

INAX Corporation

Tornare Nihombashihama-cho Office Tower 7F, 3-3-2, Nihombashihama-cho, Chuo-ku, Tokyo, 103-0007, Japan
Tel +81-3-4332-5161 Fax +81-3-4335-7519
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Japan



SATIS

EP-6-088

Household goods and equipment

toilets

The Sensor Urinal: achieving excellent Water and Energy Saving

Environmental performance

The Sensor Urinal flushes automatically after use. It has a built-in hydroelectric generator with a power generation function that effectively converts spouting water into electrical energy. It uses just 1 to 2 liters of water to flush monitoring the time of use, saving of about 70% compared with existing products.

Product performance

The Sensor Urinal has an ISO standard antibacterial ceramic surface and an easy-to-clean rim shape. It features a stylish design in addition to ease of maintenance.



INAX Corporation

Tornare Nihombashihama-cho Office Tower 7F, 3-3-2, Nihombashihama-cho, Chuo-ku, Tokyo, 103-0007, Japan
Tel +81-3-4332-5161 Fax +81-3-4335-7519
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Japan

Sensor Urinal:AWU-506RAMP/BN8

EP-6-089

Household goods and equipment

toilets

Toilet bowl (Luvue -701R and water-saving effect)**Environmental performance**

Water-saving effect

8 liters for the current water-saving type

4.5 liters for the super water-saving type

Product performance

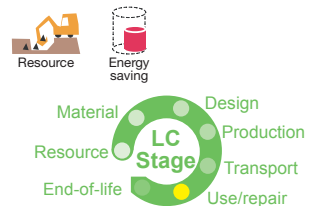
- 1) Noise reduction effect
Reduction of more than 10db (about one-third)
- 2) Perfect washing power
Existing water-saving toilets need flushing 2-3 times because excretions get stuck to the ceramic due to insufficient water.
- 3) Quick water reloading

Bokwang Ceramics. Ltd.

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-701R, Korea

Tel +82-2-3444-6711 Fax +82-2-3444-6725

E-mail projectpark@empal.com

URL <http://www.boce.co.kr/>URL http://www.boce.co.kr/index.php?status=menu5&code=menu5_1

Low-tank Type

EP-6-090

Household goods and equipment

toilets

Toilet bowl (Luvue-702R and water-saving effect)**Environmental performance**

Water-saving effect

8 liters for the current water-saving type

4.5 liters for the super water-saving type

Product performance

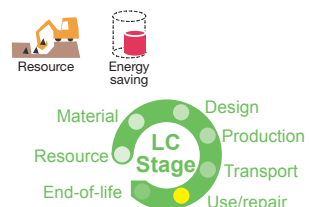
- 1) Noise reduction effect
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E-mail projectpark@empal.com

URL <http://www.boce.co.kr/>URL http://www.boce.co.kr/index.php?status=menu5&code=menu5_1

Low-tank Type

EP-6-091

Household goods and equipment

toilets

Toilet bowl (Luvue-101R and water-saving effect)

Environmental performance

Water-saving effect

8 liters for the current water-saving type

4.5 liters for the super water-saving type

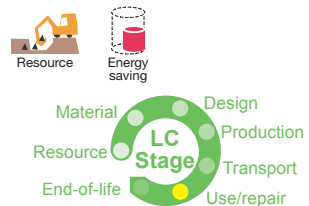
Product performance

- 1) Noise reduction effect
Reduction of more than 10db (about one-third)
- 2) Perfect washing power
Existing water-saving toilets need flushing 2-3 times because excretions get stuck to the ceramic due to insufficient water.
- 3) Quick water reloading

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Flush-valve Type

EP-6-092

Household goods and equipment

toilets

Toilet bowl (Luvue -102R and water-saving effect)

Environmental performance

Water-saving effect

8L of the current water-saving type

4.5L of the super water-saving type

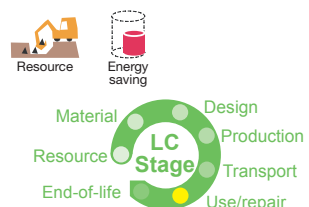
Product performance

- 1) Noise reduction effect
Reduction of more than 10db (about one-third)
- 2) Perfect washing power
Existing water-saving toilets need flushing 2-3 times because excretions get stuck to the ceramic due to insufficient water.
- 3) Quick water reloading

Bokwang Ceramics. Ltd.

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-102R, Korea

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Flush-valve Type

EP-6-093

Household goods and equipment

toilets

Flushing Toilet : Floor-Mounted Close-Coupled Water-Closet with Single Flushing Device

Environmental performance

Company recognizes water is an essential raw material in its operations. We can use recycling water up to 93% for production processes. Almost parts and Materials can recycle. Company sanitary ware products reduced water consumption from 9 liters down to <6 liters.



Siam Sanitary Ware Industry CO., LTD.

36/11 Vibhavadi Rangsit Road, Sanam Bin, Don Muang, Bangkok, 10210, Thailand
Tel 662-551-1818 Fax 662-973-3470
URL www.cotto.co.th

Available in: Thailand

C1081 Rosanna (P) Closet



EP-6-094

Household goods and equipment

toilets

Flushing Toilet : Floor-Mounted Close-Coupled Water-Closet with Dual Flushing Device

Environmental performance

Company recognizes water is an essential raw material in its operations. We can use recycling water up to 93% for production processes. Almost parts and Materials can recycle. Company sanitary ware products reduced water consumption from 9 liters down to <6 liters.



Siam Sanitary Ware Industry CO., LTD.

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Tel 662-551-1818 Fax 662-973-3470
URL www.cotto.co.th

Available in: Thailand

C1709 Evita (P) Closet



EP-6-095

Household goods and equipment

toilets

Flushing Toilet : Floor-Mounted One-Piece Water-Closet with Single Flushing Device**Environmental performance**

Company recognizes water is an essential raw material in its operations. We can use recycling water up to 93% for production processes. Almost parts and Materials can recycle. Company sanitary ware products reduced water consumption from 9 liters down to <6 liters.

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Tel 662-551-1818 Fax 662-973-3470
URL www.cotto.co.th

Available in: Thailand



C1052 G.Riviera Closet

EP-6-096

Household goods and equipment

toilets

Flushing Toilet : Floor-Mounted One-Piece Water-Closet with Dual Flushing Device**Environmental performance**

Company recognizes water is an essential raw material in its operations. We can use recycling water up to 93% for production processes. Almost parts and Materials can recycle. Company sanitary ware products reduced water consumption from 9 liters down to <6 liters.

**Siam Sanitary Ware Industry CO., LTD.**

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Tel 662-551-1818 Fax 662-973-3470
URL www.cotto.co.th

Available in: Thailand



C1001 G.Dazzle D/F Closet

EP-6-097

Household goods and equipment

toilets

Flushing Toilet : Wall-Mounted Close-Coupled Water-Closet with Single Flushing Device**Environmental performance**

Company recognizes water is an essential raw material in its operations. We can use recycling water up to 93% for production processes. Almost parts and Materials can recycle. Company sanitary ware products reduced water consumption from 9 liters down to <6 liters.

**Siam Sanitary Ware Industry CO., LTD.**

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Tel 662-551-1818 Fax 662-973-3470
URL www.cotto.co.th

Available in: Thailand

C1985 Unique Wall Hung Closet



EP-6-098

Household goods and equipment

toilets

Flushing Toilet : Wall-Mounted Close-Coupled Water-Closet with Dual Flushing Device**Environmental performance**

Company recognizes water is an essential raw material in its operations. We can use recycling water up to 93% for production processes. Almost parts and Materials can recycle. Company sanitary ware products reduced water consumption from 9 liters down to <6 liters.

**Siam Sanitary Ware Industry CO., LTD.**

36/11 Vibhavadi Rangsit Road, Sanam Bin, Don Muang, Bangkok, 10210, Thailand
Tel 662-551-1818 Fax 662-973-3470
URL www.cotto.co.th

Available in: Thailand

C1987 Tetragon Wall Hung Closet



EP-6-099

Household goods and equipment

toilets

Flushing Toilet : Wall-Mounted Water-Closet with Flush Valve**Environmental performance**

Company recognizes water is an essential raw material in its operations. We can use recycling water up to 93% for production processes. Almost parts and Materials can recycle. Company sanitary ware products reduced water consumption from 9 liters down to <6 liters.

**Siam Sanitary Ware Industry CO., LTD.**

36/11 Vibhavadi Rangsit Road, Sanam Bin, Don Muang, Bangkok, 10210, Thailand
Tel 662-551-1818 Fax 662-973-3470
URL www.cotto.co.th



Available in: Thailand

C4501 Amanda FV.

EP-6-100

Household goods and equipment

toilets

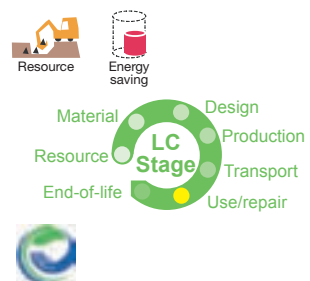
Falcon CU-502F / CU-1000 / CU-900**Environmental performance**

The functional waterfree urinal system disposes urine in a hygienic and eco-friendly way without using water.

- Preserve clean water (existing urinal using water use the aqueous 120 tons per year, or 4liters on average at a time)
- Carbon dioxide reduction

Product performance

The Falcon Waterfree urinal involves a vitreous china or stainless steel fixture and a patented, replaceable cartridge that is installed at the bottom of the urinal into a fitting that is connected to a drainpipe. The combination of non-stick, non-porous materials of construction and the funnel-shape of the cartridge ensure all urine passes into the cartridge and through a unique sealant liquid that floats on top of the liquid beneath it. Uric sediment is collected by the cartridge, leaving an odor-free environment, clean pipes and absolutely no water waste.

**Falcon Waterfree Technologies Co., Ltd.**

1012 Masters Tower, 553 Dohwa-dong, Mapo-gu, Seoul, 121-748, Republic of Korea
Tel +82-2-3275-5282 Fax +82-2-3275-5285
E-mail limjh202@naver.com
URL <http://www.falconwaterfree.co.kr>
URL <http://www.ewatertech.co.kr>

Falcon waterfree urinals are eco-friendly and save water resources and money through sanitary treatment of urine.

Available in: Asia

EP-6-101

Household goods and equipment

toilets

BKC-701R

Environmental performance

"Water is not only our life but also valuable resource for the future generation." This is the motto of our product, Luvue. To save water in this era of water shortage of the 21st century, Bokwang Ceramics, Ltd. has developed super water-saving flush toilets that consume only about 30% of water usage of an average household.

<Advantages of Luvue>

The current products spend 9L water when you use the toilet. However, Luvue is only 4.8L of the super water-saving type. Our product can be completely washed with just one flushing after use, minimization of discharge noise, and quick water reloading.

Product performance

Award.

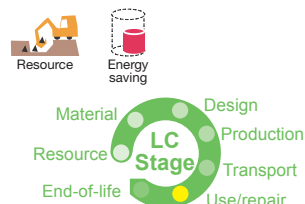
2001.04 Won a special prize at the 100th international exhibition of inventions in Paris, France.

2001.11 Won a gold medal at the exhibition of inventions in Nuremberg, Germany.

2003.11 Won a gold medal at the exposition of inventions sponsored by the Korean Intellectual Property Office.

Bokwang Ceramics. Ltd.

#34-11, Nowon3dong, Buk-Gu, Daegu, Korea



EP-6-102

Household goods and equipment

hand dryers

JET TOWEL, Environmentally Friendly Hand Dryer

Environmental performance

It eliminates paper waste and fewer natural resources are consumed.

----<< Material / Resource saving >>----

DC brushless motor has the durability of seven years by 1,000 times* of use per one day, which realizes its longer life.

*Depending upon environment and usage conditions.

----<< Energy saving >>----

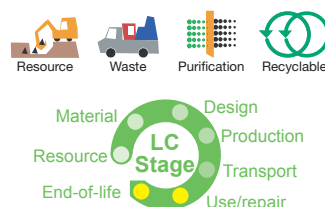
Approximately 15% lower power consumption compared to previous Mitsubishi Electric model*.

It is equipped with a newly developed "hyper nozzle" that blows off drops of water on hands with a filmy jet blow at a stretch and improves its drying efficiency.

* JT-SB116D

----<< Toxicity / Chemical substances reduction >>----

Eliminated the use of the six substances specified by the EU's RoHS directive.



Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Asia, Europe, North America

JT-SB116GN / JT-SB216GSN

EP-6-103

Household goods and equipment

pillow cover

Military Pillow Cover

Environmental performance

Reduction of Hazardous Materials

Product performance

- "-No halogen synthetic resins such as PVC in the manufacturing process
- "-Odor-free operation



Samduk Commercial Co., Ltd.

127-1 Hoehyeon-dong 1-ga, Jung-gu, Seoul, 100-873, Republic of Korea
 Tel +82-2-775-3811 Fax +82-2-774-5588
 E-mail parkcs6a@naver.com
 URL <http://www.kimbulls.com>



Available in: Republic of Korea

EP-6-104

Household goods and equipment

mini drawers

L'earth wheat composite mini drawer

Environmental performance

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or or required deforestation. High content of recycled and certified food-safe plastic used. This helps in the lowering of greenhouse emissions and slowdown of global warming. Less toxic gases are being emitted when incinerated.

Product can also be made oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and Certifications for wheat-composite material:

1. Singapore Green Label certified
2. SEC-Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012

With L'earth, it is simple, enjoyable, and sustainable embracing an eco-conscious and modern lifestyle.

Product performance

- Non-toxic
- Withstand temperatures -20 to 160 deg celsius
- Durable and sturdy
- Lightweight
- Comes in natural and customisable colours

L'earth S Pte Ltd

21 Toh Guan Road East, Toh Guan Centre, Singapore 608609, Singapore
 Fax +6565154557
 E-mail marketing@mylearth.sg
 URL <http://www.mylearth.sg>



Available in: Worldwide

L'earth wheat composite mini drawers

EP-7-001

Building and civil engineering

concrete board

Woodchip-board 'Artificial soil for re-vegetation'

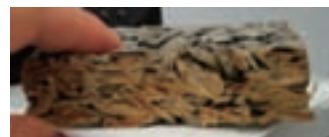
Environmental performance

This product recycles woodchips from trees that have been cut down and abandoned after land formation. A grout coating ensures that the chips combine firmly, producing a woodchip board with outstanding durability. It has consecutive voids, providing an environment where plants can grow even in severe conditions such as acid soil or concrete walls.



Obayashi Corporation

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, 108-8502, Japan
 Tel +81-3-5769-1006 Fax +81-3-5769-1065
 URL <http://www.obayashi.co.jp/english/index.html>
 URL <http://www.obayashi.co.jp/english/csr/>



Available in: Japan

Tip-board (500An X500An X30mm)

EP-7-002

Building and civil engineering

window

EX'1001 (Tilt&Turn)

Environmental performance

EX' 1001 is a high energy-efficient window system. It consists of an aluminum/polyamide composite-framed and a double-glazed window. It contributes to an environment preservation, heat insulation and energy saving in buildings. The frame is made of an aluminum raw material, which is not harmful to the human body and is reusable and recycle material. There is no material waste of sealant, while the glass is retrofitted. Therefore, it can reduce environmental pollution in advance.

Product performance

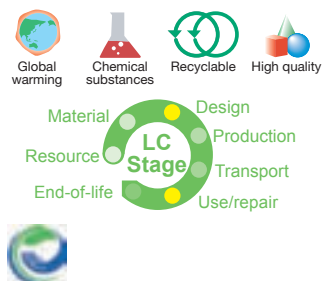
EX' 1001 is an European-style window system (Tilt & Turn).

High Energy-Efficient
 High Air Tightness
 High Water Tightness
 Secure Structure
 High Thermal & Sound Insulation
 Fire Resistance & Harmlessness

It is a 2-way window system (Tilt & Turn) and very easy to handle. It is applicable by itself in buildings and curtain wall facade. Also it has very various color proper for your taste.

Alutek Ltd.

6F, GS B/D, 588 Guro-dong, Guro-gu, Seoul, 152-050, Republic of Korea
 Tel +82-2-6675-1304 Fax +82-2-6675-1399
 E-mail judoc@alutek.co.kr
 URL www.alutek.co.kr



Available in: Worldwide

EX'1001 (Tilt&Turn)

EP-7-003

Building and civil engineering

window

EX'2002 (Lift&Sliding)

Environmental performance

EX' 2002 is a high energy-efficient window system. It consists of an aluminum/polyamide composite-framed and a double-glazed window. It contributes to an environment preservation, heat insulation and energy saving in buildings. The frame is made of an aluminum raw material, which is not harmful to the human body and is reusable and recycle material. There is no material waste of sealant, while the glass is retrofitted. Therefore, it can reduce environmental pollution in advance.

Product performance

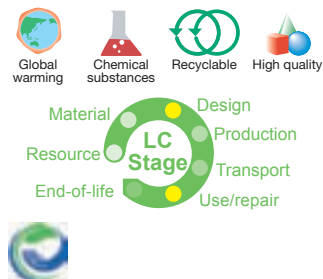
EX' 2002 is an European-style window system (Lift & Sliding).

High Energy-Efficient
High Air Tightness
High Water Tightness
Secure Structure
High Thermal & Sound Insulation
Fire Resistance & Harmlessness

It consists of a laminated glass for safety. Its high strength guarantee the security. It has reinforced & narrow-designed frame. It makes a wide view. It suits not only apartment, high-rise building but all buildings.

Alutek Ltd.

6F, GS B/D, 588 Guro-dong, Guro-gu, Seoul, 152-050, Republic of Korea
Tel +82-2-6675-1304 Fax +82-2-6675-1399
E-mail judoc@alutek.co.kr
URL www.alutek.co.kr



Available in: Worldwide

EX'2002 (Lift&Sliding)

EP-7-004

Building and civil engineering

window

EX'2200 (Double Skin Windows)

Environmental performance

EX' 2200 is a high energy-efficient window system. It consists of an aluminum/polyamide composite-framed and a double-glazed window. It contributes to an environment preservation, heat insulation and energy saving in buildings. The frame is made of an aluminum raw material, which is not harmful to the human body and is reusable and recycle material. There is no material waste of sealant, while the glass is retrofitted. Therefore, it can reduce environmental pollution in advance.

Product performance

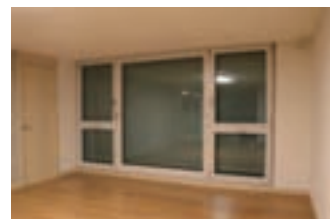
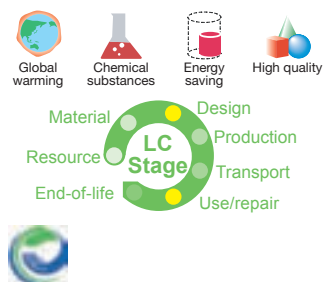
EX' 2200 is a Double Skin Window system with Tilt & Turn.

High Energy-Efficient
High Air Tightness
High Water Tightness
Secure Structure
High Thermal & Sound Insulation
Fire Resistance & Harmlessness

It is composed of two skins and cavity between them with Tilt & Turn. The cavity works as thermal absorber and customers can utilize therm of the cavity by inside window's open and close. It is very high energy-efficient window system.

Alutek Ltd.

6F, GS B/D, 588 Guro-dong, Guro-gu, Seoul, 152-050, Republic of China
Tel +82-2-6675-1304 Fax +82-2-6675-1399
E-mail judoc@alutek.co.kr
URL www.alutek.co.kr



Available in: Worldwide

EX'2200 (Double Skin Windows)

EP-7-005

Building and civil engineering

binders

A recycled inorganic material manufactured from fly ash (coal ash) and paper sludge ash

Environmental performance

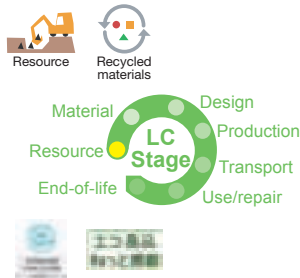
Construction costs are reduced and the construction period is shortened thanks to the omission of the conventional foundation work involved in afforestation. This reduces CO₂ emissions from the construction machines used in foundation work.

Product performance

Alpha Green stabilizer for slope afforestation is a recycled inorganic material produced primarily from fly ash (coal ash) and paper sludge ash, unlike the conventional cementing material (paste) made of synthetic polymeric resin. It contains minerals (such as magnesium, which promotes plant growth) and brings variety of secondary effects such as enabling the active utilization of inorganic basic vegetation materials, improved water permeability of vegetation bases, promotion of organic matter decomposition, and mitigation of aluminum-related damage.

Alfa Green, Ltd

99-1-207 Yamashita-cho, Naka-ku, Yokohama-city, Kanagawa-Pref, 231-0023, Japan



EP-7-006

Building and civil engineering

binders

Waste wood from construction sites can be reused onsite

Environmental performance

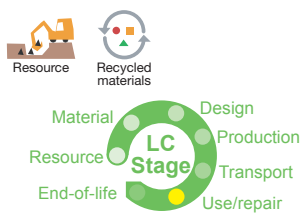
This method uses conventional construction machinery to achieve excellent rooting on and base-layer stability of bedrock and slopes under severe conditions, by just replacing the spray-on material paste with our MC binder. As a result, work periods can be shortened and costs reduced. The method also contributes to zero emission by making use of wood chips processed from trees cut on site.

Product performance

With conventional methods using waste wood chips from construction sites, problems such as the high cost of on-site mixing with composted chips, UV damage caused by the use of polymer pastes in curing compounds, and deterioration caused by frost heaving and foundation erosion often occurred. These problems can be avoided by using this product.

Alfa Green, Ltd

99-1-207, Yamashita-cho, Naka-ku, Yokohama-city, Kanagawa-Pref, 231-0023, Japan



Eco-product // Building and civil engineering

1
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EP-7-007

Building and civil engineering

civil engineering work

Continuous subterranean diaphragm wall members

Environmental performance

urban subterranean structures reduces the waste soil by reducing wall thickness. It also shortens the construction period by eliminating the need for concrete reinforcing bars.

Product performance

Nippon Steel's NS-BOX (continuous subterranean diaphragm wall members) for the walls of urban subterranean structures reduces the generation of waste soil by reducing wall thickness. It also shortens the construction period by eliminating the need for concrete reinforcing bars, reduces the space required at construction sites, and eases traffic congestion in urban areas.

Nippon Steel Corporation

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



EP-7-008

Building and civil engineering

paving work

PerfectCool

Environmental performance

Perfect Cool is a cool pavement, the surface of which is coated with a solar radiation reflective paint.

Since the coating paint reflects the near infrared rays and reduces the amount of heat absorbed into the pavement during the daytime, the pavement stores less heat and has lower surface temperature compared with conventional pavements.

As a result, it also improves the durability of pavement. It helps to fight the Urban Heat Island Effect prompted by an increase of number of hot days and tropical nights in urban area.

Product performance

The special Features of Perfect Cool are as follows:

- (1) Reduction of High temperature and Thermal storage
- (2) Improvement of Road Environment and Tropical Nights
- (3) The possibility of adding the noise reduction and drainage features
- (4) Simplicity of maintenance works
- (5) Improvement of the durability of the pavement
- (6) Availability of different colors

NIPPO CORPORATION

1-19-11 Kyobashi, Chuo-ku, Tokyo 104-8380, Japan
Tel +81-3-3563-6743 Fax +81-3-3567-7058
E-mail nippo_international@nippo-c.jp
URL <http://www.nippo-c.co.jp/english/index.html>
URL http://www.nippo-c.co.jp/english/e_enviro.html



EP-7-009

Building and civil engineering

paving work

Photoroad Method

Environmental performance

The Photoroad Process is a method for treating atmospheric pollutants, such as nitric oxides (NOx) found in motor vehicle exhaust, by creating a photocatalytic coating on the surface of roads.

We have done more than 20 constructions with the method.

Product performance

This method has the following two characteristics;

1. A large amount of NOx is absorbed because photocatalyst coated pavement is quite near the source of car exhaust.
2. The supply of power such as electricity or special maintenance is not needed.

FUJITA CORPORATION

4-25-2 Sendagaya, Shibuya-ku Tokyo, 151-8570, Japan

Tel +81-3-3402-1911 Fax +81-3-3404-8477

E-mail info@fujita.co.jp

URL <http://www.fujita.com/index2.html>

URL <http://www.fujita.com/finance.html>



Available in: Japan, Asia, Europe, North America

The construction site of Photoroad.

EP-7-010

Building and civil engineering

paving work

Sidewalk 'Wet pavement' system to counter heat island phenomenon

Environmental performance

The 'wet pavement' system (water sprinkling road system) can reduce summer daytime temperature of road surfaces by approximately 20 degree Celsius lower than asphalt pavement. The wet pavement surface reduces radiation heat. A special textile and special bricks provide a continuous cooling effect even if fine weather continues for several days. Water quantity required is 5-6L/m² for a typical fine day in summer.



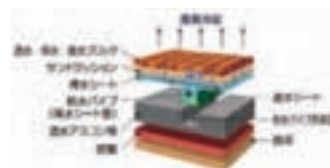
Obayashi Corporation

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, 108-8502, Japan

Tel +81-3-5769-1006 Fax +81-3-5769-1065

URL <http://www.obayashi.co.jp/english/index.html>

URL <http://www.obayashi.co.jp/english/csr/>



Available in: Japan

Wet Pavement System (Uchimizu-Pave)

EP-7-011

Building and civil engineering

paving work

Photocatalytic road-paving method, Optical Randix Method

Environmental performance

Optical Randix Method is air purification technology for pavement by using photocatalytic coating. Resin, which is developed for photocatalysis and has excellent durability and adherability, is used as a binder in this construction method, resulting in roads becoming more tolerant against wear from vehicles. Thanks to excellent effect to decrease road temperature, this method can also be utilized as a countermeasure against the heat-island phenomenon.

Product performance

- 1) Dense grade asphalt concrete pavement, semi-flexible pavement and porous asphalt pavement are available.
- 2) Excellent adhesive strength and durability
- 3) According to the results a year after the test construction, NO_x removal performance was superior (1.94 μmol^*), having long-term durability.
- 4) The method's remarkable construction property allows traffic to resume more quickly than conventional construction.

*Test conducted under the air purification test procedure, JIS R1701-1

Mitsubishi Materials Corporation

KeidanrenKaikan 1-3-2, Ohtemachi, Chiyoda-ku, Tokyo, 100-8117, Japan

Tel +81-3-5252-5308 Fax +813-5252-5344

E-mail kkawabat@mmc.co.jp

URL <http://www.mmc.co.jp/corporate/en/index.html>

URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>



Available in: Japan

Construction sample for parking lot

EP-7-012

Building and civil engineering

insulation material

Non-Freon spray-on thermal insulating material 'Ceramilite-ecoG®'

Environmental performance

In this construction method, We use spray-on thermal insulating material on-site. It does not use Freon-gas, Freon-gas substitute or VOCs which cause 'sickhouse'syndrome. It also contributes to environmental conservation by using recycled products from fractured styrene foam waste as a main material of an insulator. Moreover, because Ceramilite-ecoG (Non flammable) does not cause explosive burning like Polyurethane foam does, it obtained high safety against fire. This method received a prize of Ministry of Land, Infrastructure, Transport and Tourism Government on the 1st Ecoproducts award 2004.



Obayashi Corporation

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, 108-8502, Japan

Tel +81-3-5769-1006 Fax +81-3-5769-1065

URL <http://www.obayashi.co.jp/english/index.html>

URL <http://www.obayashi.co.jp/english/csr/>

Available in: Japan, Asia

Appearance of Ceramilite-EcoG sprayed on wall

EP-7-013

Building and civil engineering

water-well drilling work

Polyethylene pipe

Environmental performance

The use of recycled plastics as an agent saves the consumption of new materials. These products are economical and eco-friendly since they use pollutants generated by incineration and landfills as raw materials.

Product performance

Ring Stiffness: 13KN/m²
 Yield Tensile Strength: 20N/m²
 Thermal Stability: More than 20
 Specification: 11 Types (Ranging from Φ150 to 1,000mm)

Green Polytech Co., Ltd.

220-3 Daejeon-ri, Hapdeok-eup, Dangjin-gun, Chungcheongnam-do, Republic of Korea
 Tel +82-41-362-5857 Fax +82-41-362-5867
 E-mail Greenpipe@paran.com
 URL www.greenpipe.co.kr

Available in: Republic of Korea



EP-7-014

Building and civil engineering

cement products

Pavement block "NOXER" for preventing air pollution by photo-catalysis

Environmental performance

NOXER is a pavement block that has a function to decompose harmful substances by oxidation in the surface layer of concrete blocks. The function is based on the photocatalytic reaction that is caused by titanium oxide.

Formation of active oxygen takes place by the action of photocatalytic reaction when titanium oxide in the surface layer of the block is exposed to ultraviolet rays in sunlight.

The formed active oxygen oxidizes the harmful substances, and decomposes them.

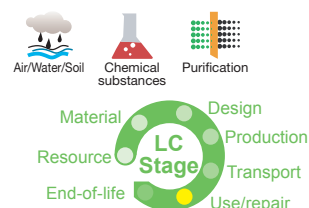
Product performance

1m² of "NOXER" removes 1.5mmol of nitrogen oxides (field test result).

Mitsubishi Materials Corporation

KeidanrenKaikan 1-3-2, Ohtemachi, Chiyoda-ku, Tokyo, 100-8117, Japan
 Tel +81-3-5252-5308 Fax +81-3-5252-5344
 E-mail kkawabat@mmc.co.jp
 URL <http://www.mmc.co.jp/corporate/en/index.html>
 URL <http://www.mmc.co.jp/corporate/en/product/construct/10.html>
 URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan



Chigasaki City, Japan

EP-7-015

Building and civil engineering

tiles

Thermo Tile: saying good-bye to chilly bathroom tiles

Environmental performance

Thermo Tile is a floor tile for bathrooms that offers the function of preventing the chill often felt when walking on tiled floors. It does not need energy sources such as electricity or gas; rather, it works on the principle of forming a heat-insulating layer on the tile surface. Thermo Tile has a surface layer that contains many small hollow balloon-like bubbles, which lowers the thermal conductivity of the tile itself and reduces the heat transfer rate (i.e., the thermal flux value). Consequently, those walking on the tiles do not feel much of a chill.

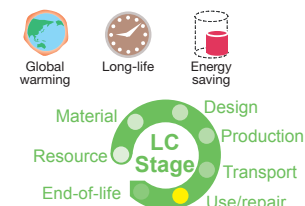
Product performance

The surface of Thermo Tile offers good drainage. In addition, its rugged surface means that it is not slippery even with wet feet. The coefficient of slip resistance for bathrooms (CSR-B) is set at a value suitable for use in large bathhouses.

INAX Corporation

Tornare Nihombashihama-cho Office Tower 7F, 3-3-2, Nihombashihama-cho, Chuo-ku, Tokyo, 103-0007, Japan
Tel +81-3-4332-5161 Fax +81-3-4335-7519
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Japan



TERMO TILE:IFT-300/ML-201N,ML-301N

EP-7-016

Building and civil engineering

tiles

Ecocarar: superior health-promoting building materials to support both comfort and health

Environmental performance

Ecocarar, a material produced from waste glass and other recycled materials, controls by itself the humidity of rooms where it is used by absorbing moisture in the air in humid conditions and giving off moisture when the air is dry. The low-temperature firing used in its production means that energy consumption and CO₂ emissions are reduced compared with those of existing tiles.

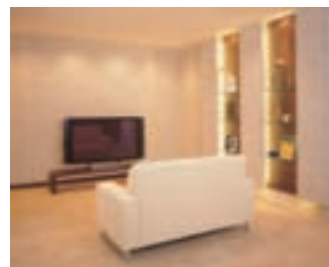
Product performance

Ecocarar, a material that controls by itself the humidity of rooms in a natural way, also works to absorb VOCs (the airborne compounds that cause Sick Building Syndrome), thus providing a comfortable and healthful interior environment. This is Japan's first formaldehyde-reducing building material certified by the Building Center of Japan.

INAX Corporation

Tornare Nihombashihama-cho Office Tower 7F, 3-3-2, Nihombashihama-cho, Chuo-ku, Tokyo, 103-0007, Japan
Tel +81-3-4332-5161 Fax +81-3-4335-7519
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Worldwide



ECOCARAR:ECO-275NET/R01

EP-7-017

Building and civil engineering

tiles

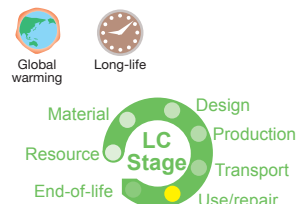
MICROGUARD, INAX anti-fouling technology for the external wall of housing and building

Environmental performance

Tile that is treated with MICRO-GUARD functions to prevent the fouling of the external walls of houses and buildings and to maintain the beautiful appearance of the wall for a long period.

MICRO-GUARD is a technology to process tiles with INAX's original anti-fouling method in order to maintain and beautify the landscape of urban areas in severe environmental conditions including air pollution.

MICRO-GUARD enhances the surface hydrophilicity of conventional tile. Thereby, the condition of the tile surface is always covered with a water film that absorbs water molecules from the air. As a result, it prevents the generation of static electricity which attracts air-borne dust. Moreover, the tile effectively becomes "self-cleaning" since dust and grime are flushed from tile surface when it rains thanks to the MICRO-GUARD treatment.



INAX Corporation

Tornare Nihombashihama-cho Office Tower 7F, 3-3-2, Nihombashihama-cho, Chuo-ku, Tokyo, 103-0007, Japan
Tel +81-3-4332-5161 Fax +81-3-4335-7519
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Asia

MICROGUARD:COM-255/MGN-14

EP-7-018

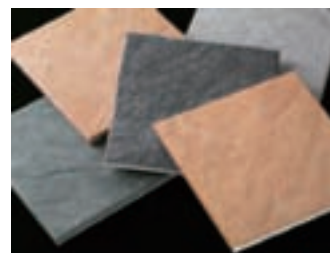
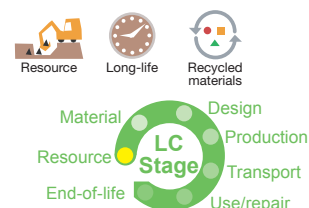
Building and civil engineering

tiles

Recycled-material Tile: wall and floor materials made from waste resources

Environmental performance

Recycled-material Tile is a wall/floor tile made from recycled materials. INAX makes every effort to use up all materials generated during the various production processes at its factories, ranging from mill ends and waste materials to the clay contained in wastewater. Materials used in large quantities are "ceramic-industry waste-mud" (recovered from the excavation of ceramic raw materials), "Kira" (a material generated during the mining of silica sand - one of the raw materials of glass), and "pottery chips" (formed by crushing ceramic products such as tiles).



INAX Corporation

Tornare Nihombashihama-cho Office Tower 7F, 3-3-2, Nihombashihama-cho, Chuo-ku, Tokyo, 103-0007, Japan
Tel +81-3-4332-5161 Fax +81-3-4335-7519
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Japan

Recycled Material:IPF-150

EP-7-019

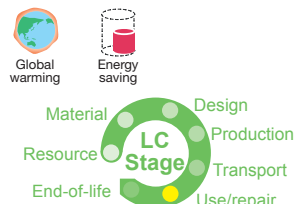
Building and civil engineering

water synthetic resin paints

Building Exterior Paint Invented with Energy Conservation in Mind "MIRACOOOL"

Environmental performance

Coating with "Miracool" reflects about 90% of sunlight, which curbs the temperature increases in building walls and roofs. In addition, it drastically reduces the quantity of heat transmission owing to its low coefficient of thermal conductivity and high long-wave emissivity. Because of these functions, "Miracool" can contribute to energy conservation by reducing a building's cooling load. Not only for the energy conservation of a building itself, it can also be helpful for mitigating the heat island phenomenon, extraordinary high temperatures in urban areas as a whole, as it is able to control the absorption of solar energy. We can provide "Miracool way" for asphalt-paved roads, other than "Miracool" for buildings.



MIRACOOOL Co., Ltd.

1-11-15-4F, Nihonbashi-horidomecho, Chuo-ku, Tokyo, 103-0012, Japan
 Tel +81-3-3249-0272 Fax +81-3-3249-0270
 E-mail info@miracool.jp
 URL <http://www.miracool.jp>
 URL <http://www.miracool.jp/international/english.html>



Available in: Japan, Asia, Southeast Asia, Indonesia, Singapore, Thailand, Philippines, Malaysia, Republic of Korea, Taiwan (Rep. of China), China

Miracool

EP-7-020

Building and civil engineering

paints and related products

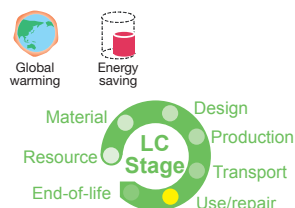
Heat ray shielding paint with energy saving and CO₂ reduction effects

Environmental performance

Due to the characteristics of its good weatherability and radio-wave permeability, as well as high-transparency, our heat-rays shielding paint has been widely applied to glass for automobile, train, and housing windows. This paint contributes significantly to reduce both energy consumption and CO₂ emission as a result of reducing the air conditioning load.

Product performance

Our heat-rays shielding paint is a clear coating-material containing highly dispersed ultra-fine ceramic particles absorbing heat rays in sun light. Application of this paint as direct glass coating or coated film on glass surface enables glass to reduce insolation permeability ratio to less than 70% while keeping 90% of visible radiation permeability.



Mitsubishi Materials Corporation

1-6-1 Yokoami, Sumida-ku, Tokyo, 130-0015, Japan
 Tel +81-3-5819-7325 Fax +81-3-5819-7327
 URL <http://www.mmc.co.jp/corporate/en/index.html>
 URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>



Available in: Worldwide

Film coated with IR cutting paint

EP-7-021

Building and civil engineering

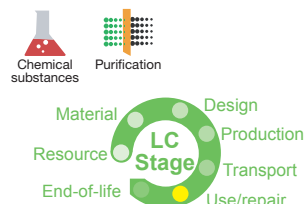
paints

New material special paint WALLFACE

Environmental performance

Healthy architectural finishing with no VOC (volatile organic compounds), which has become even more important recently because of sick house syndrome, and the use of harmful levels of formaldehyde, mercury, and lead.

Samjin liquid WALLFACE supports elegant living and good health with eco-friendly construction finishing materials with more quality than mere wallpaper, using liquid instead of paper.



13kg-CO₂
not Inspection

Resource/Materials/Production/
Transfer/Use/End-of-Life

Samjin WALLFACE is your competitiveness!
Toward environmental conservation and healthy life of human race!



In addition, those exceeding the performance of existing wallpaper are semi-permanent products cleaned with water and detergent, and hygienic for its anti-fungal character as well. These also discharge cool scent, far infrared radiation, and anion during application.



This product achieved patent of invention in November, 2003. Eco-label logo (Eco-mark) (Green, Ministerial Environment Price in the UNEP ECO-TECH FAIR, May. 30, 2004 and government procurement certificate, Dec. 21, 2006).

Beautiful Grand Nature is Utopia which is pursued by Samjin Industrial studying and developing environment-friendly, new construction products.

Contact Address : Hwabuk 2-dong, Jeju City, Jeju Island.
Tel. 82-(064)722-0756 Fax: 82-(064)724-0756 Cell: 82-11-698-0756
E-mail: ish5049@hanmail.net Homepage: www.sj-waterpaper.com

SAMJIN INDUSTRIAL

3467-1, Hwabuk 2-dong, Jeju -City, Jeju Island, 690-062, Korea
Tel +82-64-722-0756 Fax +82-64-724-0756
E-mail ish5049@hanmail.net

EP-7-022

Building and civil engineering

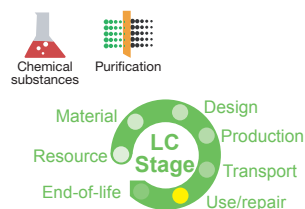
paints

WALLFACE-F

Environmental performance

On-spot direct construction for individual design and pattern.
For top coat and direct on-spot presentation of design

- Applicable on plastic
- Applicable on zinc galvanized sheets
- Applicable on interior steel plate
- Applicable on acrylic



2kg-CO₂
not Inspection

Resource/Materials/Production/
Transfer/Use/End-of-Life



SAMJIN INDUSTRIAL

3467-1, Hwabuk 2-dong, Jeju-City, Jeju Island, 690-062, Korea
Tel +82-64-722-0756 Fax +82-64-724-0756
E-mail ish5049@hanmail.net

EP-7-023

Building and civil engineering

paints

WHE

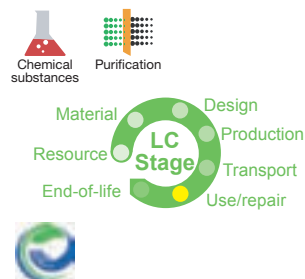
Environmental performance

This product is special exterior wall paint featuring additional primer coating quality and is applicable to bricks, cement, and concrete walls without primer.

Samjin exterior wall paint (intermediate coating) has excellent osmosis, alkali resistance, and water and air resistance with definite cover-up qualities and strong adhesion.

SAMJIN INDUSTRIAL

3467-1, Hwabuk 2-dong Jeju-City, Jeju Island, 690-062, Korea
Tel +82-64-722-0756 Fax +82-64-724-0756
E-mail ish5049@hanmail.net



EP-7-024

Building and civil engineering

paints

Natural Anti-bacterial Paint "Fragrance of Forest"

Environmental performance

Natural Paint ("Fragrance of Forest") is an environment-friendly paint developed from pure and healthy natural resources, such as wild plants and minerals. Throughout the entire process of producing, painting and disposing, Natural Paint ("Fragrance of Forest") does not radiate harmful substance which could threaten the environment or human health.

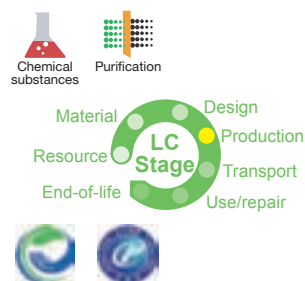
Product performance

It emits anion. It is free of bad odor-No need to wait for smell to fade away. It prevents mold and bacteria and absorbs chemical substances. It emits Phytoncide. It comes in various color choices and could be used on wallpapers as well as walls. It is highly durable.

*Atopy, Bacteria, Mold and Toxin Free.

HANKOOK SHINHWA CO.,LTD

101-7, Yangbeol-ri, Opo-eup, Gwangju-si, Gyeonggi-do, 464-896, Republic of Korea
Tel 82-31-766-2983 Fax 82-31-766-6654
E-mail vco17comp@hanmail.net
URL <http://www.hshpaint.co.kr>



Available in: Worldwide, Republic of Korea

Natural Anti-bacterial Water Paint "Fragrance of Forest"

EP-7-025

Building and civil engineering

paints

Printing Ink - SOLFREE MAGENTA

Environmental performance

1. The existing products contains 30% of Petroleum Type High Viscosity Solvents, which is also known as carcinogen: VOCs 30%
2. The new product Solfree substitutes the Petroleum Type Solvent with Vegetable Oil: VOCs Below 1%
3. The existing products contains Petroleum Type Solvent which evaporates after printing. However, the SolFree does not contain Petroleum Type Solvent
4. FDA Certification from U.S.
5. ISO 2846 Certification
6. Soyseal User Agreement

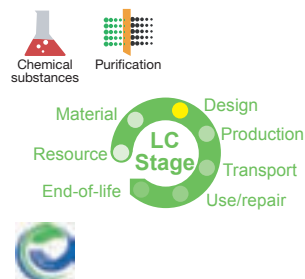
Product performance

- Excellent Printing Quality
- + Excellent Gloss and Color Reproductivity
- + No Gloss Down or Dry Down from Evaporation of Solvent
 - Excellent Rub-Resistance
 - Excellent Transferability (Widens Variations of Substrates to be used)
 - Excellent Weatherability"

DAIHAN INK CO.,LTD

615, Bakdal-Dong, Manangu, Anyang-City, Kyeong gi-Do.Korea., 430-030,
 Republic of Korea
 Tel +82-31-467-6437 Fax +82-31-443-8570
 E-mail sean@d-ink.co.kr
 URL www.daihanink.com

Available in: Asia, Southeast Asia, Middle and Near East, U.S.A, China



Eco-friendly Printing Ink: Reduction of Toxic Substance, Reduction of Pollution Material

EP-7-026

Building and civil engineering

paints

Printing Ink - SOLFREE YELLOW

Environmental performance

1. The existing products contains 30% of Petroleum Type High Viscosity Solvents, which is also known as carcinogen: VOCs 30%
2. The new product Solfree substitutes the Petroleum Type Solvent with Vegetable Oil: VOCs Below 1%
3. The existing products contains Petroleum Type Solvent which evaporates after printing. However, the SolFree does not contain Petroleum Type Solvent
4. FDA Certification from U.S.
5. ISO 2846 Certification
6. Soyseal User Agreement

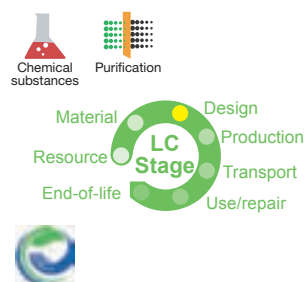
Product performance

- Excellent Printing Quality
- + Excellent Gloss and Color Reproductivity
- + No Gloss Down or Dry Down from Evaporation of Solvent
 - Excellent Rub-Resistance
 - Excellent Transferability (Widens Variations of Substrates to be used)
 - Excellent Weatherability"

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615, Bakdal-Dong, Manangu, Anyang-City, Kyeong gi-Do.Korea., 430-030,
 Republic of Korea
 Tel +82-31-467-6437 Fax +82-31-443-8570
 E-mail sean@d-ink.co.kr
 URL www.daihanink.com

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Eco-friendly Printing Ink: Reduction of Toxic Substance, Reduction of Pollution Material

EP-7-027

Building and civil engineering

paints

Printing Ink - SOLFREE CYAN

Environmental performance

1. The existing products contains 30% of Petroleum Type High Viscosity Solvents, which is also known as carcinogen: VOCs 30%
2. The new product Solfree substitutes the Petroleum Type Solvent with Vegetable Oil: VOCs Below 1%
3. The existing products contains Petroleum Type Solvent which evaporates after printing. However, the SolFree does not contain Petroleum Type Solvent
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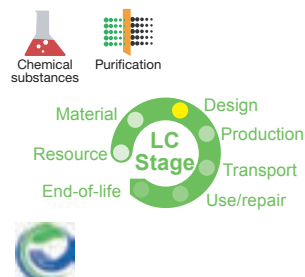
Product performance

- *- Excellent Printing Quality
- + Excellent Gloss and Color Reproductivity
- + No Gloss Down or Dry Down from Evaporation of Solvent
 - Excellent Rub-Resistance
 - Excellent Transferability (Widens Variations of Substrates to be used)
 - Excellent Weatherability"

DAIHAN INK CO.,LTD

615, Bakdal-Dong, Manangu, Anyang-City, Kyeong gi-Do.Korea., 430-030,
 Republic of Korea
 Tel +82-31-467-6437 Fax +82-31-443-8570
 E-mail sean@d-ink.co.kr
 URL www.daihanink.com

Available in: Asia, Southeast Asia, Middle and Near East, U.S.A, China



Eco-friendly Printing Ink: Reduction of Toxic Substance, Reduction of Pollution Material

EP-7-028

Building and civil engineering

paints

Printing Ink - SOLFREE BLACK

Environmental performance

1. The existing products contains 30% of Petroleum Type High Viscosity Solvents, which is also known as carcinogen: VOCs 30%
2. The new product Solfree substitutes the Petroleum Type Solvent with Vegetable Oil: VOCs Below 1%
3. The existing products contains Petroleum Type Solvent which evaporates after printing. However, the SolFree does not contain Petroleum Type Solvent
4. FDA Certification from U.S.
5. ISO 2846 Certification
6. Soyseal User Agreement

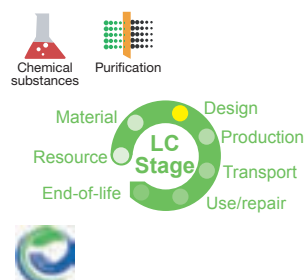
Product performance

- *- Excellent Printing Quality
- + Excellent Gloss and Color Reproductivity
- + No Gloss Down or Dry Down from Evaporation of Solvent
 - Excellent Rub-Resistance
 - Excellent Transferability (Widens Variations of Substrates to be used)
 - Excellent Weatherability"

DAIHAN INK CO.,LTD

615, Bakdal-Dong, Manangu, Anyang-City, Kyeong gi-Do.Korea., 430-030,
 Republic of Korea
 Tel +82-31-467-6437 Fax +82-31-443-8570
 E-mail sean@d-ink.co.kr
 URL www.daihanink.com

Available in: Asia, Southeast Asia, Middle and Near East, U.S.A, China



Eco-friendly Printing Ink: Reduction of Toxic Substance, Reduction of Pollution Material

EP-7-029

Building and civil engineering

steel pipe materials

Geo Wing Pile™ II steel pipe pile for the rotary penetration method

Environmental performance

Geo Wing Pile™ II steel pipe pile is an environmentally friendly method which produces no excavation surplus soil and which involves low noise and vibration.

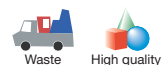
Product performance

Geo Wing Pile™ II, a new-structure steel pipe pile installed by the rotary penetration method and used for the construction of medium-height buildings, has a truncated cone shape wing on the toe of this pile. The product is characterized by its improvement to the workability of the penetration process.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



Geo Wing Pile™ II

EP-7-030

Building and civil engineering

steel pipe materials

CLEANWELL® DRY, OCTG Premium Connection

Environmental performance

CLEANWELL® DRY is an environmentally-friendly premium connection of VAM® used in connecting oil country tubular goods (OCTG). When a connection is connected to a pipe, the thread surface is coated with grease called "dope". This was necessary to satisfy the specifications for both anti-galling performance and gas-tightness. As the dope contains heavy metals such as lead, there was a concern that heavy metals might result in a detrimental impact on marine creatures or humans. CLEANWELL® DRY is not used of "dope". CLEANWELL® DRY premium connection enables oil and gas development with no discharge of products that are harmful to the environment.

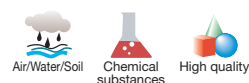
Product performance

CLEANWELL® DRY is "dope-free" by using a special surface treatment and coating with an excellent lubricating solid film for both anti-galling performance and gas-tightness. Environmentally-friendly CLEANWELL® DRY is used in the area with the most stringent environmental regulation in the world, and so on with greatly desire.

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan
Tel +81-3-4416-6183 Fax +81-3-4416-6793
E-mail chikyu-kan@sumitomometals.co.jp
URL <http://www.sumitomometals.co.jp>

Available in: Worldwide



CLEANWELL® DRY Structure

EP-7-031

Building and civil engineering

rock drills

Dismantling and Drilling Methods using Super Low-noise Hydraulic Breaker

Environmental performance

Thanks to the sound-insulation/soundproof hydraulic breaker with oscillation-reduction effect, engineering works in urban areas, such as the dismantling of buildings, which are conducted with hesitation due to their noise, can be carried out without concern over noise pollution. The device also shortens the duration of engineering works compared with conventional methods of construction using hydraulic crushers. Since the operation time of construction machinery is reduced, and fuel consumption is cut, there is a reduction of greenhouse gas emissions. In addition, soundproofing measures are facilitated with the device, and the minimum amount of soundproof sheets and walls are required. Furthermore, as the machines vibrate less, machine operators suffer less fatigue.

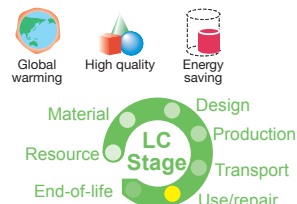
Product performance

By holding hydraulic breaker with special dampers to cover airtight box-shaped frames, sound is controlled and vibrations are largely reduced. The sound pressure level is cut by 30% and noise is sharply reduced by 18dB compared with the F 22 plate-type model. Vibrations, generated by the body of the breaker, are sharply restrained by 80% at the point of the arm of the hydraulic shovel and 40% at the driver's seat.

FURUKAWA ROCK DRILL CO., LTD.

1-5-3, NIHONBASHI, CHUO-KU, TOKYO, 103-0027, JAPAN

Available in: Japan



EP-7-032

Building and civil engineering

parts of machinery and equipment for construction and mining

"e'-DUSCO240," electrostatic precipitator for tunnel construction

Environmental performance

- (1) This precipitator for tunnel construction cuts electricity costs by approximately 13 million yen annually (roughly 80%) compared with major filter-type dust collectors thanks to its air-curtain effect under full operation.
- (2) This leads to a CO₂ reduction of approximately 484 tons with full operation of the precipitator every year.
- (3) Minute particles of 0.2 - 5 μm in diameter, which are produced during construction work and said to be the most harmful for health, can be collected efficiently, preventing pneumoconiosis.

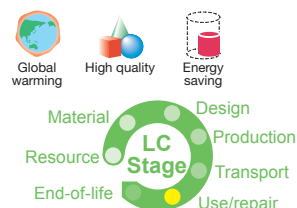
Product performance

The e'-DUSCO240 can cope with 20% more air-volume wind than usual electrostatic precipitators used for tunnel construction (2,000 m³/min→2,400 m³/min), and this device is the first in the industry to have achieved a 95% efficiency rate for dust collection in performance tests by the Japanese Industrial Standards (JIS). In addition, the motive power consumption is greatly decreased compared with other same-air-volume filter-type precipitators (fan power 160 kW→30 kW), and when compared with usual electric 2,000 m³/min-class precipitators, this is a more efficient power-saving device (fan power 37.8 kW→30 kW).

FURUKAWA INDUSTRIAL MACHINERY SYSTEMS Co., Ltd.

2-3, MARUNOUCHI 2-CHOME, CHIYODA-KU, TOKYO, Japan
Tel 03-3212-7808 Fax 03-3212-7802

Available in: Japan



122,000kg-CO ₂ not Inspection	Resource/Materials/Production/ Transfer/Use/End-of-Life
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EP-7-033

Building and civil engineering

manufacturing products

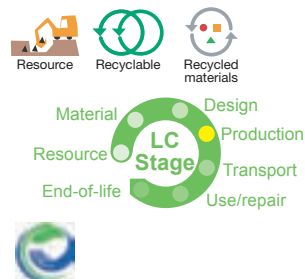
Raised blocks for the blind (SH-1)

Environmental performance

- Recyclable of wasted synthetic resins as raw material
- Recyclable to produce products for other purposes (since only 100% pure synthetic resins are used)

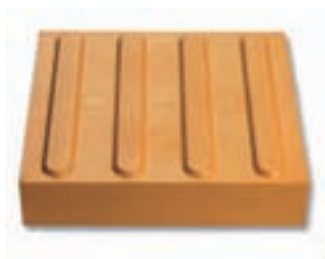
Product performance

Products recycled from available resources, Superior durability



Shinhongjin Co., Ltd.

D-317 Auto Parts Shopping Mall, 952 Dapsimni 2-dong, Dongdaemun-gu,
Seoul, 130-809, Republic of Korea
Tel +82-2-2216-3180 Fax +82-2-2217-5929
E-mail A8114467@CHOL.COM
URL WWW.SHINHONGJIN.CO.KR



Available in: Republic of Korea

Provide walking directions for the blind.

EP-7-034

Building and civil engineering

manufacturing products

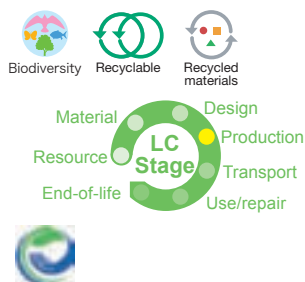
Raised blocks for the blind (SH-4)

Environmental performance

- Recyclable of wasted synthetic resins as raw material
- Recyclable to produce products for other purposes (since only 100% pure synthetic resins are used)

Product performance

Products recycled from available resources, Superior durability



Shinhongjin Co., Ltd.

D-317 Auto Parts Shopping Mall, 952 Dapsimni 2-dong, Dongdaemun-gu,
Seoul, 130-809, Republic of Korea
Tel +82-2-2216-3180 Fax +82-2-2217-5929
E-mail A8114467@CHOL.COM
URL WWW.SHINHONGJIN.CO.KR

Available in: Republic of Korea

Provide stop signal for the blind.

EP-7-035

Building and civil engineering

manufacturing products

Bio-functional floor coatings

Environmental performance

Non-volatile UV coatings using reactive monomer or UV oligomer

Product performance

UV floor coating free of Total Volatile Organic Compounds (TVOC)



Chemical substances



Purification



Bio-functional floor coatings

Noroo Chemicals Co., Ltd.

(#406, 6-BA Shinhwa Industrial Complex) 682-5 Seonggok-dong, Danwon-gu, Ansan-si, Gyeonggi-do, 425-836, Republic of Korea
 Tel +82-31-599-7200 Fax +82-31-599-7217
 E-mail dhlee@noroochem.kr
 URL <http://www.noroochem.kr>
 URL <http://www.noroochem.kr/product/carpentry.asp>

Available in: Worldwide, Republic of Korea

EP-7-036

Building and civil engineering

manufacturing products

Coatings made with natural jade and mud powder

Environmental performance

Water-based colored coatings made with high functional emulsion resin, natural mud and jade.

Product performance

Water-based base coating system free of Total Volatile Organic Compounds (TVOC) and heavy metals



Chemical substances



Purification



Coatings made with natural jade and mud powder

Noroo Chemicals Co., Ltd.

(#406, 6-BA Shinhwa Industrial Complex) 682-5 Seonggok-dong, Danwon-gu, Ansan-si, Gyeonggi-do, 425-836, Republic of Korea
 Tel +82-31-599-7200 Fax +82-31-599-721
 E-mail kykim@noroochem.kr
 URL <http://www.noroochem.kr>
 URL http://www.noroochem.kr/product/carpentry.asp?prod_idx={FF68DF84-530F-4AD9-AE93-E8FA836F9685}

Available in: Worldwide, Republic of Korea

EP-7-037

Building and civil engineering

architectural design services

Mirror-duct System "Energy-saving with bright sunlight"

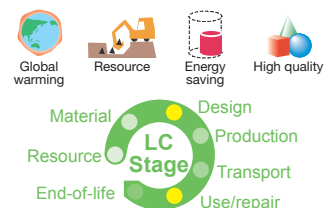
Environmental performance

"Mirror-duct System" can extend daylight deep within interior spaces. The proposed system that we have developed captures natural sunlight from the building exterior and sends it via a highly efficient, light-transmitting ductwork (or tubes) into the building interior, where it is dissipated uniformly and economically throughout the interior. When the exterior light source is deficient due to variations depending on the time of day or seasonal or climatic changes, the system will compensate to 100% requirement by augmenting artificial light with an automatically-controlled dimmer. The proposed system is expected to find widespread application in communal housing, underground spaces, vegetation-cultivating facilities, etc. and above all as a realistic way to drastically cut the energy cost of lighting an office building.

Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en>
 URL <http://www.nikken.co.jp/en/>

Available in: Worldwide



Mechanism of the Mirror-duct System

EP-7-038

Building and civil engineering

architectural design services

NIKKEN SEKKEI Tokyo Building "Prototype Openings for Next Generation Buildings"

Environmental performance

-Technologies

Electric exterior blinds can block solar radiation effectively to reduce a cooling load. Heat-generating double glazing has a transparent metal layer on the inside glass. The glass temperature can be kept warm to prevent cold drafts, and condensation by electric current. Horizontal integration system with Open Network Interface connects automatic controls of the electric exterior blinds, heat-generating glasses and air conditioning on the same floor, and can get interoperability.

Product performance

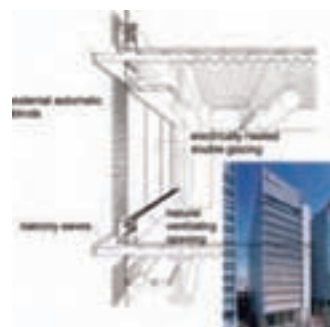
-Features

This system can reduce energy consumption of air conditioning and electric lighting for perimeter zone. Perimeter air conditioning systems are not needed due to enhanced thermal performance. Further, this system creates comfortable space near the window glass and expands the effective working space. The appearance of facades change by angle of exterior blind slats and moving up and down.

Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en/>
 URL <https://www.nikken.co.jp/en/projects/>

Available in: Worldwide



EP-7-039

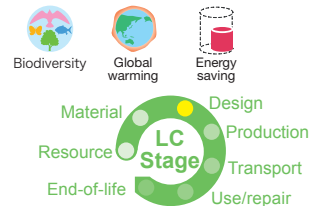
Building and civil engineering

architectural design services

Pola Museum of Art "In harmony with the Existing Topography and Vegetation"

Environmental performance

Pola Museum of Art nestles among the trees in Fuji-Hakone-Izu National Park. We carried out a ten-year project on the theme of how to protect and coexist with the natural environment. The first year, we surveyed the flora and fauna of the site in detail, the position allowed the conservation of all the beech trees. The substructure is hemispherical to avoid interrupting the flow of aquifers. Only indigenous local plants were planted on the site, to avoid bringing in outside strains. Cypress trees that had been planted on the site were felled and seeds gathered on the site were grown into saplings and planted, in an attempt to restore the forest to its underlying vegetation types. The saplings included a variety of beech that only yields seeds once in seven years. As trees grow, they help prevent global warming by absorbing carbon dioxide from the air, storing carbon in trees and soil.



Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en/>
 URL <https://www.nikken.co.jp/en/projects/>



Cross section: The hemispherical substructure was designed to avoid interrupting the flow of groundwater.

EP-7-040

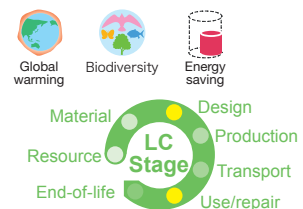
Building and civil engineering

architectural design services

Toyota Institute Global Learning Center "Blending into nature"

Environmental performance

This training facility, standing on a small mountain and surrounded by greenery, is the center of the Toyota Institute. The building was situated with the aim of leaving all of the existing trees standing on the site and using the borrowed scenery of the foliage to create a rich interior environment. The T-shaped building layout conforms to the topography of the site. To minimize excavations and reduce fossil-fuel use and emissions of heavy-construction-equipment and dump trucks, the height difference within the site was exploited. So that the accommodation block has five floors on the west side and three above ground level on the east. The training block and the lecture theater have green roofs that acts as insulation from the sun and wind and can decrease energy consumption of air conditioning, to help prevent Global Warming.



Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en/>
 URL <https://www.nikken.co.jp/en/projects/>



As an environment-themed corporate training facility

EP-7-041

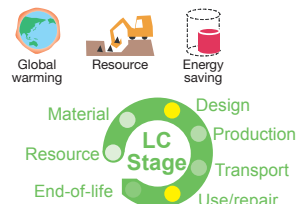
Building and civil engineering

architectural design services

Nakashibetsu Junior High School "Realizing an eco school at -20°C"

Environmental performance

This is an Eco School, achieved without the burden of initial costs through a concentration of everyday technologies. Nakashibetsu has a wide range of temperatures, from -20deg in winter to 30deg in summer, so the reduction of thermal loads was a major theme. Reduced surface area of exterior walls, external insulation, highly-insulating sash windows were employed to enhance the thermal performance of the skin. Two multipurpose rooms with a three storey height were constructed as a way of letting in the heat and light of the sun while protecting the interior from the bitter cold outside, creating a healthy, open space. It also serves as an environmental device, as a path for wind and light. The students and teachers who attend this school have gained a greater awareness of the environment, and an environmentally-friendly kind of development has begun in the town.



Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en/>
 URL <https://www.nikken.co.jp/en/projects/>



The simple building form, exterior insulation and highly-insulative sash windows

Available in: Worldwide

EP-7-042

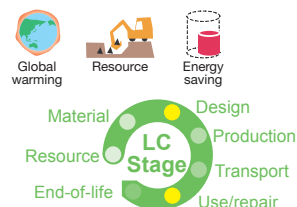
Building and civil engineering

architectural design services

Amami Hospital for Foundation Jiaikai "The Wind Terrace Draws Breezes into the Wards"

Environmental performance

The typical image of a psychiatric hospital is of sealed windows. The aim of this hospital was to make a "healing building," which would enjoy the benefits of Amami's abundant nature. The climate of Amami is subtropical, but there is a pleasant breeze in the shade of the trees. The building has deep eaves to take the strong sunlight gently into the interior. They allow open windows even on rainy days, so that the breeze flows throughout the building. The four wards have big bay windows, called "Wind Terraces." When the bay windows are opened, a natural breeze moves through the day room. Groundwater at a stable year-round temperature of 21deg is used for drinking, and also for cooling outside air. Roof planting and a solar water heating system are among other measures used, with the combined result that energy consumption is 1/3 of the consumption per unit area in a standard hospital.



Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en/>
 URL <https://www.nikken.co.jp/en/projects/>



Available in: Worldwide

EP-7-043

Building and civil engineering

architectural design services

Nippon Life Insurance Company Marunouchi Building "Pursuit of design for permanent use"

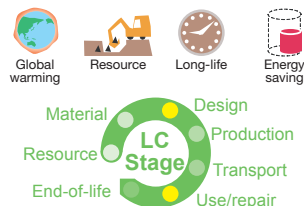
Environmental performance

The extension of building life spans goes beyond structural measures. The designer must take a broader perspective, including consideration for urban scenery, the formation of office spaces able to respond flexibly to social changes, and the pursuit of easy maintenance and efficient replacement of building equipment and services. We wanted to make the exterior appearance of the building something that would be loved long into the future, by considering the historic character of the surrounding urban scenery. The office space on the typical floor has 2,000 m² of flexible, columnless space, with some of the floor panels made detachable, ensuring the freedom to link floors as necessary with added staircases and multi-floor openings. Each floor is equipped with two sets of toilets, so that one set can be used as the other is renewed while the floor remains occupied and in use.

Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en/>
 URL <https://www.nikken.co.jp/en/projects/>

Available in: Worldwide



The floors slabs have removable portions, and each floor has two sets of toilets.

EP-7-044

Building and civil engineering

architectural design services

Izumi Garden Tower: "The Vertical void" is ready for future changes

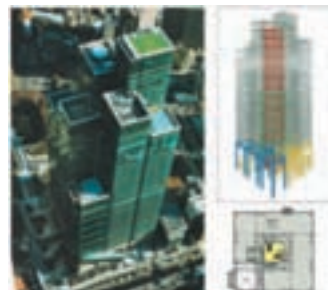
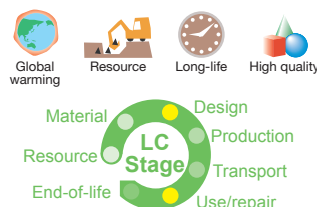
Environmental performance

In an office building it is difficult to reconcile structural elements, which are hard to change, with the routes for a horizontal extension of air conditioning services, and with fast-changing sanitary facilities. There are also limits to the potential for predicting and preparing for future social shifts. This situation led us to propose a new office form, called the "Void Core" for this building. The Void Core takes outside space and inserts it vertically through the center of the office core. This space is used as a route for natural ventilation using the chimney effect, as well as for bringing natural light. It can also be used for future expansion of building service routes, and a temporary elevator route. Thus the Void Core is a sustainable solution for high-rise buildings and can reduce carbon footprints of demolition and new construction.

Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
 Tel +81-3-5226-3030 Fax +81-3-5226-3038
 E-mail webmaster@nikken.co.jp
 URL <https://www.nikken.co.jp/en/>
 URL <https://www.nikken.co.jp/en/projects/>

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The Void Core in the center of the building can be used in many ways, extending the service life of the building.

EP-7-045

Building and civil engineering

architectural design services

I-Garden Air "Joining together city-center greenery"

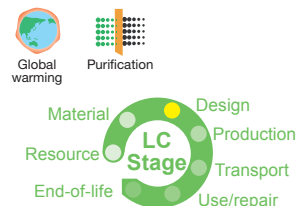
Environmental performance

The government of Japan said that they would promote decarbonization of urban areas through improving the thermal environment by Urban Greening and other heat island countermeasures in the "Kyoto Protocol Target Achievement Plan". The main theme for I-Garden Air, a district developed on the site of the Iidamachi freight station, was to make the new green space of the development into an axis linking the green masses of the nearby Imperial Palace and Koishikawa Korakuen. This attitude to uniting nearby green areas was shared from an early stage with local people, government and businesses as a common development principle, bringing together design concepts for planning and landscaping. As a result, the streets have a unified setback to the building walls, creating a tree-lined pedestrian avenue that extends for 300m.

Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
Tel +81-3-5226-3030 Fax +81-3-5226-3038
E-mail webmaster@nikken.co.jp
URL <https://www.nikken.co.jp/en/>
URL <https://www.nikken.co.jp/en/projects/>

Available in: Worldwide



EP-7-046

Building and civil engineering

architectural design services

Harumi Island Triton Square "Urban Planning & management to cut environmental loads"

Environmental performance

This large-scale urban redevelopment project opened in April 2001. It has achieved an unprecedented reduction in environmental load by considering such reductions over the area as a whole, not just for individual buildings. In this concentrated business and compound zone, it is easy to deploy large scale, high-efficiency equipment, and the energy required for conveying heat can be reduced. The plant for electrical power and the district heating and cooling (DHC) system are centralized and located to achieve a compact equipment infrastructure with short conveyance distances. At the operating stage, management activities are pursued at the district level to cut environmental loads. The end result is a 23% reduction in primary energy consumption, a 36% reduction in mains water usage and a 48% reduction in waste volume in the business and multi-purpose zone.

Nikken Sekkei Ltd

2-18-3 Iidabashi, Chiyoda-ku, Tokyo, 102-8117, Japan
Tel +81-3-5226-3030 Fax +81-3-5226-3038
E-mail webmaster@nikken.co.jp
URL <https://www.nikken.co.jp/en/>
URL <https://www.nikken.co.jp/en/projects/>

Available in: Worldwide



Area energy management achieves a district with high energy efficiency.

EP-7-047

Building and civil engineering

industries unable to classify

Shirasu Balloon Paint - saves energy using the properties of shirasu (volcanic ash sediment) , a natural material from Kagoshima

Environmental performance

Shirasu Balloon Paint features multiple levels of thermal conductivity and solar reflectance that enhance its heat-shielding and insulation properties. Coating roofs and walls with this paint reduces the temperatures of surfaces and their reverse sides by 20 and 10 - 15°C, respectively, enabling the maintenance of a comfortable indoor environment throughout the year and helping to reduce air-conditioning costs as well as CO₂ emissions. Its heat-shield performance has been confirmed in test construction as well as by its use in the field, and calculation examples of its heat shield and insulation effects can also be shown based on figures relating to heat-shield performance, such as heat conductivity and solar reflectance. The product has passed a test involving 3,000 hours of accelerated weathering using a xenon lamp (representing 10 years of weathering).

Product performance

Shirasu Balloon Paint is a water-based substance that uses no paint thinner, and is produced by processing Shirasu - a material produced throughout Kagoshima Prefecture - into Shirasu balloons (hollow bodies). The paint shields and insulates against heat, making it friendly to people, the environment, and buildings. It can also be applied to helmets and sheets as well as buildings to take advantage of its characteristics. In addition to the paint itself, the manufacturer also offers a product called Shirasu Wall - an interior/exterior finishing material with the same properties as Shirasu-based paint that requires no maintenance for a period of 20 years. This product won the 2007 Minister of the Environment Award for Global Warming Mitigation Activities in the Category of Mitigation Technology Introduction and Dissemination.

EARTH KAKEN Corporation

2052 MIYAZAKI CYOU SATSUMASENDAI-CITY KAGOSHIMA, 895-0013,
Japan

Available in: Japan



EP-8-001

Machines and equipment

shellfish and seaweed collecting

Nurturing Algae to Create Bountiful Seashores, the VIVARY SERIES

Environmental performance

The VIVARY SERIES supply to the sea "bivalent iron ions" required for the growth of marine plants.

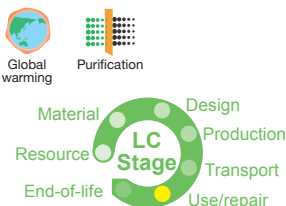
Product performance

Humic-acid iron, which is usually produced in the forest soil by the chelation of "bivalent iron ions" and "humic acid," is formed artificially by utilizing basic-oxygen steelmaking slag and humous soil made by fermenting wood chips and other byproducts. When supplied to seashores, it aids the growth of algae fields.

The VIVARY SERIES are ecological products made using our byproducts alone. The name is derived from "vivarium," a spot in which plants are artificially kept and raised.

Nippon Steel Corporation

2-6-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-6867-2566 Fax +81-3-6867-4999
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



Giant kelp flourished half year after Vivary Series had been buried.

EP-8-002

Machines and equipment

air conditioning system

TEL-CON® Eco-System contributes to energy saving & CO₂ reduction

Environmental performance

TEL-CON® Eco System converts the conventional air-conditioning system to be energy-saving, improving the cooling efficiency and reducing the electric power consumption.

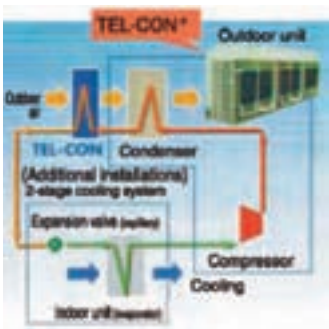
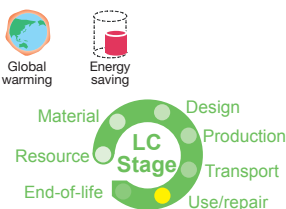
Product performance

TEL-CON® Eco System improves the condensation efficiency of the refrigerant gas, by installing TEL-CON®, additional condenser to the condenser of outdoor unit of the air-conditioner.

1. Improvement in cooling efficiency : 5-10%
Without replacing the existing refrigerant (e.g. R22), the efficiency degraded by aging or malfunction can be recovered, improving cooling efficiency and reducing CO₂ emission as well.
2. Reduction in electric power consumption : 15-25%
A reduction in electric power consumption is attained by replacing the R22 with mixed refrigerant mainly containing R134a. The air-conditioners demonstrate an energy-saving effect while in cooling mode in summer and heating mode in winter.

TEIJIN ENGINEERING LIMITED

1-6-7 Minami-Hommachi, Chuo-ku, Osaka, 541-8587, Japan
Tel +81-6-6268-2353 Fax +81-6-6268-2238
E-mail se.saeki@teijin.co.jp
URL <http://www.teijin-eng.jp/telcon.html>



TEL-CON® Eco System

EP-8-003

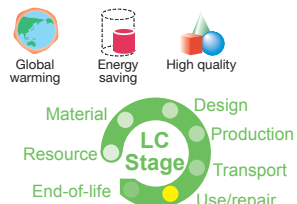
Machines and equipment

machine and equipment installation work

Clathrate Hydrate Slurry (CHS) Heat Storage Air-conditioning System

Environmental performance

Using clathrate hydrate slurry instead of water, the Clathrate Hydrate Slurry (CHS) Heat Storage Air-conditioning System is a cooling system with excellent energy saving effects. This system substantially reduces power consumption and thereby contributes to global warming prevention. The Kawasaki shopping mall "Azalea" is one of our major clients who have adopted this system. As a form of energy conservation technology created in Japan, it was awarded the Prime Minister Prize in 2006 and the Nikkei Global Environment Technology Prize in 2007.



JFE Engineering Corporation

2-6-2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan
 Tel +81-3-3516-7300 Fax +81-3-3516-7345
 URL <http://www.jfe-eng.co.jp/>



EP-8-004

Machines and equipment

furnace construction work

Babcock & Wilcox Volund Wood Biomass Gas-fired Power Generation System

Environmental performance

Combining gasification furnace and gas engine, this system efficiently generates power from carbon-neutral biomass. It has realized a comprehensive energy utilizing efficiency rate as high as 80% or more by not only generating power but also utilizing heat.



JFE Engineering Corporation

2-6-2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan
 Tel +81-3-3516-7300 Fax +81-3-3516-7345
 URL <http://www.jfe-eng.co.jp/>



EP-8-005

Machines and equipment

conveyor rubber belts

Energy-saving belt "BEATRON"

Environmental performance

In the operation of a conveyor belt, energy consumption grows by the roll over resistance generated when the belt passes over the rollers. Energy-saving belt "BEATRON" can decrease the roll over resistance by uniting the optimization design of the rubber viscoelasticity and the HELLO theory (the theory of optimized belt design). As a result, about 30% and more energy-saving has been verified when applied to an actual long distance conveyor line.

※ The efficiency value depends on the specification of conveyor and term of use.



Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan
Tel +81-3-5202-6851 Fax +81-3-5202-6854
URL <http://www.bridgestone.co.jp/english/index.html>



Energy-saving belt "BEATRON"

EP-8-006

Machines and equipment

optical fiber cord, including core wire

GE-PON system uses optical fiber to realize high-speed broadband communications

Environmental performance

-----<< Material / Resource saving >>-----

Significant reduction in use of virgin material through product size reduction and elimination of metal as a material.

Reductions from our previous model are following.

Iron components: 0.046kg to 0kg

Aluminum: 0.306kg to 0kg

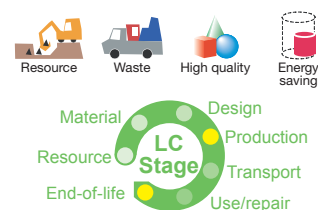
Plastic: 0.5kg to 0.133kg

-----<< Energy saving >>-----

Reduced electricity consumption 65% compared to previous product by eliminating use of a high-electricity-consumption part (FPGA).

-----<< Toxicity / Chemical substances reduction >>-----

Complies with RoHS Directive adopting lead-free solder.

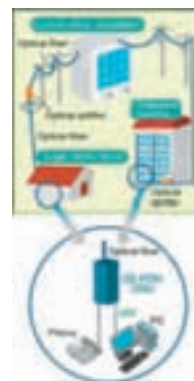


Product performance

The GE-PON system uses optical circuits to realize high-speed broadband communications. The GE-PON-ONU is installed in households and attached to an optical fiber cable as a terminal device.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
Tel +81-3-3218-9024 Fax +81-3-3218-2465
E-mail eqd.eco@pj.mitsubishielectric.co.jp
URL <http://global.mitsubishielectric.com/index.html>
URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
URL <http://global.mitsubishielectric.com/company/csr/index.html>



GE-PON ONU

Available in: Japan, Republic of South Africa, Thailand

EP-8-007

Machines and equipment

steam turbines

Power Generation System Using Ultra-high-temperature Steam Achieves Dramatic Energy Saving

Environmental performance

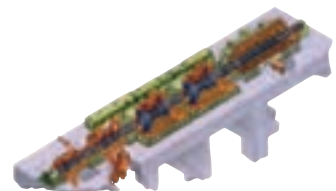
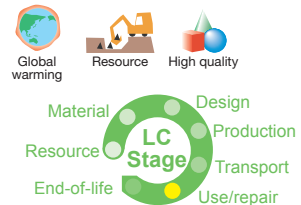
- Mitigation of climate change: Dramatic energy saving owing to a 20% improvement in thermal efficiency.
- Efficient use of resources: The turbine system is fueled by coal, an abundant resource, which it uses very efficiently to generate power.
- Management of chemicals: Reductions in emissions of CO₂, NO_x, SO_x and soot.

Product performance

- High efficiency: High-temperature steam improves thermal efficiency, dramatically reducing fuel consumption. Use of high-temperature-resistant materials enables the use of high-temperature steam.
- Miniaturization: Downsizing of turbine auxiliaries thanks to reduced fuel consumption.

TOSHIBA CORPORATION Power Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 Tel +81-3-3457-3613 Fax +81-3-5444-9238
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Advanced ultra-super-critical steam turbine (A-USC)

EP-8-008

Machines and equipment

parts of steam engines, turbines and water wheels

Small-scale Hydro-power Generation System Hydro - eKIDS™ Using Renewable Energy

Environmental performance

- Mitigation of climate change: In comparison with fossil-fuel power generation, the consumption of resources and the discharge of CO₂ are suppressed. Because of small-scale hydraulic power generation, the system can be applied to places where hydraulic energy is available. Considered is the utilization of water and sewage, agriculture water, factory waste water, and water discharged from river dams, resulting in the reduction of greenhouse gases and the saving of energy. The system can be used as a dispersed power source, and it can contribute to the reduction of greenhouse gas and the saving of energy.
- Efficient use of resources: The system does not need a conventional large-scale dam, so the river environment and the natural ecosystem are not influenced.

Product performance

Brief specifications are as follows: the flow rate, 0.03m³/s~3.5m³/s; the head, 2~15m; the output, 1~200kw. Five kinds of standard units cover wide application ranges. Because of a small, lightweight pipe-in structure, the units are easily placed even in a small space. The features are a cheaper running cost and longer life than other large-scale power sources, so the economical efficiency will be displayed for long-term use.



Hydro-eKIDS S type

TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

36-5, Tsurumichuo 4-chome, Tsurumi-Ku, Yokohama, 230-8691, Japan
 Tel +81-45-500-7342 Fax +81-45-500-7599
 URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-8-009

Machines and equipment

elevators

Machine Room-Less Elevator AXIEZ

Environmental performance

- << Material / Resource saving >>-----
- Reduced the weight of car equipment (Car floor: Approx. 20 kg; Car balustrade: Approx. 5 kg; Counterweight: Approx. 25 kg)
- Employed corn-based plastic for part of the car control panel.
- << Energy saving >>-----
- Switched to LED for lighting in car to extend lamp life, and reduced electricity consumption by up to 50%.
- Use regenerative electric power to reduce electricity consumption by about 20%. (When equipped with the optional "Ele-save" package)
- << Toxicity / Chemical substances reduction >>-----
- RoHS-compliant parts and materials are used. (Six varieties of Pb-free substrates and hexavalent-chromium-free plating are used.)
- Reduced usage of toluene, xylene and other atmospheric and soil contaminants.
- In compliance with sick-house laws and regulations. Reduced substances regarded as being harmful to below standard levels in an elevator. Reduced formaldehyde concentrations to levels below the standard of 100 $\mu\text{g}/\text{m}^3$.

Product performance

This is a machine room-less resource- and space-saving elevator.
The conventional model is sophisticated and enhanced to meet diversified needs. In addition, to provide greater construction and design freedom, we reduced the amount of space necessary for elevator shafts.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
Tel +81-3-3218-9024 Fax +81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://global.mitsubishielectric.com/index.html>
URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



AXIEZ Series P9-CO-60,6stop

EP-8-010

Machines and equipment

elevators

Elevator Without Machine Room for Safety and Energy Saving

Environmental performance

- Mitigation of climate change: Life span 8 times longer than that of the previous model and a 10% reduction in lighting power consumption.
- Management of chemicals: Elevator floor is made of resin that does not generate harmful gases when incinerated. Abolition of the use of lead for wire rope terminals.

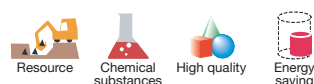
Product performance

- Earthquake countermeasures: Prevention of locking in and the provision of information for enhanced safety and security.
- "Attentive" door: "Attentive" door system to ensure safety during entering and exiting the elevator.
- Safe and easy: Advanced universal design for ease of use.

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

5-27, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo, 141-0001, Japan
Tel +81-3-5423-3330 Fax +81-3-5423-3425
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www2.toshiba-elevator.co.jp/elv/infoeng/index.jsp>

Available in: Japan



ElevatorNEW SPACEL-EX

EP-8-011

Machines and equipment

elevators

Quick Elevator Refurbishment Thanks to Addition of New Control Panel

Environmental performance

- Mitigation of climate change: Reduction in power consumption due to the change from conventional AC feedback control to inverter control.
- Efficient use of resources: Possible to perform refurbishment work without removing the existing motor, hoist, car, and platform facilities. Elimination of unnecessary replacement for the efficient utilization of existing resources.

Product performance

- Short work period: Reduced time required for transport and replacement work because of the division of the control panel into compact units.
- Reduced frequency of trouble: Change from a relay system to a microcomputer controlled system brings enhanced reliability as there are fewer replacement parts.
- Remote surveillance: Remote surveillance for 24 hours x 365 days.



Elevator Control Board Refurbishment CV260RN

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

5-27, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo, 141-0001, Japan
 Tel +81-3-5423-3330 Fax +81-3-5423-3425
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www2.toshiba-elevator.co.jp/elv/infoeng/index.jsp>

Available in: Japan

EP-8-012

Machines and equipment

elevators

TOSHIBA COMPACT MACHINE ROOM ELEVATORS ELCOSMO

Environmental performance

- Wide variety of newly developed LED lightings are available. LED lighting realizes mercury free, energy-saving and long life. The electric consumption fall about 85% and the product life time will be increased 20 times. Therefore the LED lighting reduces CO₂ emission. (Adopted in new car design SL-1, SL-2, SL-3, and TL-1)

Product performance

The top class compact machine room elevator ELCOSMO has been developed based on Toshiba's accumulated experience of sophisticated PMSM technology as typified by the world's fastest elevator*. ELCOSMO offers layout flexibility, space saving, energy saving and wide line-ups. ELCOSMO is well-suited to all type of buildings by the compact designed compact machine room elevator.

* Dec.2004 Press release - Jan.2011



TOSHIBA COMPACT MACHINE ROOM ELEVATORS ELCOSMO

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

5-27, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo, 141-0001, Japan
 Tel +81-3-5423-3332 Fax +81-3-5423-4465
 URL <http://www.toshiba-elevator.co.jp/elv/infoeng/index.jsp>
 URL http://www.toshiba-elevator.co.jp/elv/infoeng/about/csr_vision.jsp

Available in: Middle and Near East, Indonesia, Singapore, Thailand, Philippines, Malaysia, Mexico, China

EP-8-013

Machines and equipment

elevators

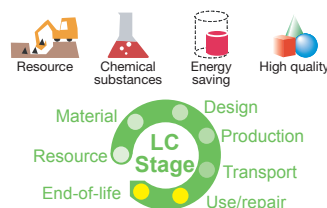
TOSHIBA MACHINE-ROOM-LESS IELEVATORS SPACEL-UNI**Environmental performance**

- Wide variety of newly developed LED lightings are available. LED lighting realizes mercury free, energy-saving and long life. The electric consumption fall about 85% and the product life time will be increased 20 times. Therefore the LED lighting reduces CO₂ emission. (Adopted in new car design SL-1, SL-2, SL-3, and TL-1)

Product performance

The top class machine-room-less elevator SPACEL-UNI has been developed based on Toshiba's accumulated experience of sophisticated PMSM technology as typified by the world's fastest elevator*. SPACEL-UNI offers layout flexibility, space saving, energy saving and wide line-ups.

* Dec.2004 Press release - Jan.2011



TOSHIBA MACHINE-ROOM-LESS IELEVATORS SPACEL-UNI

TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

5-27, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo, 141-0001, Japan

Tel +81-3-5423-3332 Fax +81-3-5423-4465

URL <http://www.toshiba-elevator.co.jp/elv/infoeng/index.jsp>

URL http://www.toshiba-elevator.co.jp/elv/infoeng/about/csr_vision.jsp

Available in: Middle and Near East, Indonesia, Singapore, Thailand, Philippines, Malaysia, Mexico, China

EP-8-014

Machines and equipment

escalators

Eco Consucious Designed Escalator**Environmental performance**

----<< Material / Resource saving >>----

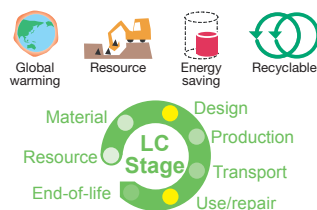
- Scale down of the truss chords and other parts has resulted in overall weight reduction.
- Recyclable thermoplastic polyurethane handrails and rollers were installed.

----<< Energy saving >>----

The adoption of an automatic operation function helps make the escalator more energy efficient. A line of VVVF inverter-based products that stop or slow down when not in use has been prepared. And variable speed functionality results in expanded application for automatic operation functions.

----<< Toxicity / Chemical substances reduction >>----

- ROHS-compliant parts and materials are positively used. (hexavalent chromium-free plating are used.)
- Reduced usage of toluene, xylene, and other atmospheric and soil contaminants.



Escalator ZJ-S

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.mitsubishielectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan, Worldwide

EP-8-015

Machines and equipment

chiller

Eco Cooling Mat

Environmental performance

Eco Cooling Mat is a cooling support system for many kinds of outdoor units. (refrigerator/remote-condenser/chiller/EHP/GHP)

Tap water is sprinkled over the cooling mat, and then intake air gets cooled when it goes through the mat.

What the Eco Cooling Mat brings (at EHP 10HP)

*Energy saving:

High side pressure reduction and freezing/air cooling-ability increased by through the mat gives a 25% cut.

*CO₂:

2.2 tons/year of CO₂ emissions can be cut. (the electricity conversion value)

*Reducing "Heat-Island Effect":

The discharged air is 3-4°C cooler through the cooling mat.

Product performance

The mat also works as a filter for the protection of fins against dust, exhaust gas, etc.

FUJIKOKI CORPORATION

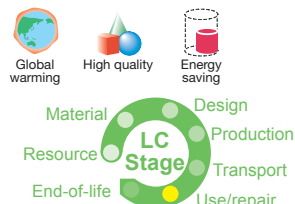
7-17-24, Todoroki, Setagaya-ku, Tokyo, 158-0082, Japan

Tel +81-3-3702-5141

URL <http://www.fujikoki.co.jp>

URL http://www.fujikoki.co.jp/en/product/ot/pr_ot_mat.html

Available in: Japan



EP-8-016

Machines and equipment

chiller

Energy-saving Condensing Unit Suitable for Various Refrigeration Systems

Environmental performance

- Mitigation of climate change: 40% improvement in COP compared with the conventional non-inverter model.
- Efficient use of resources: 11% reduction in the weight of raw materials: 15% reduction in steel sheet and 8% reduction in copper tubing.
- Management of chemicals: Adoption of lead-free soldering and chromium-free steel sheet plating.

Product performance

- Optimum operation: Combination of a rotary compressor and inverter achieves all-around high efficiency operation from the low-rotation to high-rotation range.
- Low noise: Noise value is reduced by 4dB from the previous model and operation is extremely quiet. Standard features include four control modes to suit different systems.

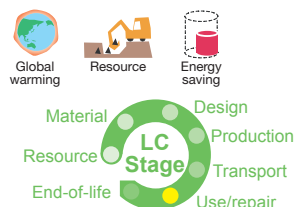
Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan

Tel +81-3-6409-1735 Fax +81-3-5447-8101

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>



Out-door Inverter Condensing Unit
TAM131AM-SV TAM201AM-SV TAM351AM-SV

EP-8-017

Machines and equipment

chiller

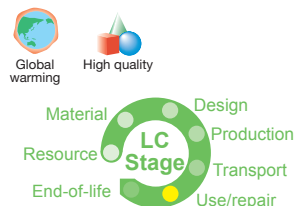
Adsorption Chiller making a cold water at a low cost**Environmental performance**

This is a chemical refrigeration compressor using one of the NWFs, H₂O and adsorbent. It can produce chilled water from the low grade heat source of less than 75 degrees Celsius. Main body does not require electricity. In addition, the maintenance cost is nearly negligible.

Mayekawa Mfg.Co.,Ltd.

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan
 Tel 81-3-3642-8181 Fax 81-3-3643-7094
 E-mail pubic@mayekawa.co.jp
 URL <http://www.mayekawa.co.jp>

Available in: Japan



Adsorption Chiller

EP-8-018

Machines and equipment

chiller

Air refrigeration system, "Pascal Air"**Environmental performance**

Air is the ultimate NWF from the viewpoint of safety and environment. This is the latest refrigeration system which uses air as a refrigerant. The major feature is to suck the air in the refrigerated room, and to lower the temperature of sucked air by compressing and expanding, and then to burst out into the refrigerated room again. High coefficient of performance is realized by the expander integrated turbo-compressor, and 50% energy saving can be fulfilled compared with the former system.

Mayekawa Mfg.Co.,Ltd.

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan
 Tel 81-3-3642-8181 Fax 81-3-3643-7094
 E-mail pubic@mayekawa.co.jp
 URL <http://www.mayekawa.co.jp>

Available in: Japan



Pascal Air

EP-8-019

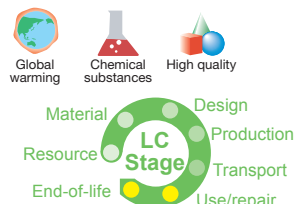
Machines and equipment

chiller

Hybrid cooling unit

Environmental performance

This is a hybrid cooling unit with one of the NWFs, NH3 which is equipped with a IPM motor and a semi-hermetic type compound screw compressor which is proud of world's best coefficient of performance (COP). It is optimum for the re-modeling and the renewal of the existing refrigerated warehouses and/or the food processing factories.



Mayekawa Mfg.Co.,Ltd.

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan
 Tel 81-3-3642-8181 Fax 81-3-3643-7094
 E-mail pubic@mayekawa.co.jp
 URL <http://www.mayekawa.co.jp>



Available in: Japan

NewTon3000

EP-8-020

Machines and equipment

chiller

Highly-efficient, Energy-saving, Space-saving Chiller with Greatly Increased Cooling Capacity for Quick Installation

Environmental performance

- Mitigation of climate change: 15% reduction in primary energy consumption compared with the benchmark model thanks to improved efficiency.
- Efficient use of resources: 40% reduction in weight resulting in a reduced amount of materials used. 98.4% of the materials are recyclable.

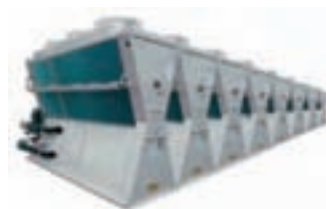
Product performance

- Large capacity: 60% or 45% improvement in cooling capacity compared with the standard specifications and the high-efficiency specifications, respectively.
- Modular design: 50% reduction in carbon footprint thanks to a space-saving modular structure.
- Built-in circulation pump: Quick installation and reduced transfer power due to variable flow rate control according to the load.



Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan
 Tel +81-3-6409-1735 Fax +81-3-5447-8101
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>



Air-cooled Super Flex ModularChiller,
RUA-TBP S series

EP-8-021

Machines and equipment

chiller

Highly-efficient, Compact Chiller with Greatly Increased Cooling Capacity

Environmental performance

- Mitigation of climate change: 31% reduction in primary energy consumption compared with the benchmark model thanks to improved efficiency.
- Efficient use of resources: 46% reduction in weight resulting in a reduced amount of materials used. 99.9wt% of the materials are recyclable.
- Management of chemicals: The exterior is largely uncoated, resulting in a reduced use of volatile organic compounds (VOC).

Product performance

- Large capacity: 58% improvement in cooling capacity compared with the previous model of the same size in the series.
- Ease of installation: Modular structure with each module sufficiently compact for transportation in an 11-passenger-class elevator.
- Ease of use: Batch control available using a touch-panel computer.

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan
 Tel +81-3-6409-1735 Fax +81-3-5447-8101
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba-aircon.jp/aboutus/emvirement.htm>



Water-cooled Super Flex Modular Chiller,
Type-VRUW-TBP S series

EP-8-022

Machines and equipment

chiller

High-efficiency Heat Pump Chillers for Factories and Office Buildings

Environmental performance

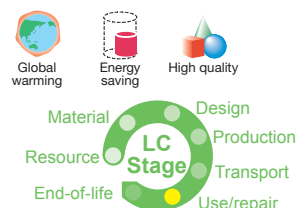
- Air-cooled heat pump chillers, suitable for large-scale air conditioning tasks, such as office buildings, factories and hospitals.
- Scroll compressors and DC inverter motors for fan drive achieve control with high load responsivity, to save energy.
- The air side heat exchangers are hexagonal, which expands surface area, saves energy and also saves space through layout efficiency.

Product performance

- Unique integrated control system "ZU:NOS" can optimize control of up to 20 units to suit air conditioning load. Large-capacity units can be linked together up to a maximum of 800hp, with the units controlled to operate in rotation for longer lifespans.

DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL http://www.daikin.com/global_ac/products
 URL <http://www.daikin.com/csr>



Available in: Japan

HEXAGON

EP-8-023

Machines and equipment

chiller

Chiller

Environmental performance

- Innovative technologies are applied for the design and development of the compressor, refrigerant cycle, and chiller itself to realize this R410A screw chiller. R410A refrigerant and optimized design of equipment for R410A achieved COP value dramatically improved to become more than 5.1 for all models.

Product performance

- Hitachi has succeeded to introduce R410A refrigerant in all its range of products, ranging from room air-conditioners, package air-conditioners to currently released SCREW CHILLER. Using R410A refrigerant, the cooling capacity per unit volume were increased. It makes the system compact and achieves less impact on the environment.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
Tel 81-3-3502-2111 Fax 81-3-3506-1442
URL <http://www.hitachi-ap.com/>

Available in: Asia (Except for 60Hz Market such as Korea, Philippines and Taiwan)

RCUA-WHYZ



EP-8-024

Machines and equipment

air conditioners

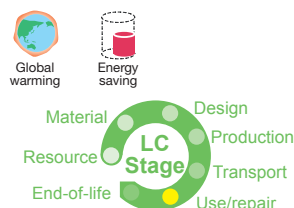
High performance, energy-saving air conditioner

Environmental performance

Daikin's SkyAir Inverter series have launched a new line up achieving High COP.

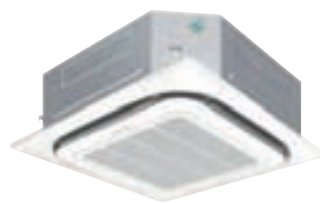
The outdoor unit is equipped with Reluctance DC scroll compressor, Aero Spiral Fan, DC Fan Motors, and Super Aero Grille as the latest energy saving technologies.

The ceiling mounted cassette type (Round Flow) indoor unit which delivers 360-degree airflow brings out uniform temperature distribution and a comfortable living environment even if the setting temperature is raised by just 1 deg C in cooling.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
Tel +81-6-6374-9304 Fax +81-6-6373-4380
E-mail kankyo@daikin.co.jp
URL <http://www.daikin.com>
URL http://www.daikin.com/global_ac/products
URL <http://www.daikin.com/csr>



Sky Air Inverter series

EP-8-025

Machines and equipment

air conditioners

Gas engine heat pump air conditioner equipped with power generator

Environmental performance

It realizes air conditioning and power generation simultaneously. A compressor driven by a gas engine provides space heating/cooling and an engine generates electricity supplied to air conditioner pumps and buildings. It exercises a maximum rated capacity of 3 to 4 kW and supplies 2 to 3 kW of electricity per outdoor unit in the building. With its high energy-saving features, this system contributes to cutting electricity consumption in the peak hours of electricity demand.

CO₂ emission reduction: 24%*

Electricity consumption saving: 29%*

*Compared to an electric heat pump with equivalent air-conditioning capacity, powered by grid electricity.

Product performance

It boasts the industry-leading seasonal efficiency(*1), reaching 1.86, and the generating efficiency (LHV(*2)), 44%, exceeds the average generating efficiency at the consuming end of thermal power plants in Japan, 40%.

*1 Annual Performance Factor (primary energy base): rate of air conditioning capacity of consumed energy on a year-round operation under certain conditions.

*2 LHV: Lower Heating Value. The amount of heat generated by complete combustion of the combustion gas, minus the latent heat of vaporization of the water vapor generated in the process.

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL http://www.osakagas.co.jp/csr_e/index.html

Available in: Japan



High Power Excel

EP-8-026

Machines and equipment

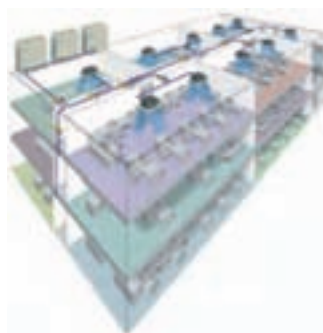
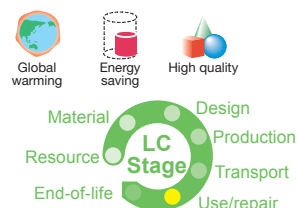
air conditioners

High performance, energy-saving air conditioner

Environmental performance

To respond precisely to customer needs, a lineup of outdoor units is available with power ranging from 5 to 54 HP. Up to 64* indoor units can be individually controlled in a single refrigerant tubing system. The system also can air condition each room individually, which is ideal for the constantly changing occupancy of a typical building.

* Using 40-54 HP outdoor units.



VRV III Series

DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan

Tel +81-6-6374-9304 Fax +81-6-6373-4380

E-mail kankyo@daikin.co.jp

URL <http://www.daikin.com>

URL http://www.daikin.com/global_ac/products/

URL <http://www.daikin.com/csr>

EP-8-027

Machines and equipment

air conditioners

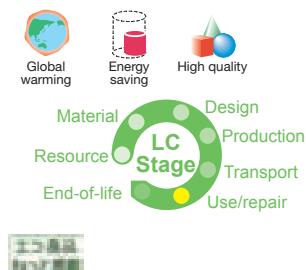
High performance, energy-saving air conditioner

Environmental performance

A special version of the VRV III for small offices and shops. Daikin have remodeled the acclaimed VRV III system aiming to provide the precise power and compactness.

Product performance

VRV III-s is a system for the needs of small office and shops.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL http://www.daikin.com/global_ac/products
 URL <http://www.daikin.com/csr>

Available in: Outside Japan only

VRV III-S Series



EP-8-028

Machines and equipment

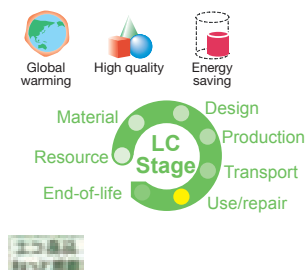
air conditioners

High performance, energy-saving air conditioner

Environmental performance

A water-cooled intelligent individual air conditioning system which is suitable for tall multi-storied buildings.

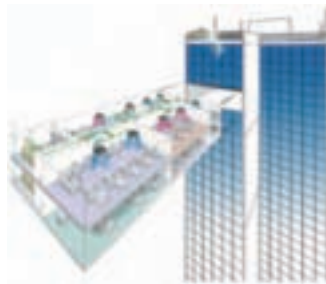
Water-cooled VRV II is an individual air conditioning system that utilizes water as a heat source. In this unique system, water is piped from a cooling tower or boiler to the VRV-WII (which is the equivalent of the outdoor unit of an air cooled conditioning system) and after heat exchange, refrigerant is piped from the VRV-WII to each indoor unit.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL http://www.daikin.com/global_ac/products
 URL <http://www.daikin.com/csr>

VRV-WII



EP-8-029

Machines and equipment

air conditioners

Multi System CDU for Building with All-Inverter Compressor

Environmental performance

- Mitigation of climate change: Our efforts to improve efficiency exceeded the standard set for 2015 Annual Performance Factor (APF) in 12HP and larger sizes.
- Efficient use of resources: 7% reduction in quantity compared to our conventional model. As for 1

Product performance

- Energy-saving: The use of the new DC compressor and the Intelligent VRF controller, etc. has contributed to achieving one of the highest APF in the industry.
- About 40% reduction in footprint in case of connecting units: Achieved by the new line-up in 14 and 16HP with 3 compressor and 3 inverters.
- More flexible design: About 25% increase in longest piping length and 40% increase in total piping length.

Toshiba Carrier Corporation

3-23-17 Takanawa, Minato-ku, Tokyo, 108-0074, Japan

Tel +81-3-6409-1735 Fax +81-3-5447-8101

URL <http://www.toshiba.co.jp/index.htm>URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>

Air conditioning Modular system in business use 'Super Module Multi'

EP-8-030

Machines and equipment

air conditioners

Highly Efficient, Energy-saving Air-cooled Heat Source Unit for Wide-ranging Temperatures - Only Small Footprint and Installation Work Needed

Environmental performance

- Mitigation of climate change: 65% reduction in CO₂ emissions compared to absorption chillers.
- Efficient use of resources: 15% reduction in the product weight per refrigeration capacity, has contributed to reducing the use of raw materials. 98% of the materials used are recyclable.

Product performance

- High performance: With 6.3 COP for cooling, energy-saving operation in wide-ranging temperatures, such as 25°C hot water or 30°C chilled water, was achieved.
- Modular configuration: Can be connected upto 96 units. The modular connection method for saving space reduces 58% of the footprint.
- Built-in Circulation Pump: Successfully reduced installation work and transportation power by variable flow control depending on the required load.

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan

Tel +81-3-6409-1735 Fax +81-3-5447-8101

URL <http://www.toshiba.co.jp/index.htm>URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>

Air-cooled HP Chiller, Universal Smart X : RUA-SP series

EP-8-031

Machines and equipment

air conditioning and household equipment

Energy-conserving air conditioning system for data centres "Ref Assist"

Environmental performance

This energy-conserving air conditioning system combines a cooling system using outdoor air and a natural refrigerant circulation system without transport power. It cools the heated air down with the Spot cooling units (Rear Door Type and Ceiling Unit Type) attached to IT Racks and reduces the electrical power consumption by over 60%* compared to a conventional system.

* Our calculated figure: For using a combination of the system (chilled water-refrigerant heat exchanger, spot cooling units) and the high-efficiency heat sources, free cooling system.

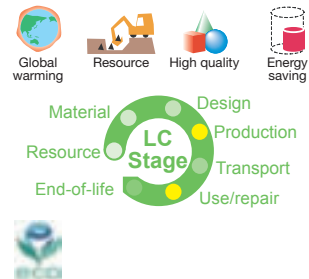
Product performance

Type	Cooling Capacity	Air-Volume flow	Power Consumption	Width	Height	Depth	Weight
Rear Door	10kW	2000m ³ /h	230w	594mm	1,995mm	164mm	85kg
Ceiling	15kW	3000m ³ /h	700w	565mm	600mm	1,400mm	120kg

Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan
 Tel (81)3-5928-8100 Fax (81)3-5928-8701
 URL <http://www.hitachi-pt.com>
 URL http://www.hitachi-pt.com/products/ac/building_system/datacenter/cool_circulation.html
 URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Japan, Asia, Europe, Middle and Near East



a natural refrigerant circulation system

EP-8-032

Machines and equipment

air conditioning and household equipment

OH Saver (Optimized HVAC Control Systems for Energy Saving)

Environmental performance

A 20% reduction in energy usage was achieved by using enhanced software, which improves the efficiency of the Primary Source System and the Secondary System. (in-house comparison)

*The figure is based on the optimization test result conducted at our in-house facility (2000RT turbo chiller)

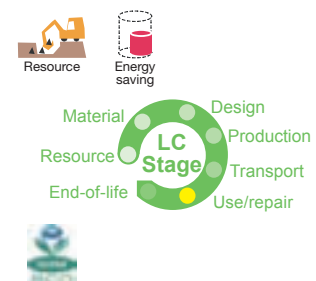
Product performance

During the design stage, total system parameters are simulated to assist in obtaining the high energy saving. on any air-conditioning configuration.

Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan
 Tel 81-3-5928-8100 Fax 81-3-5928-8701
 E-mail koho-senden@hitachi-pt.com
 URL <http://www.hitachi-pt.com>
 URL <http://www.hitachi-pt.com/products/ac/building/ohsaver.html>
 URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Japan



System configuration

EP-8-033

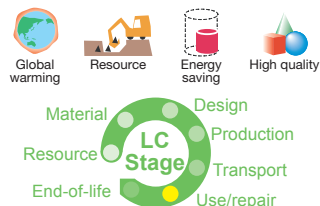
Machines and equipment

air conditioning and household equipment

Freezing/refrigerating/air-conditioning system

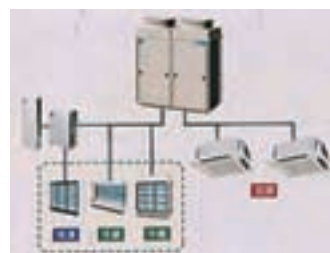
Environmental performance

This system achieves an energy reduction for convenience stores by integrating the freezer and refrigeration showcases with an air-conditioning system. It achieves a 50% reduction in annual energy consumption compared with existing systems by using exhausted heat from freezing, refrigerating, and air conditioning into one system provides resource-savings.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
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 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL <http://www.daikin.com/csr>



CONVENI-PACK

EP-8-034

Machines and equipment

air conditioning and household equipment

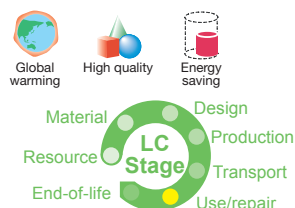
Energy- and Money-saving Heat Pump Hot Water Supply Unit Suitable for Buildings in Various Scale.

Environmental performance

- Mitigation of climate change: Compared to conventional hot water supply system, namely, the boiler, this highly efficient Heat Pump hot water supply system generates only half of CO₂ emissions, and reduces its operating cost approximately to one-third.

Product performance

- Simple installation: Drastic improvement in piping and wiring was achieved compared to our conventional model.
- Energy-saving operation: The multi-function remote controller enables different settings required by various industries to achieve energy-saving operation.
- Optimum system: The system allows upto 8-unit connection to satisfy different applications and wide-ranging hot water demands (1 to 27 tons).



Toshiba Carrier Corporation

Shinagawa Center Building, 23-17, Takanawa 3-chome, Minato-ku, Tokyo, 108-0074, Japan
 Tel +81-3-6409-1735 Fax +81-3-5447-8101
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba-aircon.jp/aboutus/emviment.htm>



Heat Pump Water Heater for Commercial Use "Hot Power Eco BIG II"

EP-8-035

Machines and equipment

air conditioning and household equipment

Bathroom Ventilation Dryer for Drying Clothing with Reduced Power Consumption

Environmental performance

- Mitigation of climate change: Includes an eco-drying mode that minimizes the time that electricity is supplied to the heater for drying clothes. This is controlled by changing the temperature of the air sent to the bathroom. The amount of electricity used has been reduced to 1/3 in comparison with that of the standard drying mode.

Product performance

Since the revised Building Standards Act, which considered sick-house syndrome, was executed in July 2003, the role of ventilation systems has varied from local ventilation to ventilation of the whole house. The carrier group in Toshiba developed the bathroom ventilation drier, "Bath Dry" which can ventilate not only bathrooms, but also other rooms.

Toshiba Carrier Corporation

3-23-17 Takanawa, Minato-ku, Tokyo, 108-0074, Japan

Tel +81-3-6409-1735 Fax +81-3-5447-8101

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba-aircon.jp/aboutus/emvirement.htm>



Global warming



Energy saving



DVB-18STD2

EP-8-036

Machines and equipment

air conditioning and household equipment

Non-fluorocarbon type energy saving air-conditioning system

Environmental performance

This is a heat pump system using one of the NWFs, HC i.e. hydrocarbons. By using mixed hydrocarbons, it enables to do high efficient operation for cooling, heating and hot water supply.



Global warming



High quality



HC2008HP

Mayekawa Mfg.Co.,Ltd.

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan

Tel 81-3-3642-8181 Fax 81-3-3643-7094

E-mail pubic@mayekawa.co.jp

URL <http://www.mayekawa.co.jp>

Available in: Japan

EP-8-037

Machines and equipment

general valves and cocks

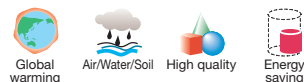
Bellows Valves**Environmental performance**

These valve products are available in a wide range of materials, including ductile cast iron, stainless steel, cast steel and forged steel, and are suitable for a broad array of applications. Hitachi Valves' bellows valves prevent leaks of various types of fluids, including steam, general gas, stench gas and corrosive gas, thereby saving energy, protecting people from hazardous substances and contributing to a better environment.

Hitachi Valve, Ltd.

200 Obuke, Asahicho, Mie-gun, Mie, 510-8102, Japan
 Tel 81-59-377-4711 Fax 81-59-377-2714
 URL <http://www.hitachi-valve.co.jp/english/>
 URL <http://www.hitachi-valve.co.jp/english/product/product.htm>

Available in: Worldwide



Malleable Bellows Valve

EP-8-038

Machines and equipment

demisters

MIST ELIMINATOR, DEMISTER, TOWER PACKING MESH PAD TYPE, CHEVRON TYPE**Environmental performance**

We provide "Mist Elimination equipment" for gas-liquid separation, liquid-liquid separation as well as vapor flow conditioning devices, for a broad base of petrochemicals, power generation, pulp & paper, refining and sulfuric acid.

we offer a complete line of products including "Wire Mesh", "Chevron", "Coalescers", "Fiberbed and Gas distribution devices for applications such as Absorption Tower, Scrubber, Knockout drums, Evaporators, Pollution control and general mist elimination.

Products are available in a wide range of metals (stainless steel), plastics (P.P, P.E), alloy (Monel), etc.

DAE SHIN DEMISTER CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX (45BLOCK 6LOT), 435-6 NON-HYUN DONG, NAM-DONG GU, INCHEON, 405-848, KOREA
 Tel +82-32-814-0211 Fax +82-32-814-0213
 E-mail dsdemister@naver.com
 URL www.dsdemister.com



CHEVRON TYPE (BAFFLED MIST ELIMINATOR)

EP-8-039

Machines and equipment

demisters

DEMISTER (MESH PAD TYPE)**Environmental performance**

1. High collection efficiencies of up to 99% at the velocity of a moving fluid of 1 to 8 m/sec
2. Provides free area of up to 98% for operation and low pressure drop (0.1" ~ 1.0" W/G)
3. A variety of materials in accordance with temperature and corrosion resistance
4. Easy to install by using M/H
5. Usable without any restriction and Interchangeable with existing facilities
6. Designed for self-cleaning (semi-permanent and economical)

Construction

Consists of a mat with overlapping knitted metal or plastic wire meshes, which are assembled in accordance with the densities for each style and disposed alternately.

The completion offers a complicated structure for inertial impaction, so it provides free area of 98% for operation and low pressure drop.

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Tel +82-32-814-0211 Fax +82-32-814-0213
E-mail dsdemister@naver.com
URL www.dsdemister.com



DSM-193 (MESH DEMISTER SUS 316L)

EP-8-040

Machines and equipment

demisters

CHEVRON MIST ELIMINATOR**Environmental performance**

1. Used in separating and removing a great deal of dust or liquid mist in a gas stream without getting clogged, commonly in separation of relatively coarse droplets.
2. Provides low resistance drop and low pressure drop at high velocity. Horizontal Type: 5-7 M/S Vertical Type: 4-6 M/S
3. Easy and economical to install in spite of the facilities for dispose of gas with a large capacity.
4. Free choice of appropriate materials for heat-resistance and corrosion-resistance according to Gas condition.

Application

1. Removal of noxious material in a gas (air pollution control) 2. Removal of impurities in a gas (Improvement of products purity) 3. Protection of changing materials into arsenic acid (saving costs) 4. Installment before and after plant construction (longer durability & saving energy) and separations and collection of mist.

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Tel +82-32-814-0211 Fax +82-32-814-0213
E-mail dsdemister@naver.com
URL www.dsdemister.com



EP-8-041

Machines and equipment

demister filters

DEMISTER FILTER**Environmental performance**

Structure: Assembled wire mesh or expanded metal to both sides of the products by using demister into it.

Feature

- 1) High collection efficiency due to weak resistance
- 2) Items in a variety of materials
- 3) Easy to install and repair due to light weight
- 4) Semi-permanent and economical

Useful for

- 1) equipment for air conditioning
- 2) Air cleaner

Measurement

- 1) In general 500x500x50T in size, but able to manufacture a filter with a special specification.

DAE SHIN DEMISTER CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX (45BLOCK 6LOT), 435-6 NON-HYUN DONG, NAM-DONG GU, INCHEON, 405-848, KOREA
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 E-mail dsdemister@naver.com
 URL www.dsdemister.com



EP-8-042

Machines and equipment

weaving machinery for air jet loom and water jet loom

Air Jet Loom "JAT710"**Environmental performance**

Less air consumption -20% down. New technology offers even further energy saving.

Product performance

The JAT710 is designed with the same concept as the JAT610: "weaving the highest quality fabric at the lowest possible cost," and boasts improved features such as higher speed, lower vibration and lower energy consumption. Plus it is equipped with the latest electronics technology such as a new Internet-capable color function panel, taking today's weaving mill into a new dimension.

**Toyota Industries Corporation**

2-1 Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan
 Tel +81-566-22-2511 Fax +81-566-27-5650
 URL <http://www.toyota-industries.com/>
 URL <http://www.toyota-industries.com/product/textile/textile/textile.html#textileJ710>
 URL <http://www.toyota-industries.com/csr/library/>



JAT710

EP-8-043

Machines and equipment

die cast machinery

Environment-Friendly Servo Control Die Casting Machine Ds series

Environmental performance

For the first time in the industry (2006) electric servo control system is applied to die casting machine to realize all : environment-consciousness, energy conservation, high-cycle and high stability.

The electric servo machine achieved followings compared with the hydraulic type of the same size:

- Power consumption: less 70%
- Dry cycle time: 35% less or more
- CO₂ emission : 75% less

* Comparison Ds series and TOYO's BD-V4-T (2008 hydraulic model) .

Product performance

- The electric servo motors are used for low-speed injection and intensification while hydraulic accumulators are for high-speed injection.
- The electric servo motor clamping system makes it easy to set up the die movement in a shock less, high-speed manner.
- Superior positioning repeatability by multi-step setting of the ejector speed.

TOYO MACHINERY & METAL CO., LTD.

523-1 Fukusato, Futami-cho, Akashi-city, Hyogo, 674-0091, Japan

Tel 81-78-942-2345 Fax 81-78-943-7275

E-mail k-ohashi@toyo-mm.co.jp

URL <http://www.toyo-mm.co.jp>



Environment-Friendly Servo Control Die Casting Machine Ds series

Available in: Japan, Worldwide

EP-8-044

Machines and equipment

uniaxial screw

"PICO Pump," non universal joint uniaxial screw

Environmental performance

The newly developed Furukawa Non-joint System has dramatically improved the ease of dismantling and cleaning pumps used for food production. It has also reduced total pump length by half compared to conventional models.

- (1) The amount of solid waste is reduced because less liquid is left inside the pumps after cleaning.
- (2) The number of replacement parts has been reduced.
- (3) Since the pumps can be placed on units, there is a saving of resources needed to make trestles.
- (4) High-performance quantitative capability allows the excellent operation efficiency of pumps while controlling the total amount of liquid.

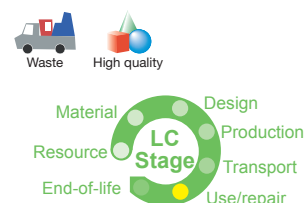
Product performance

- (1) Thanks to its simple structure, which uses no universal joints, pumps can be broken up by removing clamps set at three points, thereby allowing for easier maintenance.
- (2) The Furukawa Non-joint System, which supports rolling rotors with bearings, enjoys great basic power along with an extremely low possibility of decreased flow during high-pressure operation.
- (3) Fixed quantities of watery, high viscosity, concentrated, slurry or air entraining liquids can be transported with no pulsatory motion.

FURUKAWA INDUSTRIAL MACHINERY SYSTEMS Co., Ltd.

2-3, MARUNOUCHI 2-CHOME, CHIYODA-KU, TOKYO, Japan

URL <http://www.furukawa-sanki.co.jp>



Available in: Japan

EP-8-045

Machines and equipment

reactors, generators, carbonizers and electrolytic cells

Biomass Boiler System

Environmental performance

This system uses a circulating fluidized bed boiler to efficiently generate power and supply heat from carbon-neutral biomass. The biomass boiler system has been adopted and used mainly by wood biomass power plants and paper-manufacturing companies and contributes to the reduction of CO₂ emissions.



JFE Engineering Corporation

2-6-2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan
Tel +81-3-3516-7300 Fax +81-3-3516-7345
URL <http://www.jfe-eng.co.jp/>



EP-8-046

Machines and equipment

chemically treated environment protecting equipment

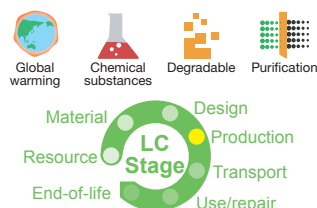
Exhaust gas abatement system

Environmental performance

The PFC gases, very hard to be decomposed, can be decomposed more than 90% by heat source of electric power as clean energy.
The CO₂ emission of the electric power is 0.
The fuel piping is unnecessary.
The processed gas volume is 1/5 to 1/10 of the combustion system, and then the energy saving of exhausted gas is realized in this system.
There is no waste because the system doesn't use the dry adsorption agents.
The system has the heat exchange and the heat reservoir mechanisms.

Product performance

This is the abatement system of toxic and global warming PFC gases. The detoxified gases are exhausted safely.
This Trinity abatement system, the inlet scrubber, the reactor, and the outlet scrubber, is our patent.



Kanken Techno co.,ltd.

Ota30-2, kotari, Nagaokakyo, Kyoto, 617-0833, Japan
Tel +81-75-955-8826 Fax +81-75-955-8915
E-mail s-matsushima@kanken-techno.co.jp
URL <http://www.kanken-techno.co.jp>



Available in: Japan, Singapore, Malaysia, Republic of Korea, Taiwan (Rep. of China), China

Compact Catalytic Thermal System Detoxifier

EP-8-047

Machines and equipment

chemically treated environment protecting equipment

High Concentration Organic Wastewater Treatment System (Energy Regeneration System)

Environmental performance

Energy efficiency/ Waste reduction: Utilizing anaerobic microorganisms in the treatment of organic matter results to 80% power consumption reduction and 90% less waste sludge compared to conventional aerobic treatment.

Energy regeneration: biogas obtained from organic wastes can be converted to and used as electric power and/or steam.

Product performance

This system consists of a facility where high concentration of organic wastewater and process residue are treated while regenerating energy from the organic matter in the form of biogas which is then converted and effectively used as electric power or steam. The system's strong points are the energy efficiency of the treatment process and its waste reduction feature. Upon necessity, pre-treatment, aerobic treatment, and sludge treatment facilities may also be installed as accessory equipment. Moreover, energy efficiency may be increased through the use of the 2-stage UASB and bio-desulfurizer technology original to the company.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-4340

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



High concentration organic effluent treatment system

EP-8-048

Machines and equipment

parts of chemical machinery and its equipment

High Concentration Ozone Generation Systems, Contributing to the Reduction of Life Cycle Cost

Environmental performance

----<< Material / Resource saving >>----

40% of weight is reduced by downsizing compared to that of our previous model.

----<< Energy saving >>----

15% lower energy consumption compared to that of our previous model.

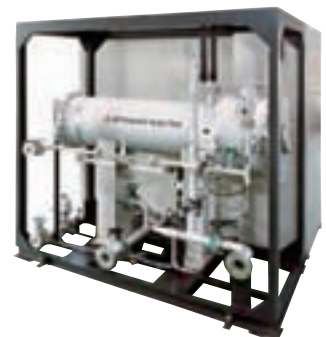
----<< Toxicity Environmental clean-up products >>----

Different from sterilization and oxidation by chlorine, that by ozone does not pollute the environment because it turns into oxygen after treatment.

Product performance

Ozone is used at water treatment plants, or wastewater treatment plants and factories, owing to its ability of disinfection, decolorization and deodorization.

Our product can generate high concentration ozone gas efficiently. It realizes maximum ozone concentration of 225g/m³ (cf. 150g/m³ by our previous product)



Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan, North America, China

EP-8-049

Machines and equipment

injection molding machinery

Fully Electric Injection Molding Machine Si-V series

Environmental performance

- The electric machines consume about one third of the electricity that existing hydraulic machines*1 require. In addition, it is able to cut cooling water and air-conditioning running costs (no need to cool oil to operate; increase of temperature is limited to heating pipe). For new factories, initial investment costs for cooling water pipes and air-conditioning can be expected.
 - Originally-developed PLASTAR GREASE and lubricant-saving design can reduce grease consumption by 88%*2.
- *1 TOYO's same class hydraulic machine.
 *2 Compared with the electric machine Si-III series (2006 model). 88% is an average value of the Si-V series.

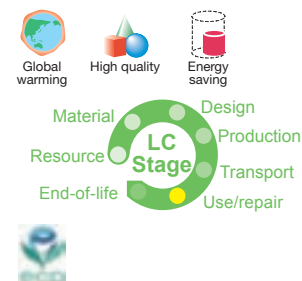
Product performance

- Digitized molding technology and expertise. The new SYSTEM500 control system smartly handles parameter setting work, which was conventionally dependent on the operator's skill.
- Built-in high-performance CPU delivers the high-speed, highly accurate injection motion control. As a result, ensuring greater consistency in product weight.
- Complies with global safety standards. Safety specifications are available to meet the safety standards for countries and regions such as Japan, China, Europe, North America and South Korea.

TOYO MACHINERY & METAL CO., LTD.

523-1 Fukusato, Futami-cho, Akashi-city, Hyogo, 674-0091, Japan
 Tel 81-78-942-2345 Fax 81-78-943-7275
 E-mail k-ohashi@toyo-mm.co.jp
 URL <http://www.toyo-mm.co.jp>

Available in: Japan, Worldwide



Fully Electric Injection Molding Machine Si-V series

EP-8-050

Machines and equipment

metal working machinery

Next Generation WEDM: Realizing High-precision Machining and Reduced Running Costs

Environmental performance

----<< Material / Resource saving >>----

Larger size can be handled than the previous model without increasing the amount of cost.

Reduces the number of component parts.

Electrical instruction manual reduces paper consumption.

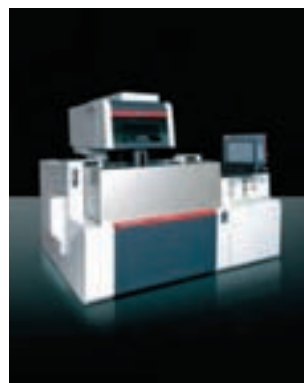
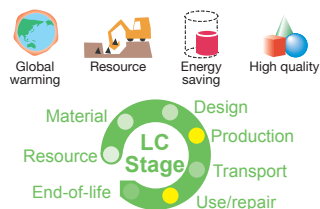
----<< Energy saving >>----

Machining time is shortened 30% from previous model by newly developed power unit.

Newly added "Wake-up mode" saves standby power requirement, saves almost 69% of total energy.

----<< Toxicity / Chemical substances reduction >>----

The use of lead is drastically restricted.



NA series

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
 Tel +81-3-3218-9024 Fax +81-3-3218-2465
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://global.mitsubishielectric.com/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

EP-8-051

Machines and equipment

power tools

Cordless Grass Cutter

Environmental performance

- CG14DSL, with a highly efficient disk motor installed just above the cutting blade to rotate it directly, does not have a power transmission shaft. Thus, it realized weight reduction by 15% and noise reduction by 4dB, compared with our previous model FCG18DAL (placed on market in 2009).
- The battery adopted lithium-ion type (cadmium free) for less environmental load.

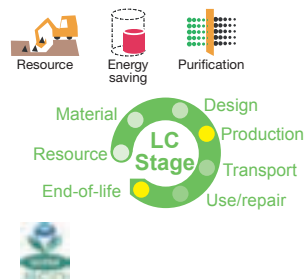
Product performance

Adoption of a highly efficient disk motor made it possible to operate long (approx. 20-40 mins) (14.4V battery use). If you install the 18V battery, longer operation will be possible (approx. 30-50 mins). (comparison with our previous model FCG18DAL of which possible continuous operation is approx. 5-25 mins. (18V battery use))

Hitachi Koki Co., Ltd

15-1, Konan 2-chome, Minato-ku, Tokyo, 108-6020, Japan
 Tel +81-29-276-7423 Fax +81-29-276-7424
 E-mail kankyo@hitachi-koki.co.jp
 URL http://www.hitachi-koki.com/about/environment/report_es/2008_es/2008_es.html

Available in: Japan



Cordless Grass Cutter "CG14DSL"

EP-8-052

Machines and equipment

assembly equipment

Compact Premium Modular Moulder Σ-G4/Σ-G5

Environmental performance

- <1> Deep cut in power consumption by 39.6% (Σ-G4), 34.5% (Σ-G5) and realized excellent progress of productivity by 270% comparing to Hitachi standard models (TCM-X210(*)).
- <2> Provides more quiet environment for the operation by 11.8% (Σ-G4), 2.2% (Σ-G5) in noise reduction.
- <3> Decrease of product mass by 22.7% (Σ-G4), 18.1% (Σ-G5) comparing to Hitachi standard models (TCM-X210(*)).

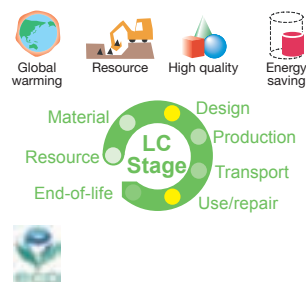
*Comparison with our standard model TCM-X210 (2003)

Product performance

- <1> Throughput 130,000cph (Under optimum conditions)
- <2> Wide range component size : 0.4×0.2mm~55×55mm, 100×26mm
- <3> Mounting accuracy 40 μm (3σ)

Hitachi High-Technologies Corporation

24-14, Nishi-Shimbashi, 1-chome, Minatoku, Tokyo, 105-8717, Japan
 Tel 81-3-3504-7562 Fax 81-3-3504-3959
 E-mail sugawara-kazunari@nst.hitachi-hitec.com
 URL <http://www.hitachi-hitec.com/global/index.html>
 URL http://www.hitachi-hitec.com/global/i_and_m/surf/surf_index.html
 URL <http://www.hitachi-hitec.com/global/csr/index.html>



Compact Premium Modular Moulder Σ-G4/Σ-G5

Available in: Japan, Asia, Oceania, Europe, North America, Central America, South America, Southeast Asia, ASEAN, U.S.A., Indonesia, Singapore, Thailand, Philippines, Malaysia, Mexico, Republic of Korea, Taiwan (Rep. of China), China

EP-8-053

Machines and equipment

semiconductor manufacturing equipment

CD-Measurement SEM CG4000

Environmental performance

Throughput of automatic measuring of microscopic semiconductor circuit patterns on Wafer is enhanced by 9% (33wafers/h→36wafers/h:@under Hitachi's standard evaluation conditions) in comparison with previous model S-9380II (sales start in March, 2005).

Product performance

Image resolution of microscopic semiconductor circuit patterns for process evaluation is extended by 10% (2.0→1.8nm:@ under Hitachi's standard evaluation conditions) in comparison with previous model S-9380II (started sales in March, 2005).

Hitachi High-Technologies Corporation

24-14, Nishi-shimbashi 1-chome, Minato-ku, Tokyo, 105-8717, Japan
Tel 81-3-3504-7562 Fax 81-3-3504-3959
E-mail sugawara-kazunari@nst.hitachi-hitec.com
URL <http://www.hitachi-hitec.com/global/index.html>
URL http://www.hitachi-hitec.com/global/device/met/met_index.html
URL <http://www.hitachi-hitec.com/global/csr/2008/index.html>



EP-8-054

Machines and equipment

industrial machinery and equipment

PSA type nitrogen gas generator BELLSWING®

Environmental performance

<Summary> Air Water Inc. has developed the energy saving type PSA (Bellswing™). New NSP series inherits the design philosophy of our popular SP series, which retains the smallest set up space while increasing the energy saving performance.

<Characteristics> A newly developed; high-performance MSC has been adopted. Power consumption by up to 33% reduction available that means the electricity cost reduction and low CO₂ emission. Maintenance cycle has been extended to 1.5 times. Operation can be made by using the compressor for general purpose. Customers having over 0.7MPaG air sources need no compressor.

<Effect> When introducing KN4-60NSP, annual electricity costs will be sliced by about ¥1,350,000, and suppress CO₂ emissions 50ton per year.

Product performance

New PSA (KN4-20NSP, KN4-40NSP, KN4-60NSP) attained to generate N₂ of 99.99%, 0.5MPa and 20 to 60Nm³/H by using general compressor of 11 to 30KW.

AIR WATER BELLPEARL INC.

2-12-8, Minamisemba, Chuo-ku Osaka, 542-0081, Japan
Tel +81-6-6252-1803 Fax +81-6-6252-1750
E-mail yamashita-mas@awi.co.jp
URL <http://www.awi.co.jp/english/>
URL <http://www.awi.co.jp/bp/e/pg/03.html>
URL <http://www.awi.co.jp/english/environment/index.html>



PSA type nitrogen gas generator BELLSWING® NSP series

Available in: Japan, Asia

EP-8-055

Machines and equipment

industrial machinery and equipment

"AIR ZEUS", HITACHI Oil-Free Screw Compressor**Environmental performance**

- New type air block improving efficiency and energy consumption can reduce CO₂ emissions by approximately 31 tons annually*.
- It is equipped with our unique power saving control systems. End pressure control with active power control can reduce CO₂ emissions by approximately 91 tons annually * and precision pressure control with power saving control can reduce CO₂ emissions by approximately 24 tons annually *when average load factor is 70% respectively.

*Our in-house comparison

Note: Reduction amount of CO₂ emissions (CO₂ emission coefficient: 0.555kg-CO₂/kWh) is based on the comparison of previous model number SDS-IE and current SDS-U280 (motor output: 280kW).

Product performance

Air block fluid analysis applying our advanced computational fluid dynamic technology simulates to assist in optimising shapes of air flow path, inlet, and rotor and as a result improves efficiency and energy consumption.

Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan

Tel +81-3-5928-8100 Fax +81-3-5928-8701

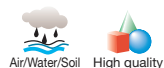
E-mail koho-senden@hitachi-pt.com

URL <http://www.hitachi-pt.com>

URL <http://www.hitachi-pt.com/products/si/compressor/screw/index.html>

URL <http://www.hitachi-pt.com/csr/index.html>

Available in: Japan, Europe, U.S.A, Singapore, Thailand, Malaysia, Republic of Korea, Taiwan (Rep. of China), China



View of "AIR ZEUS"

EP-8-056

Machines and equipment

optical analytical instruments

U-5100 Ratio Beam Spectrophotometer**Environmental performance**

Energy conservation design : Through control of the Xenon flash lamp that emits pulses only during measurement, power consumption is reduced by 70% compared with our standard model*.

Compact, lightweight design : The U-5100 features a 38% smaller footprint and the 52% less in weight compared with our standard model*.

*our standard model: U-1900 (2009 model)

Product performance

The adoption of a Xenon flash lamp : eliminates the need for periodic lamp replacement that was necessary in previous models.

Wavelength setting repeatability: $\pm 0.5\text{nm}$

Photometric accuracy: $\pm 0.005\text{Abs}$

Photometric repeatability: $\pm 0.002\text{Abs}$

**Hitachi High-Technologies Corporation**

24-14, Nishi-Shimbashi, 1-chome, Minatoku, Tokyo, 105-8717, Japan

Tel 81-3-3504-7562 Fax 81-3-3504-3959

E-mail sugawara-kazunari@nst.hitachi-hitec.com

URL <http://www.hitachi-hitec.com/global/index.html>

EP-8-057

Machines and equipment

physical and chemical instruments

Tabletop Micro Ultracentrifuge

Environmental performance

Requires 20% less space on the desk and 8% lighter. (comparing to the smallest product of the tabletop ultracentrifuges in the world, 737 (W) x 584 (D) x 409 (H) 105kg (started to sell in 2007) --> 590 (W) x 582 (D) x 408 (H) 97kg)

- Makes the quietest noise in the world as a small sized ultracentrifuge, 45dBA. (as of Sep. 2010.)
- Has thermo-module cooling system (HFC free)
- Has regenerative brake system

Product performance

The CS150NX Tabletop Micro Ultracentrifuge generates the centrifugal force that is hundreds of thousands times stronger gravity by the high velocity revolution, and is used to separate micro-particles like DNA*. *DNA: Deoxyribonucleic acid (genetic instructions)

- The largest RCF: 1,050,000 × g. (Versus other similar ultracentrifuge, as of Sep. 2010.)
- *RCF; Relative Centrifugal Force.
- Max. speed: 150,000min⁻¹
- Max. capacity: 180mL

Hitachi Koki Co., Ltd

15-1, Konan 2-chome, Minato-ku, Tokyo, 108-6020, Japan

Tel +81-29-276-7423 Fax +81-29-276-7424

E-mail kankyo@hitachi-koki.co.jp

URL <http://www.hitachi-koki.com/>

URL <http://www.hitachi-koki.com/himac/centrifuges/cs150nx/cs150nx.html>

URL http://www.hitachi-koki.com/about/environment/report_es/2008_es/2008_es.html

Available in: Worldwide



Tabletop Micro Ultracentrifuge "CS150NX"

EP-8-058

Machines and equipment

measuring instruments

Further reducing power consumption: "MT8820C Radio Communication Analyzer"

Environmental performance

While making good use of the strong points of existing models, which have been developed to save production line space, more carefully selected parts and circuit designs are adopted for this lower power consumption product. These efforts have realized a 26% energy saving compared with existing models.

Product performance

The MT8820C Radio Communication Analyzer is a measuring instrument used to develop and produce mobile phone terminals and data communication cards corresponding to the new wireless communication system, LTE (Long Term Evolution), which enables high-speed large-capacity communication on a par with optical fibers.



Anritsu Corporation

5-1-1, Onna, Atsugi-shi, Kanagawa, 243-8555, Japan

Tel +81-46-223-1111

URL <http://www.anritsu.com/>

URL <http://www.anritsu.com/en-US/About-Anritsu/CSR/index.aspx>

MT8820C Radio Communication Analyzer

EP-8-059

Machines and equipment

measuring instruments

Multiple-function downsizing: "MP2100A BERTWave Series"

Environmental performance

Power sources, CPU, all other circuits and parts have been redeveloped in order to realize downsizing, weight saving and low-power-consumption of this multifunction-integrated device. The product has been downsized by 47% in cubic content, 72% in mass and 72% in power consumption compared with existing models.

Product performance

Fiber-optic communication systems transmit signals via optical transceiver modules and various electrical devices. The MP2100A BERTWave Series are measuring instruments to evaluate the quality of signals, such as wave patterns, bit error ratio, etc., of the modules and devices.



Global warming



Energy saving



MP2100A BERTWave Series

Anritsu Corporation

5-1-1, Onna, Atsugi-shi, Kanagawa, 243-8555, Japan

Tel +81-46-223-1111

URL <http://www.anritsu.com/>

URL <http://www.anritsu.com/en-US/About-Anritsu/CSR/index.aspx>

EP-8-060

Machines and equipment

measuring instruments

Reduced processing time and energy conservation: "MS2830A Signal Analyzer"

Environmental performance

In order to save time and electricity during measuring, electricity-saving parts are adopted alongside technology used for existing models, and the number of materials are substantially reduced. In addition, some functions, which are equipped as standards for existing models, are used as optional extras to reduce unnecessary power consumption. These efforts improve the measure-processing ability by 1.2 times compared with existing models, and CO₂ emissions are reduced by 30% while the devices are in use.

Product performance

The MS2830A Signal Analyzers are signal-measuring instruments utilized for signal analyses of various transmission tests during the development and production of next-generation mobile phone terminals, various kinds of digital wireless instruments and electronic materials.



Global warming



Energy saving



MS2830A Signal Analyzer

Anritsu Corporation

5-1-1, Onna, Atsugi-shi, Kanagawa, 243-8555, Japan

Tel +81-46-223-1111

URL <http://www.anritsu.com/>

URL <http://www.anritsu.com/en-US/About-Anritsu/CSR/index.aspx>

EP-8-061

Machines and equipment

measuring instruments

Reduced processing time and energy conservation: "MS9740A Optical Spectrum Analyzer"

Environmental performance

Optical Active Device makers make efforts to cut test times through efficient assessment by measuring instruments with the aim of reducing the costs of manufacturing facilities. The total measuring and processing speed of this instrument, including wave shape sweep, wave shape analysis and data transmission to exterior control equipment, is 0.2 seconds or less, taking less than one fifth of the time of existing models. In addition, parts for the device are carefully selected and there has been a redesign of electrical circuits and reduction of the number of printed circuit boards. With these improvements, power consumption is reduced by half and the mass is cut by 10% compared with existing models.

Product performance

The MS9740A Optical Spectrum Analyzer has high optical basic performances, such as wide dynamic range and high resolution, as well as a high speed measuring process, which is highly required in the optical active device manufacturing markets.



Global warming



Energy saving



Anritsu Corporation

5-1-1, Onna, Atsugi-shi, Kanagawa, 243-8555, Japan

Tel +81-46-223-1111

URL <http://www.anritsu.com/>

URL <http://www.anritsu.com/en-US/About-Anritsu/CSR/index.aspx>



MS9740A Optical Spectrum Analyzer

EP-8-062

Machines and equipment

turbine generators

A Small, Light and High-efficiency Turbine Generator for Thermal Power Plant

Environmental performance

- Mitigation of climate change: The amount of CO₂ exhaust was reduced; it was about 240 tons at the step of manufacturing, (23% cut at our company's ratio before 15 years). It was about 1,700 tons per year at the step of use, (18% cut).
- Efficient use of resources: Realization of a 2/3 size in comparison with the conventional generator. Development of new materials and methods. Reduction of waste and environmental load by the reuse of parts / materials at the time of repair.

Product performance

- High-efficiency: 20% reduction in loss compared to the conventional generator, leads to high-efficiency.
- High-reliability: High-reliability thanks to advanced analysis and verification experiments.
- Reduced manufacturing period: 30% reduction in the manufacturing period by adoption of an easy-to-manufacture structure.



Global warming



Waste



High quality



TOSHIBA CORPORATION Power Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-3613 Fax +81-3-5444-9238

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Turbine generator

EP-8-063

Machines and equipment

engine generators

Cogeneration system with micro-gas engine: GENELIGHT

Environmental performance

GENELIGHT is an energy-saving gas cogeneration system which generates electricity with a gas engine and heats water utilizing generated exhaust heat. This system is ideal for small and mid-sized hotels, hospitals and restaurants because of its energy-saving features and capacity to supply a large amount of hot water.

CO₂ emission reduction: 30% or more*

* Compared with the amount of CO₂ emitted under conditions where the same amount of electricity is drawn from the grid and the same amount of heat is produced by the boiler.

Product performance

Generation efficiency of 35 kW: 34% (the highest in the capacity class)*

* Achieved by employing the newly-developed Miller cycle gas engine, inverter and generator, as well as reducing pump loss.

When the power source is suspended, some models can supply electricity according to predetermined loads.

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL <http://www.osakagas.co.jp/indexe.html>

URL http://www.osakagas.co.jp/csr_e/index.html

Available in: Japan



GENELIGHT 35kW

EP-8-064

Machines and equipment

dc motors

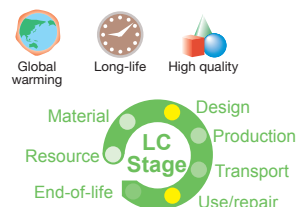
Traction Motor for Railway Rolling Stock which achieved Saving Energy, Reduction of CO₂ and Low-noise by using Permanent Magnet and Totally Enclosed Structure

Environmental performance

- Mitigation of climate change: More than 20% reduction in power consumption through the pursuit of high efficiency.
- Efficient use of resources: Reduced need of maintenance because of little internal contamination thanks to the totally enclosed structure.

Product performance

- Reduced loss: Around 5% improvement in efficiency compared with the conventional motor thanks to reduced internal loss.
- High reliability: Enhanced reliability of the motor thanks to the totally enclosed design.
- Reduction operating cost: Reduced running cost thanks to high efficiency.
- Low noise: Noise-reduction of about 6dBA achieved by adopting the totally enclosed structure.



TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-4556 Fax +81-3-5444-9276

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan, Worldwide

Permanent magnet synchronous motor

EP-8-065

Machines and equipment

three-phase induction motors

"High efficiency motor which meet or exceed Premium efficiency of NEMA standards. (NEMA premium is same as IE3 (premium efficiency) of the IEC standard.) "

Environmental performance

- Mitigation of climate change: Annual power consumption reduced by about 5% compared with the standard efficiency (IE1) model. CO₂ emissions reduced by 0.3 tons.
- Efficient use of resources: Reduction 2% in weight, 34% in the number of parts.
(in the case of 4pole-10HP)

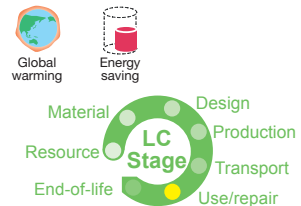
Product performance

- Economical: Energy saving through lower loss design
- Low noise, Long life and High reliability
- High efficiency and Lower starting current are achieved by the adoption of the most suitable slot shape at the same time.

TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
Tel +81-3-3457-3846 Fax +81-3-5444-9368

Available in: North America



Low Voltage Three phase High Efficiency Induction Motor (NEMA Premium® efficiency motors)

EP-8-066

Machines and equipment

wind turbine generators

Downwind turbine designed to take advantage of up-flow wind in mountainous areas

Environmental performance

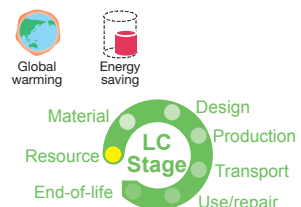
The life cycle CO₂ emission rate is about 29 g/kWh at the stage of manufacturing and construction (CRIEPI, 2000). It becomes almost zero at the stage of operation. The amount of 127 kt CO₂ is produced per the estimated annual electric output, 4.38GWh.

Product performance

Hitachi wind turbine is a 2MW pitch regulated downwind type with active yaw. When selecting wind turbine installation sites, mountainous areas are often overlooked and considered unattractive for wind development. However, its complex terrains provide a distinct concentration of high speed, up-flow wind. This downwind turbine is specifically designed to take advantage of up-flow wind. Due to differences of blades' location and tilt angles, downwind turbine design has smaller misalignment towards up-flow wind compared to upwind turbine design. This advantage enables power generation up to 7.6% more than upwind (FHI, Wind Engineering Vol. 30).

Hitachi, Ltd.

6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-8280, Japan
Tel 81-3-3258-1111
URL <http://www.hitachi.com/>
URL http://www.hitachi.co.jp/environment/showcase/solution/energy/wind_velocity.html



2MW Downwind Turbine Generator System (courtesy of Wind Power Ibaraki Ltd.)

EP-8-067

Machines and equipment

generators

Environmentally-friendly System Generating Electricity and Heat Using City Gas or LP Gas

Environmental performance

- Mitigation of climate change: 40% reduction in CO₂ emissions per year (equivalent to about 1 ton) for a typical household.
- Efficiency use of resources: Weight reduction of Fuel cell package to about 104kg. Easy to handling.

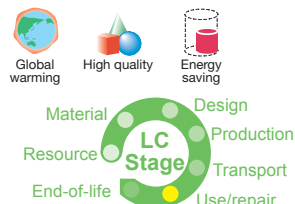
Product performance

- Increased efficiency in terms of both power and heat: Overall efficiency, combining electric efficiency and heat recovery efficiency of more than 86%.
- Low noise: Quiet operation: 40dB or less. Silence is similar in a library.
- Maintenance saving: Maintenance two years interval; Reduced to visit customer.
- Clean: Emissions consist of only water and CO₂.

Toshiba Fuel Cell Power Systems Corp.

2-4, Suehiro-Cho, Tsurumi-Ku, Yokohama, 230-0045, Japan
 Tel +81-45-510-5920 Fax +81-45-500-2564
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Residential fuel cell co-generation system

EP-8-068

Machines and equipment

standard transformers

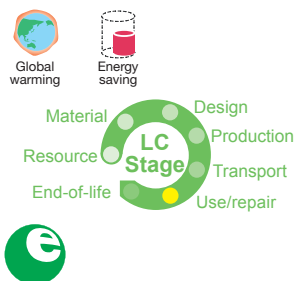
Energy-saving, compact new series of transformers

Environmental performance

- Mitigation of climate change: Energy consumption reduced by about 30% compared with the previous model. CO₂ emissions reduced more than 4.0 tons at a 40% load factor (500kVA).

Product performance

- Reduced loss: About 40% reduction in loss compared with the previous model by the adoption of high-performance iron-core material and the use of highly conductive copper for the coil conductor.
- Saving space: Reduced footprint thanks to high-density coil technology.



Super high efficiency Eco type Cast Resin transformer RCT-N22E

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 Tel +81-3-3457-4371 Fax +81-3-5444-9280
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan

EP-8-069

Machines and equipment

reactors and induction voltage transformers

Automatic three-phase capacitance switching equipment

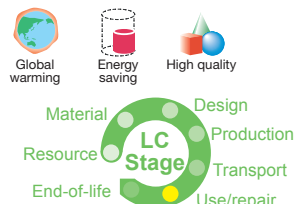
Environmental performance

----<< Energy saving >>----

This equipment is installed on electric power receiving and distributing equipment in factories, and controls association or shut off electric power capacitors in order to obtain the ideal power factor by picking up reactive power for efficient and energy saving operation.

Product performance

Automatic capacity grasping function enables easier installation.
Larger LCD display improves visibility.



VAR-12A

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan, Asia

EP-8-070

Machines and equipment

electrical relay switches

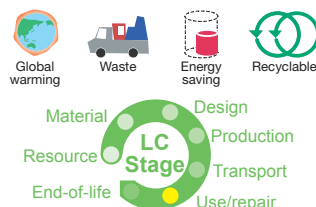
Highly-reliable, Low Power-consumption Protection Relay with Five Times Faster Processing

Environmental performance

- Mitigation of climate change: 60% reduction in power consumption thanks to a reduced number of printed circuit boards and low-power consumption design.
- Efficient use of resources: 30% reduction in the number of printed circuit boards thanks to the adoption of high performance MPU and high-capacity FPGA.

Product performance

- Enhanced Reliability: Enhanced reliability thanks to a reduced number of printed circuit boards and suppressed temperature increase.
- Improved maintainability: Improved maintainability thanks to enriched guidance functions and simple structure.



Protection Relay D4 Series

TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-8-071

Machines and equipment

switches

Resource Saving & Energy Saving through the Pursuit of Compactness and Space Saving

Environmental performance

- Mitigation of climate change: 25% reduction in the consumption of SF6 gas compared with the benchmark model thanks to downsizing. Downsizing and less weight led to a reduced consumption of raw materials and a 20% reduction in CO₂ emissions.

Product performance

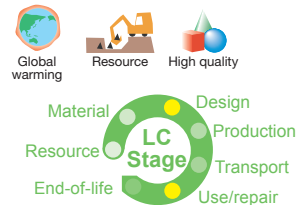
- Space saving: Downsizing slashes the space required for installation.
- Enhanced operability and maintainability: The operation panel and inspection unit are almost entirely positioned on the front of the switchgear for enhanced operability and maintainability.
- Reduced manufacturing period: As the construction of the foundation for the housing involves less work, projects can be executed faster.

TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Available in: Japan

145kV Gas-insulated switchgear (GIS) G3A-b

EP-8-072

Machines and equipment

programmable logic controllers

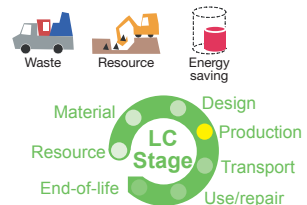
MELSEC-L General-purpose PLC: equipped with various functions, flexible and simple to use, and Compact

Environmental performance

1. Direct connection among units. Connectors located on the sides of the units allow units to connect directly to each other without using base units. Systems can be installed with minimal required space.
2. CC-Link Function, Ethernet, USB, I/O functions are equipped as standard. These functions can be freely used as necessary, requiring no special units for each function and allow for space reduction and various control.
3. The cubic volume is reduced by nearly 75% and the weight by roughly 70% compared with conventional models. By adopting the universal designs, visibility and operability are improved even with a small chassis.

Product performance

1. I/O points: 4,096 I/O device points: 8,192 Program capacity: 260k steps Processing speed (LD Instruction): 9.5 ns Program memory capacity: 1,040k bits Peripheral Ports: USB, Ethernet SD Memory Card I/F: equipped. CC-Link Master/Local stations are equipped.
2. I/O function is equipped as standard, and every function can be freely used as necessary, requiring no special units for each function and allowing various control.
3. PC-less operations using display units and simple programming environments can improve efficiency of developing, manufacturing and maintenance.



Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide

L26CPU-BT

EP-8-073

Machines and equipment

parts of electrical relay switches

Hybrid "Dry Air" and Solid Insulation SF6-free Switchgear

Environmental performance

-----<< Greenhouse gas free Global warming prevention >>-----

The adoption of a composite insulation of solid materials and low pressure, dry air (at 0.15 MPa-g with moisture removed) realizes a 72 kV C-GIS free from SF6 gas.

-----<< Material / Resource saving >>-----

The number of components was greatly reduced (to 70% from our previous type) applying a simple structure vacuum circuit breaker (VCB) with an electric magnetic operating mechanism.

-----<< Energy saving >>-----

The VCB operating energy is reduced to 70%. The power dissipation (heat loss) was reduced to 60% by optimizing device arrangement and minimizing conductor lengths that reduces the resistance of the main circuit.

Product performance

Mitsubishi Electric developed a series of 7.2 to 72 kV switchgear for power distribution featuring a composite insulation of solid materials and low-pressure dry air, and has been placing them on the market since 2000.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan, Asia, Central America



HG-VA switchgear

EP-8-074

Machines and equipment

parts of electrical relay switches

Completely new type SF6 gas-free switchgear using high-performance epoxy resin for insulation of main circuit

Environmental performance

- Mitigation of climate change: 62% reduction in CO₂ emissions as a result of SF6 gas-free.
- Efficient use of resources: Reduction 50% in mass, 40% in volume, and 50% in the number of parts.

Product performance

- Ease of disposal: Combination of vacuum and epoxy mold instead of SF6 gas.
- Size and mass reduction: Compactness makes it suitable for transportation.
- Labor-saving maintenance: Great reduction in the number of parts due to a newly developed operating mechanism with a simplified structure, making inspection simple.

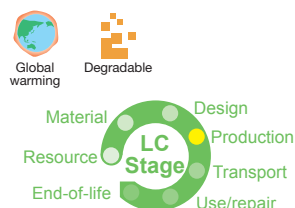
TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Solid insulated switchgear

EP-8-075

Machines and equipment

monitor and control equipment

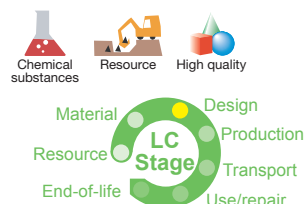
Next-generation remote terminal unit applicable in an IP network environment equipped with fault detection and waveform recording

Environmental performance

- Management of chemicals: Use of lead-free printed circuit boards (partial use). Elimination of the use of hexavalent chromium and other hazardous substances.
- Efficient use of resources: Change of the casing material from Sheet Moulding Compound to recyclable polycarbonate.

Product performance

- High performance and functionality: Equipped with distribution line fault detection, sampled-date recording, and quantitative measuring functions.
- Simple maintenance: Enhanced maintainability thanks to IT.



TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Remote Terminal Unit for Distribution Automation Systems TOSDAC-D24E

EP-8-076

Machines and equipment

switchboards and electrical control equipment

"Cool Assist System II", Energy Saving Heat Source System

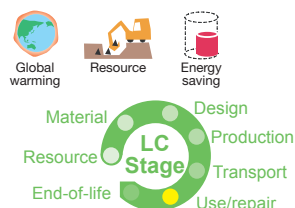
Environmental performance

This system is composed of free cooling system enabling long term usage in a year which produces cold water in a cooling tower using cool outdoor air and the technology optimizing heat source system operations depending on outdoor air temperatures and heat load. Furthermore it is capable of reducing energy consumption by 50% (our in-house comparison) when combined with inverters, the highly efficient control equipment.

*The figure is based on the comparison of a certain air conditioning delivered in 2001 and its renovation into this system.

Product performance

It can reduce the circulation power of fans and pumps by controlling chilled water flux and temperatures depending on outdoor air temperatures, heat load conditions and equipment characteristics, in order to optimize heat source system operations. It also can be flexibly installed into existing air conditioning systems.



Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan
 Tel 81-3-5928-8100 Fax 81-3-5928-8701
 E-mail koho-senden@hitachi-pt.com
 URL <http://www.hitachi-pt.com>
 URL <http://www.hitachi-pt.com/csr/index.html>



Available in: Japan

System configuration

EP-8-077

Machines and equipment

switchboards and electrical control equipment

Electronic Hybrid Functional Control Panels Bring Water Treatment Plants Simplicity and High Performance

Environmental performance

In power instrumentation and control at water purification plants or sewage-treatment plants, each function is installed in each control panel. Electronic Hybrid Functional Control Panel gathers all these circuits into fewer panels which enables reduction of space, hard-wiring and interconnection, and reduced energy consumption in electrical installation.

-----<< Material / Resource saving >>-----

Previous 3 control panels are able to be incorporated in 2 hybrid panels.

-----<< Energy saving >>-----

Almost 40% in energy saving is realized (compared to our previous model)



MACTUS 30LCB

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

EP-8-078

Machines and equipment

power transformers

A More Advanced Energy-Saving Premium Inverter "FRQROL-F700P Series"

Environmental performance

-----<< Material / Resource saving >>-----

The principal consumables - the condenser and cooling fan - are designed to last for 10 years.

-----<< Energy saving >>-----

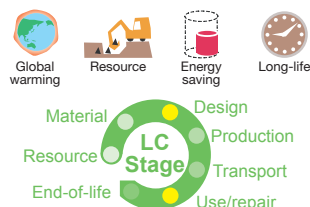
- Energy savings through RPM control (flow control) instead of on/off flow control.
- Optimal excitation control instead of regular V/F control.
- IPM motor can be regulated.

-----<< Toxicity / Chemical substances reduction >>-----

Compliant with European RoHS Directive.

Product performance

The FREQROL-F700P is an upgrade to the FREQROL-F700, which was awarded the fiscal 2006 Electrical Manufacturers Technology Prize by the Japan Electrical Manufacturers' Association. It can control both a general-purpose motor (three-phase induction motor) and an interior permanent magnet (IPM) motor, which enables it to meet enhanced energy-saving needs.



Inverter FREQROL-F700P Series

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan

EP-8-079

Machines and equipment

power converters

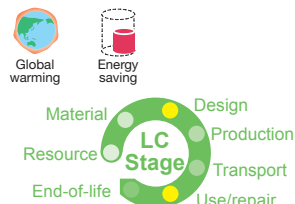
Advanced energy-saving mode increase fan and pump efficiency even in the low speed.

Environmental performance

88% of materials used on the VF-PS1 are recyclable, which meets European WEEE (Waste Electrical and Electronic Equipment) Directive of 70%.

Product performance

- More energy saving by Advanced energy-saving mode
- High-frequency noise reduction and harmonics reduction
- Built-in special softwares for fan and pump application



TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 Tel +81-3-3457-3846 Fax +81-3-5444-9368
 URL <http://www.toshiba.co.jp/index.htm>
 URL http://www3.toshiba.co.jp/sic/english/ind_sys/inverter/index.htm
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Variable torque Inverter TOSVERT™ VF-PS1

EP-8-080

Machines and equipment

electric lighting fixtures

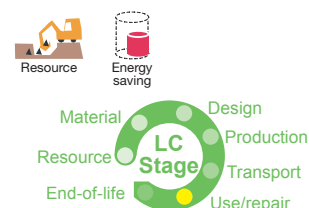
NATURE SWITCH-02

Environmental performance

Automatic Lighting control for energy saving

Product performance

automatic switching ON/OFF of outdoor lamps



Kakatiya Energy Systems Ltd

3-6-272,N.V.K.Towers, Himayat Nagar, Hyderabad, 500 029, India
 Tel +91-40-23262540 Fax +91-40-23262550
 E-mail sales@natureswitch.com
 URL www.natureswitch.com



Nature Switch

EP-8-081

Machines and equipment

medical X-ray equipment

Symmetrical open multipurpose imaging system "EXAVISTA"

Environmental performance

The number of composition units is reduced from 7 to 5, and space-saving is realized. The packaging material is reduced for the efficient use of transport equipment. This equipment also maintains the installation capability at the same level as conventional ones while employing advanced artistic design. (compared to our multipurpose imaging system "medites CREA" [2003 model])

Product performance

It is possible to see through and take upper part of the top board and even lower side up to 15cm at the edge by the wide stroke 150cm, thus patients in wheel chairs can easily come to examine test of lower legs and urinary organs.

It is possible to recorded in high resolution fluoroscopy option to add fluoroscopy recorder (including external inputs such as endoscopes, ultrasound).

The total number of systems can be reduced by multiple-purpose use of this system as well as a multi-modality image display function.

(compared to our multipurpose imaging system "medites CREA" [2003 model])

Hitachi Medical Corporation

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan

Tel 81-3-3526-8880 Fax 81-3-3526-8810

URL <http://www.hitachi-medical.co.jp/>

Available in: Japan, Asia



Appearance of EXAVISTA System

EP-8-082

Machines and equipment

medical X-ray equipment

Whole-body X-ray CT system SCENARIA

Environmental performance

- The electric power consumption per examination *1 has been reduced to less than 1/2. *2

*1 Assumption of the chest-abdomen examination

*2 Comparison with our X-ray CT system "ECLOS" [2007 model].

Product performance

- The maximum X-ray beam width is 40mm per scan, doubled in comparison with the ordinary system*1. The system allows the 64-slice image at 0.625mm width by one rotation. The maximum speed 0.35s/rotation is achieved during the whole-body examination.
- The diameter of the semi-large bore is enlarged by 50mm than that of the ordinary aperture *1 gives sufficient space to the subject and gives relief to the child during the examination.

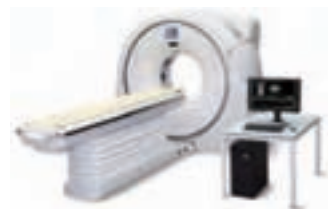
*1 Comparison with our X-ray CT system "ECLOS" [2007 model].

Hitachi Medical Corporation

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan

Tel 81-3-3526-8880 Fax 81-3-3526-8810

URL <http://www.hitachi-medical.co.jp/>



Appearance of SCENARIA

EP-8-083

Machines and equipment

medical electronic instrument and equipment

Ultrasound Diagnostic Scanner HI VISION Avius

Environmental performance

This ultrasound diagnostic scanner "HI VISION Avius" has reduced the unit size adopting software based back-end and ASIC, cut weight by 4% (Standard Configuration. Compared to our ultrasound diagnostic scanner "EUB-5500" [2003 model]) and decreased the power consumption by 5% (Standard Configuration. Compared to our ultrasound diagnostic scanner "EUB-5500" [2003 model]).

Product performance

HI VISION Avius has the performance of a top class as ultrasonic diagnostic equipment of a low-end class in the world as of December 2010. It is efficient ultrasonic diagnostic equipment accepted by the customer in a wide layer.

Hitachi Medical Corporation

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan
Tel 81-3-3526-8880 Fax 81-3-3526-8810
URL <http://www.hitachi-medical.co.jp/>

Available in: Japan, Asia, Europe, Southeast Asia



Appearance of HI VISION Avius

EP-8-084

Machines and equipment

medical electronic instrument and equipment

MR Imaging System APERTO Eterna

Environmental performance

1. This system consumes less electric power than superconducting MRI equipment because it uses the magnetic field of permanent magnets. Its power consumption power is 4KW, about 1/8 of superconducting MRI equipment (compared to our ECHELON Vega [2006 model]).

Product performance

1. A vertical field system we have developed since early stage. Widely open to the left and right, the characteristic of open MRI system, will give ease to claustrophobic patients.
2. Has various types of receiver coils which will fit respective part of human body, image measurement software, and image processing function.



Appearance of APERTO Eterna

Hitachi Medical Corporation

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan
Tel 81-3-3526-8880 Fax 81-3-3526-8810
URL <http://www.hitachi-medical.co.jp/>

EP-8-085

Machines and equipment

medical electronic instrument and equipment

Ultrasound Diagnostic Scanner HI VISION Preirus**Environmental performance**

This ultrasound diagnostic scanner "HI VISION Preirus" has reduced the unit size, cut weight by 16% (Standard configuration. Compared to our ultrasound diagnostic scanner "HI VISION 900" [2006 model]) and decreased the power consumption by 40% (Standard configuration. Compared to our ultrasound diagnostic scanner "HI VISION 900" [2006 model]), by adopting software based back-end and ASIC.

Product performance

HI VISION Preirus has the world's top class performance as middle class ultrasonic diagnostic equipment and is accepted by wide range of customers as of December 2010. It is accepted by the customer in a wide layer.

Hitachi Medical Corporation

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan
Tel 81-3-3526-8880 Fax 81-3-3526-8810
URL <http://www.hitachi-medical.co.jp/>

Available in: Japan, Europe



Appearance of HI VISION Preirus

EP-8-086

Machines and equipment

medical electronic instrument and equipment

MRI System offering diagnostic efficiency and superior image quality**Environmental performance**

- Mitigation of climate change: 44% reduction in energy consumption per scan thanks to the adoption of a dedicated coil etc.
- Efficient use of resources: A common platform enables the use of many standardized parts.
- Management of chemicals: Major reduction of non-recyclable items as a result of redesigned structure around the magnet.

Product performance

- High image quality: Improved sensitivity and resolution made possible by combining cutting edge technology and a dedicated coil.
- Simple diagnosis: A coil with a wide acquisition range for simple setting and diagnosis.
- Shorter examination time: Fast imaging made possible by combining a coil with a high-speed processing system.

TOSHIBA MEDICAL SYSTEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan
Tel +81-287-26-6280 Fax +81-287-26-6053
URL <http://www.toshiba-medical.co.jp/tmd/english/index.html>
URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>

Available in: Worldwide



Magnetic Resonance Imaging System "EXCELART Vantage Powered by Atlas" MRT-2003

EP-8-087

Machines and equipment

medical electronic instrument and equipment

X-ray CT system offering cutting-edge technology , superior image quality and low environmental impact

Environmental performance

- Mitigation of climate change: 75% reduction per examination in energy consumption thanks to the development of a new detector and increased processing speed. And Development of the first regeneration technology for electric power in a diagnostic CT system

Product performance

- Superior image quality: Development of 160mm-wide area detector enables scanning in a single rotation achieves high-definition images of the heart and cardiovascular organs.
- Patient friendly: More detailed examination in a shorter time greatly reduces the burden on the patient (less than 1/10 (average)) .
- Reduction of exposure dose: Exposure reduced by about 75% with the adoption of denoising software.

TOSHIBA MEDICAL SYSYEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan
Tel +81-287-26-6280 Fax +81-287-26-6053
URL <http://www.toshiba-medical.co.jp/tmd/english/index.html>
URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>



Available in: Worldwide

Area Detector CT AquilionONE TSX-301A

EP-8-088

Machines and equipment

medical electronic instrument and equipment

Ultrasound System offering superior diagnostic precision in a small, environmentally friendly unit

Environmental performance

- Efficient use of resources: An impressive 50% reduction in main body volume and extremely lightweight (35% reduction) .The consistent use of electronic documentation and option software licensing help save valuable resources
- Management of chemicals: 75% reduction in use PVC (polyvinyl chloride) provides environmentally friendly unit.

Product performance

- Excellent Image Quality: Simply stunning performance, improving both the contrast and the spatial resolution across all applications thanks to original Imaging technology.
- More portability and better patient access: Extremely lightweight , impressive reduction in main body volume ,and adoption of operator comfortable hand grip enables easy to move.
- Superior diagnostic precision: Premium clinical performance and high-end features thanks to wide array of probes and Advanced imaging applications.

TOSHIBA MEDICAL SYSYEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan
Tel +81-287-26-6280 Fax +81-287-26-6053
URL <http://www.toshiba-medical.co.jp/tmd/english/index.html>
URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>



Available in: Worldwide

Diagnostic Ultrasound System;Aplio MX; SSA-780A

EP-8-089

Machines and equipment

medical electronic instrument and equipment

Biochemical Analyzer for medical institutions offering improved operability , resource saving**Environmental performance**

- Efficient use of resources: Test efficiency is enhanced through sample carry-over reduction technology. Use of blood collection tubes is halved for resource saving.
- Management of chemicals: Reduction in reagent consumption due to a reduction of the minimum reaction volume.

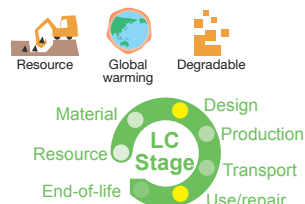
Product performance

- Enhanced test accuracy: The world's lowest impact on the carry-over of samples by a dispensing nozzle ensures data reliability.
- Improvement in operativity :Inheritance of the satisfactory operativity in higher rank model "C series".
- Reduced test time: Optimum operation is possible, such as the function that the priority subject according to urgency can be set up.

TOSHIBA MEDICAL SYSYEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan
 Tel +81-287-26-6280 Fax +81-287-26-6053
 URL <http://www.toshiba-medical.co.jp/tmd/english/index.html>
 URL <http://www.toshiba-medical.co.jp/tmd/english/company/csr/index.html>

Available in: Japan



Biochemical Analyzer TBA-c4000

EP-8-090

Machines and equipment

numerical control equipment

Mitsubishi CNC M700VS Series, Best Controller for Top-level Manufacturing**Environmental performance**

The longevity of parts such as HDD and the cooling fans is improved. Maintenance and the waste of the machine tool are reduced.

----<< Material / Resource saving >>----

It is a saving resource design which is small and lighter. (Volume:13% reduction Mass: 29% reduction)

----<< Energy saving >>----

We have developed the high-efficiency and electric power saving graphic circuit, which reduces power consumption by approximately 66% compared to the previous model.

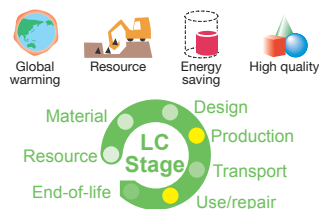
----<< Toxicity / Chemical substances reduction >>----

Conforming to EU RoHS Directive, the occurrence of six regulated substances (Lead, Mercury, Cadmium, Hexavalent chromium, PBB, and PBDE) is controlled.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
 Tel +81-3-3218-9024 Fax +81-3-3218-2465
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://global.mitsubishielectric.com/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



M700VS Series

EP-8-091

Machines and equipment

electric measuring instruments

Solar Panel EL Image Measurement Device

Environmental performance

This device can detect micro cracks or defect points of solar panel which are invisible by visual inspection.

A large number of leading solar panel manufacturers and material manufacturers use our device for development and production of high-power and high-reliable solar panel.

Product performance

- This product features high-sensitivity, high-resolution camera which requires no vacuum cooling.
- Moreover, we realized downsizing of product and price-reduction.
- Features high-definition camera offering twelve million pixels
- Industry's first EL measurement device with autofocus function
- Restrain product price to one-third of previous model

International Test & Engineering Services Co., Ltd.

No.103, 2-34, Heso2-chome, Ritto-shi, Shiga, 520-3031, Japan
Tel 81-77-599-5040
URL <http://www.ites.co.jp/english/>
URL <http://www.ites.co.jp/english/pv/index.html>

Available in: Japan, Worldwide



Global warming



High quality



PVX100

EP-8-092

Machines and equipment

electric measuring instruments

Energy Measuring Unit "EcoMonitorPro"

Environmental performance

Following is its environmental performance features compared to our previous model (per 1 circuit).

-----<< Material / Resource saving >>-----

45% reduction of resource consumption and non-recycling resource

-----<< Energy saving >>-----

51% reduction of electricity consumption when used and 82% reduction of electricity consumption on standby

-----<< Toxicity / Chemical substances reduction >>-----

Compliant with EU RoHS Directive

Product performance

"EcoMonitorPro" can support your energy saving activity. It is capable of accurately measuring the electric consumption of each facility or assembling line. The line-up is for 1,3,5, and 7 circuits. It can be connected to our field-network, CC-Link.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
Tel +81-3-3218-9024 Fax +81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://global.mitsubishielectric.com/index.html>
URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



Global warming



Resource



Energy saving



High quality



EMU2 - RD7 - B

EP-8-093

Machines and equipment

electric measuring instruments

FTIR Gas Analyzer for Semiconductor and FPD Processes

Environmental performance

The FTIR gas analyzers enable the detection and measurement of a wide variety of substances, such as greenhouse gases, whose reduction is required to prevent global warming, PFCs, semiconductor and flat panel display (FPD) process gases. The management of emissions through the quantitative measurement of emitted concentration encourages industries to act to reduce these substances with the appropriate operation of factories and development of productive processes for semiconductors.

*The compact products can be easily carried and installed in small spaces.

*Single and dual cell models available.

*The products are miniaturized by 44% in area occupancy and by 20% in quantity compared with conventional models.

*Thanks to its energy saving design, power consumption is reduced by 44% (220 VA) compared with conventional models.



HORIBA, Ltd.

2 Miyano Higashi, Kisshoin, Minami-ku, Kyoto, 601-8510, Japan
 Tel 81-75-313-8121 Fax 81-75-321-6621 E-mail info@horiba.co.jp
 URL <http://www.horiba.com>
 URL <http://www.horiba.com/uk/semiconductor/products/product-lines/gas-concentration-monitor/details/ftir-gas-analyzer-402/>
 URL <http://www.horiba.com/us/en/social-responsibility/>



Available in: Worldwide

FTIR Gas Analyzer for Semiconductor and FPD Processes

EP-8-094

Machines and equipment

electric measuring instruments

Ambient Air Pollution Gas Analyzer

Environmental performance

An analyzer to continuously measure critical components (NO_x, SO₂, CO, THC, O₃) in the air as well as a monitor to continually supervise the condition of air pollution based on the Air Pollution Control Law for local or regional governments. The units are set at Ambient Air Pollution Monitoring Stations and Roadside Air Pollution Monitoring Stations to observe the conditions of air pollution.

- A lead-free solder alloy is used for the print substrate.
- Compared with conventional models, the product offers a reduction of nearly 13% in power consumption and roughly 21% in the mass of the analyzer (compared with the average value of the five models in this series).



HORIBA, Ltd.

2 Miyano Higashi, Kisshoin, Minami-ku, Kyoto, 601-8510, Japan
 Tel +81-75-313-8121 Fax +81-75-321-6621
 E-mail info@horiba.co.jp
 URL <http://www.horiba.com>
 URL <http://www.horiba.com/process-environmental/products/ambient/>
 URL <http://www.horiba.com/us/en/social-responsibility/>



Available in: Worldwide

Ambient Air Pollution Monitor

EP-8-095

Machines and equipment

electric measuring instruments

Continuous Emission Stack Gas Monitoring System

Environmental performance

This is a continuous stack gas emission monitoring system to measure up to five components (NO_x, SO₂, CO, CO₂, O₂) with one system. The facilities having combustion process for power generation and refuse incineration utilize the system not only for environmental pollution control but also to conduct adequate management to meet the total volume control standard by each local or regional government.

- Lead-free solder alloy is used for the print substrate.
- The product is reduced by 52% in volume, by 28% in mass and by 25% (200 VA) in power consumption compared with conventional models.

HORIBA, Ltd.

2 Miyanohigashi, Kisshoin, Minami-ku, Kyoto, 601-8510, Japan

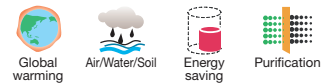
Tel +81-75-313-8121 Fax +81-75-321-6621

E-mail info@horiba.co.jp

URL <http://www.horiba.com>, <http://www.horiba.com/us/en/social-responsibility/>

URL <http://www.horiba.com/process-environmental/products/combustion/cems-stack-gas-emission/details/enda-5000-stack-gas-analysis-system-336/>

Available in: Worldwide



Continuous Emission Stack Gas Monitoring System

EP-8-096

Machines and equipment

electric measuring instruments

Breaker with Energy Measuring Function and Display

Environmental performance

Following is its features in environmental conscious design compared to the previous MDU breaker.

-----<< Material / Resource saving >>-----

31% reduction of resource consumption (MDU part only)

-----<< Energy saving >>-----

37% reduction of electricity consumption (MDU part only)

-----<< Toxicity / Chemical substances reduction >>-----

Compliant with RoHS

Product performance

MDU breaker (a breaker with measuring function and display) is capable of measuring, displaying and transmitting circuit information with having VT and CT inside of the body and Measuring Display Unit outside of the body. Wide-range line-up of MDU breakers and capability of connecting to our field network, CC-Link, can contribute to your saving energy activity.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL <http://global.mitsubishielectric.com/index.html>

URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>

URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide



NF400-SEP with MDU

EP-8-097

Machines and equipment

electric measuring instruments

GCMS-QP2010 Ultra/GCMS-QP2010 SE Equipped with Ecology Mode**Environmental performance**

Equipped with Ecology mode where analysis standby status is automatically recognized by software to turn OFF unnecessary power or start sleep mode. Power consumption during analysis standby is 36 % (277 W) less than former Shimadzu instruments. Under normal use, annual power consumption is 26 % less and CO₂ emissions are 1.1 tons less (evaluated by Shimadzu specifications). Using Ecology mode in production process, CO₂ emissions are reduced by 30 % and He carrier gas consumption by 51 %. Annually, CO₂ emissions are 28 tons less and He gas is at least 300 cylinders less.

Product performance

Gasifies target samples and performs qualitative/quantitative analysis on trace amounts of organic compounds from several nanograms to several femtograms. Applicable for various purposes such as monitoring minute compounds related to pollution, human health, development/evaluation of highly-functional new materials and chemical products.



GCMS-QP2010 Ultra / GCMS-QP2010 SE

SHIMADZU CORPORATION

1, Nishinokyo-Kuwaracho, Nakagyo-ku, Kyoto, 604-8511, Japan
 Tel +81-75-823-1113 Fax +81-75-823-2062
 URL <http://www.shimadzu.com/index.html>
 URL <http://www.shimadzu.com/products/lab/ms/oh80jt0000001r9g.html>
 URL <http://www.shimadzu.com/about/environmental/index.html>

EP-8-098

Machines and equipment

electric measuring instruments

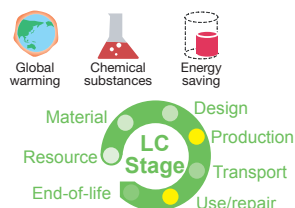
Energy Measuring Unit for MELSEC-Q Series**Environmental performance**

----<< Energy saving >>----

Reduction of energy and costs can be expected through productivity improvement by connecting this device to the MELSEC-Q Series sequencer to measure the amount of electricity used for each product and production process in production facilities and lines.

----<< Toxicity / Chemical substances reduction >>----

Meets the RoHS Directive of Europe.



Energy Measuring Unit for "MELSEC-Q Series" QE81WH

Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan
 Tel +81-3-3218-9024 Fax +81-3-3218-2465
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://global.mitsubishielectric.com/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Worldwide

EP-8-099

Machines and equipment

electric measuring instruments

High performance and crystal clear display supports measuring and monitoring systems

Environmental performance

----<< Material / Resource saving >>----

15% reduction in parts number.

40% less kinds of connection improves ease of dismantling.

----<< Energy saving >>----

This instrument is installed onto power receiving and distributing equipment in factories, then measures Voltage, Current, Power and Watthour, displays them on itself and sends their data in order to be controlled for total energy saving of the factory.

30% less energy is consumed from our previous model.

----<< Toxicity / Chemical substances reduction >>----

RoHS-compliant



Global warming



Energy saving



High quality



Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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URL <http://global.mitsubishielectric.com/company/csr/index.html>



Available in: Asia, Europe

ME96NSR, ME96NSR-MB

EP-8-100

Machines and equipment

electric measuring instruments

Online Dioxin Precursor Monitor CP-2000

Environmental performance

The CP-2000 Dioxin Precursor Monitor is an online real-time monitor of chlorophenol which is one of the dioxin precursors (intermediates of dioxin formation). It is known that chlorophenol and dioxin have a high correlation of concentration in flue gas. This monitor can measure with high sensitivity up to a few tens of ppt of chlorophenols in flue gas.

And the concentration is automatically calibrated under of the changes in flue gas components and the combustion conditions by continuous automatic calibration. So it can be stable measurement. The CP-2000 can continuously monitor transient emission of chlorophenol, so that the parameters of the incinerator and the combustion conditions can be controlled to reduce the emission of dioxin.

It prized "Nikkei Earth Environment Technical Award in 2000" and "R&D 100 Award in 2001"



Air/Water/Soil



Chemical substances



Purification



Hitachi High-Tech Trading Corporation

24-14, Nishi-Shimbashi, 1-chome, Minatoku, Tokyo, 105-8418, Japan

Tel 81-3-3504-7311 Fax 81-3-3504-7363

E-mail keisoku@nst.hitachi-hitec.com

Available in: Japan, Worldwide, Asia, Asia and Oceania, Europe, North America

Online Dioxin Precursor Monitor CP-2000

EP-8-101

Machines and equipment

electrical machinery, equipment and supplies

Non-contact Laser type On-line Thickness Measuring System

Environmental performance

- (1) The laser type is to measure the thickness of the plastic films and sheets (=web) in the manufacturing process
- (2) It equalize the thickness of the web in measuring the thickness and as a result, it is expected to decrease the consumption of the oil resources which are the materials for plastic
- (3) The conventional method of measuring by hands using micrometers needs much labor. However it improves the accuracy and speed of measuring in using our system. The comparison is more than 100 times with the measurement points *
- (4) Our system is able to measure in the process which save the loss in manufacturing and it consequently contribute to save the resource

*Comparison with JIS K 7130 3.3.5 b) c)

Product performance

- (1) Range: 3 mm (MAX)
- (2) Resolution: 0.1 μ m
- (3) Measuring pitch: 1 mm
- (4) Sensor scanning speed: 100 mm/s

YAMABUN ELECTRONICS CO., LTD.

2-13, Shinjyonishi, Higashiosaka, Osaka, 578-0964, Japan
 Tel +81-6-6745-3048 Fax +81-6-6745-8482
 E-mail yamabun@mx.mesh.ne.jp
 URL <http://www.yamabun-ele.co.jp>

Available in: Japan, Southeast Asia



Laser type On-line Thickness Measuring System

EP-8-102

Machines and equipment

electrical machinery, equipment and supplies

Desk-top Off-line Sheet Thickness Measuring System

Environmental performance

- (1) Our Desk-top Off-line Sheet Thickness Measuring System is the equipment which measures the thickness of the cut piece of plastic films and sheets from products for quality control purpose.
- (2) The conventional method of measuring by hands using micrometers needs much labor. However it improves the accuracy and speed of measuring in using our thickness measuring system. The comparison is more than 100 times with the measurement points *

* Comparison with JIS K 7130 3.3.5 b) c)

Product performance

- (1) Measuring range: "TOF-5R" 0.02-0.2 mm, "TOF-4R" 0.03-3 mm
- (2) Measurement resolution: "TOF-5R" 0.1 μ m, "TOF-4R" 0.5 μ m, 1.0 μ m
- (3) Measuring pitch: 1 mm
- (4) Films and sheets feed speed: "TOF-5R" 36 mm/s, "TOF-4R" 58 mm/s (With films and sheets automatic feed device)

YAMABUN ELECTRONICS CO., LTD.

2-13, Shinjyonishi, Higashiosaka, Osaka, 578-0964, Japan
 Tel +81-6-6745-3048 Fax +81-6-6745-8482
 E-mail yamabun@mx.mesh.ne.jp
 URL <http://www.yamabun-ele.co.jp>

Available in: Japan, Southeast Asia



Desk-top Off-line Contact type Thickness Measuring System (TOF-5R)

EP-8-103

Machines and equipment

electrical machinery, equipment and supplies

Soft X-ray type On-line Thickness Measuring System

Environmental performance

- (1) The X-ray type is to measure the thickness of the plastic films and sheets (=web) in the manufacturing process
- (2) It equalize the thickness of the web in measuring the thickness and as a result, it is expected to decrease the consumption of the oil resources which are the materials for plastic
- (3) Safe operation is ensured by no active radiation source in the system
- (4) Our system is able to measure in the process which save the loss in manufacturing and it consequently contribute to save the resource

Product performance

- (1) Range: 1-1000 μ m
- (2) Resolution: 0.01 μ m
- (3) Measuring pitch: 1 mm
- (4) Sensor scanning speed: 10-350 mm/s

YAMABUN ELECTRONICS CO., LTD.

2-13, Shinjyonishi, Higashiosaka, Osaka, 578-0964, Japan
 Tel +81-6-6745-3048 Fax +81-6-6745-8482
 E-mail yamabun@mx.mesh.ne.jp
 URL <http://www.yamabun-ele.co.jp>

Available in: Japan, Southeast Asia



Soft X-ray type On-line Thickness Measuring System

EP-8-104

Machines and equipment

terminal units

Energy saving data collecting server "EcoServer II"

Environmental performance

Features in environmental conscious design compared to the previous model.

----<< Material / Resource saving >>----

66% reduction of resource consumption

----<< Energy saving >>----

54% reduction of electricity consumption.

Product performance

EcoServer II collects energy data from MDU breaker (a breaker with energy measuring unit and display) and EcoMonitorPro (Energy measuring equipment) and transmit the data to the Internet/Intranet through Ethernet (10BASE-T). The transmitted data is graphed and can be seen on the Web browser.

Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan
 Tel +81-3-3218-9024 Fax +81-3-3218-2465
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://global.mitsubishielectric.com/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



MES-255BR-A

EP-8-105

Machines and equipment

manufacturing products

The WINPRO hybrid street light

Environmental performance

The WINPRO hybrid street light feature clean hybrid power generation systems incorporating both wind and solar power generation modules.

The WINPRO hybrid street light is a clean power generation systems that doesn't exhaust CO₂ that causes global warming.

As long as the hybrid power generation system can produce electricity by utilizing such natural energies as wind and sunlight, it can supply sustainable electric power. Therefore, it will be a suitable power supply system for disasters and the like.

Product performance

WINPRO vertical axis three blades can start rotation at the lowest wind velocity of 1 m/s, and the blades can continue stable rotation with the wind coming from any direction.

The WINPRO wind power generator produces almost no noise at low speeds and thus will not cause any noise pollution. In addition, it will not cause such trouble as vibration, resonance, and electromagnetic interference.

WINPRO CO.,LTD.

Publicity Flex Building, Shinko-cho 19-8, Chuo-ku, Niigata-shi, Niigata-ken,

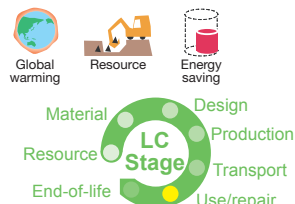
950-0965, Japan

Tel +81-3-3591-2636 Fax +81-3-3591-2665

E-mail sano@winpro.co.jp

URL <http://www.winpro.co.jp/english/index.html>

Available in: Japan, Worldwide



"SAIL" "LANCE"

EP-8-106

Machines and equipment

manufacturing products

Nikon Total Station "Nivo Series"

Environmental performance

- (1) Compact and light body
Reduces 33% of the weight and 35% of the volume compared to the previous series
- (2) Power consumption efficiency
Improves 35% in angle measurement and 35% in precise distance measurement compared to the previous series (under the Nikon's same test condition)
- (3) Reduction of hazardous substances
*Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive
*Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

"Nivo series" designed for all surveying and construction measurement users. The Nivo series are supported with Nikon optics to see clear images in both bright and low light conditions. Operated by an easy to use interface all day long, with assistance from hot swappable batteries providing endless power in the field. The Nivo series are compact in size and light weight, making them convenient to carry over long distances.

NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan

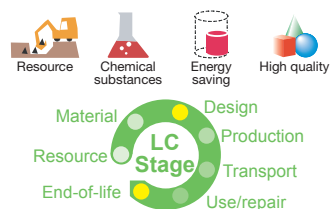
Tel +81-3-3214-5311

URL <http://www.nikon-trimble.com/>

URL <http://www.nikonpositioning.com/>

URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Nikon Total Station "Nivo Series"

EP-8-107

Machines and equipment

insulators

Armaflex Class 1

Environmental performance

- Efficient heat conductors with superb thermal conductivity in compliance with energy conservation designing standards on new buildings.
- Manufacturing products using nitrogen in the air, rather than freon gas
- Safe products under regular monitoring by EMAS
- Acquired the highest level of energy efficiency for construction materials with less emissions of formaldehyde and VOCs.
- Classified as general wastes due to construction materials that do not contain asbestos.

Product performance

Eco-friendly elastomeric rubber foamed insulator

Armatech Co., Ltd.

3rd Floor Yeongseon Bldg., 2-2 Garak-dong, Songpa-gu, Seoul, 138-160, Republic of Korea
Tel +82-2-3401-8563 Fax +82-2-430-8518
E-mail suel1208@naver.com
URL <http://www.armatech.co.kr>

Available in: Worldwide



Eco-friendly elastomeric rubber foamed insulator
Armaflex has been certified by the UN Global Compact.

EP-8-108

Machines and equipment

non-destructive testing services

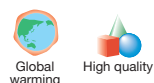
Spectroscopic Ellipsometer

Environmental performance

We provide Ellipsometry Solutions for your thin films. Non-destructively characterize film thickness and optical constants for a wide range of coatings: amorphous and polycrystalline silicon, porous and nanostructured coatings, CIGS, CdTe/CdS, SiNx and other AR coatings, organic layers, transparent conductive oxides like ITO, AZO, and ZnO, and much more.

Product performance

M-2000: Revolutionary rotating compensator technology. Many spectral ranges available from 193 to 1700nm.



M-2000

J. A. Woollam Japan Corporation

Fuji Bldg. 2F, 5-22-9, Ogikubo, Suginami-ku, 167-0051, Japan

Available in: Japan, Worldwide

EP-8-109

Machines and equipment

industries unable to classify

Waste Plastics Liquefaction System

Environmental performance

- Mitigation of climate change: The product oil can be used as an alternative fuel for boilers and power generation, and therefore its substitute share corresponds to a CO₂ reduction. In addition, a higher CO₂ reduction effect is obtained, if feeding stock recycling in which the product oil is returned to the crude oil purification flow is carried out.
- Efficient use of resources: The user can make use of the oil, the effluent gas, the residue, the hydrochloric acid, etc. which are obtained in the recovery process, so it is possible to raise the recycling rate.

Product performance

This product is a system which converts the plastic mixture in general waste or industrial waste to oil by thermal decomposition. The product oil can be utilized for various applications (diesel generator fuel, boiler fuel, chemical raw materials, etc.) after the oil has been fractionated into heavy oil, medium oil and light oil. The system consists of the pre-treatment process (pelletizing of the charged material), the dehydrochlorination process (desalting, thermal decomposition), and the product oil recovery process (fractional distillation).

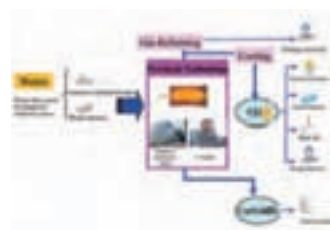
TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-4844

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Waste Plastic Liquefaction System

EP-8-110

Machines and equipment

industries unable to classify

The solid fuel production system from sewage sludge by pyrolysis

Environmental performance

- Mitigation of climate change: The CO₂ reduction effect is larger than that of the incineration system, because the feeding of extra fuel is unnecessary for the running of process, and because solid carbon is separated owing to the thermal decomposition of the charged organic materials.

Product performance

The system consists of the main facilities for pre-treatment, pyrolysis in a gasification furnace, gas-reforming and gas-cleaning, and the equipment of heat-source or gas-engine generation. The charged material is converted to gas usable as fuels by pyrolysis and gasification. In addition, it is possible to take out carbide (char) of high utility value from the charge, and thereby high recyclability is realized. Main features.

- (1) The amount of sludge is decreased in volume and in weight when converted to solid carbon fuel, so the sewage-disposal plant can reduce costs.
- (2) As for solid fuel, long-term storage is possible because its main component is stable carbides. Moreover, problems due to bad smell seldom happen.
- (3) Neighborhood factories using steam can use carbon fuel as a bio-fuel that is neutral for CO₂ discharge.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-4844

URL <http://www.toshiba.co.jp/index.htm>

URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Recycle system of sewage treatment sludge

EP-8-111

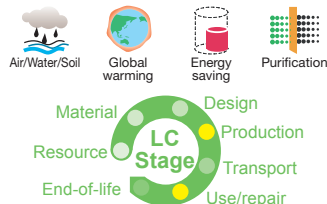
Machines and equipment

air pollution control equipments

Air pollution Control Equipments

Environmental performance

We make pollution control equipments for air & water pollution. When a solid fuel is burnt, it leads to generation of air pollution, our air pollution control equipment helps in reducing air pollution. Our products are used by industries and commercial establishments.



Thermax Limited

Thermax House, 14 Pune Mumbai Road, Wakdevadi, Pune, Maharashtra, 411003, India
 Tel 912066051200 Fax 912025541226
 E-mail vishal.mehra@thermaxindia.com
 URL www.thermaxindia.com



Available in: Worldwide

EP-8-112

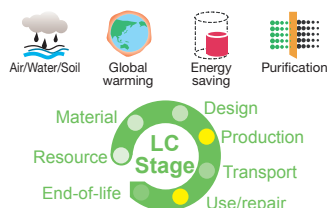
Machines and equipment

wastewater treatments

Wastewater treatment Plants

Environmental performance

We make plants which can recycle waste water. During the various industrial process wastewater is generated. This causes pollution in the water bodies. Wastewater treatment plants are used for avoiding water pollution and hence environment friendly. Our products are used by industries and commercial establishments.



Thermax Limited

Thermax House, 14 Pune Mumbai Road, Wakdevadi, Pune, Maharashtra, 411003, India
 Tel 912066051200 Fax 912025541226
 E-mail vishal.mehra@thermaxindia.com
 URL www.thermaxindia.com



Available in: Worldwide

EP-8-113

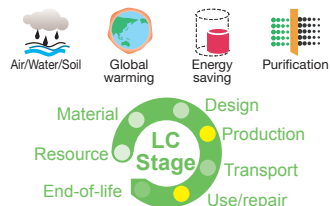
Machines and equipment

boilers

Biomass Boilers

Environmental performance

We make boilers which can use waste heat and biowaste such as rice husk, rice straw, baggase etc. These are products which use bio-waste for generation of process steam or power instead of using CO₂ generating Coal as the fuel. Our products are used by industries and commercial establishments.



Thermax Limited

Thermax House, 14 Pune Mumbai Road, Wakdevadi, Pune, Maharashtra, 411003, India
 Tel 912066051200 Fax 912025541226
 E-mail vishal.mehra@thermaxindia.com
 URL www.thermaxindia.com



Available in: Worldwide

EP-8-114

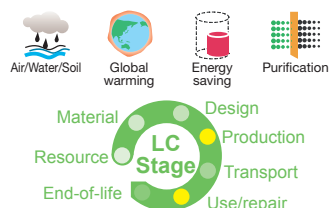
Machines and equipment

solar concentrators

Solar Concentrators

Environmental performance

We have developed solar concentrators which uses solar energy for generation of process steam. Rather than burning coal, oil or biomass, solar energy can be used to generate steam which can be used for process application or power generation. Our products are used by industries and commercial establishments.



Thermax Limited

Thermax House, 14 Pune Mumbai Road, Wakdevadi, Pune, Maharashtra, 411003, India
 Tel 912066051200 Fax 912025541226
 E-mail vishal.mehra@thermaxindia.com
 URL www.thermaxindia.com



Available in: Worldwide

EP-8-115

Machines and equipment

power transformers

DISTRIBUTION & POWER TRANSFORMER

Environmental performance

Efficiency is better than previous products

Product performance

efficiency \geq 98.90% (TC02500-206F1A-N)

efficiency \geq 98.80% (TC02000-206F1A-N)

efficiency \geq 98.70% (TC01500-206F1A-N)

efficiency \geq 98.60% (TC01250-206F1A-N)



UNELECTRA INTERNATIONAL CORP.

12F, 66, Chung-Cheng Road, Shin-Chuang, Taipei 242, Taiwan, 242, Republic of China

Tel +86-2-8994-4025 Fax +86-2-8994-4022

E-mail ken1123.lin@msa.hinet.net

URL <http://www.uic.com.tw>



DISTRIBUTION & POWER TRANSFORMER 3 ϕ 60HZ
 22.8/11.4KV-380Y/220V 2500KVA 3 ϕ 60HZ
 22.8/11.4KV-380Y/220V 2000KVA 3 ϕ 60HZ
 22.8/11.4KV-380Y/220V 1500KVA 3 ϕ 60HZ
 22.8/11.4KV-380Y/220V 1250KVA

Available in: Taiwan (Rep. of China)

EP-9-001

Others

automobile maintenance services

MAGIC PLUS Fuel Additive**Environmental performance**

Refer to product brochure attached

Product performance

MAGIC PLUS Fuel Additive enables excellent Pollution control by 30% to 50%, saving in fuel resources and usage, with fuel economy of about 10% to 30% (on pre-existing levels), while giving better engine performance - thereby contributes to energy saving for users and country, and aides efforts to control global warming.



5ml, 10ml, 20ml, 50ml, 500ml, 1ltr packings for different types of usages.

GREEN POWER MARKETING

9, NATHAMUNI STREET, T. NAGAR, CHENNAI, 600017, India
Tel (0091) 42606901 / (0091) 95000 60903 Fax 044-42606901
E-mail info@greenpower2000.com
URL www.greenpower2000.com
URL www.magicplus2.com

Available in: Middle and Near East

EP-9-002

Others

grain and soybean farming

IBUKI Grade LD_Seed coating and soil improving agent**Environmental performance**

Agricultural soil improvement requires large amounts of compost, time and effort. This product is a soil-improving material composed mainly of natural plant-based fibers. The IBUKI Grade LD is a capable of providing a sense of hope for traditional farming techniques by bringing about major changes and progress. Properties of use: when seeds are coated with a small application of 3kg per 10 ha, definite effects can be expected; can also be used efficiently on rhizospheres, and easily over large-scale areas. Example: to be used simultaneously with repellent coating. Substantial effects: both productivity and quality of products are greatly improved; harvest quantities, flavor and freshness improve simultaneously. Other: no harmful effects from continuous use. Effective under conventional fertilization plans and management.

**HANYO SCIENCE CO.,LTD.**

OFFICE 3-58-5 NOBATA AKUTAMI, GIFU-CITY, 501-3145, Japan
Tel +81-58-241-2401 Fax +81-58-241-2287
E-mail ibuki@hanyokagaku.com
URL <http://www.hanyokagaku.com/>
URL <http://www.hanyokagaku.com/ld.html>

Available in: Japan, Worldwide

EP-9-003

Others

crop farming

Plus (PLUS) compost**Environmental performance**

Turning substances with potential risks of water contamination to decomposed manure and applying them as fertilizer improve physical and biological properties and increase soil organic matters and thus enable to produce organic agricultural products.

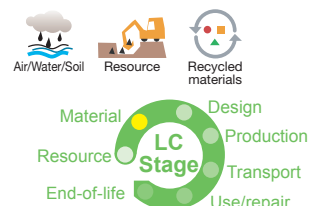
Product performance

Utilizing livestock manure and sawdust to create environmentally safe decomposed manure for use in facility horticulture through high temperature fermentation and ageing by obligatory aerobe.

Sejin Inc.

200-9 Yuseong-ri, Hwasan-myeon, Yeongcheon-si, Gyeongsangbuk-do, 770-851, Republic of Korea
Tel +82-54-335-3559 Fax +82-54-335-8594
E-mail toint@hanmail.net

Available in: Worldwide



Possible to use for facility horticulture through high temperature fermentation and ageing process

EP-9-004

Others

elemental feeds

L-threonine, which reduces nitrogen excretion from livestock animals**Environmental performance**

Vegetable ingredients commonly used in animal feeds do not necessarily have the optimal amino acid profile for animals. Insufficient supply of a certain amino acid leads to increased excretion of nitrogen because of less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-Threonine reduces the nitrogen excretion from animals by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency, and contributes to the reduction of greenhouse gas emission and the alleviation of soil and water pollution since it is demonstrated that the nitrogen excreted from animals negatively affect them. In addition, because the usage of L-Threonine in the feeds can sustain the ideal growth of animals with a less amount of feeds, it helps save the land area for feed crop production.

Product performance

Supplementation of L-Threonine, generally the second limiting amino acid in pigs and the third limiting in chickens, can improve gain and feed utilization efficiency of animals.

Ajinomoto Co., Inc.

15-1 Kyobashi 1-Chome, Chuo-ku, Tokyo, 104-8315, Japan
Tel +81-3-5250-8140 Fax +81-3-5250-8270
E-mail tomo_takagi@ajinomoto.com
URL www.ajinomoto.com/aan
URL <http://www.ajinomoto.com/csr/index.html>



EP-9-005

Others

elemental feeds

L-Tryptophan, which reduces nitrogen excretion from livestock animals**Environmental performance**

Vegetable ingredients commonly used in animal feeds do not necessarily have the optimal amino acid profile for animals. Insufficient supply of a certain amino acid leads to increased excretion of nitrogen because of less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-Tryptophan reduces the nitrogen excretion from animals by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency, and contributes to the reduction of greenhouse gas emission and the alleviation of soil and water pollution since it is demonstrated that the nitrogen excreted from animals negatively affect them. In addition, because the usage of L-Tryptophan in the feeds can sustain the ideal growth of animals with a less amount of feeds, it helps save the land area for feed crop production.

Product performance

Supplementing L-Tryptophan, which generally becomes limiting in pig and chicken feeds, can improve gain and feed utilization efficiency of animals.

Ajinomoto Co., Inc.

15-1 Kyobashi 1-Chome, Chuo-ku, Tokyo, 104-8315, Japan
 Tel +81-3-5250-8140 Fax +81-3-5250-8270
 E-mail tomo_takagi@ajinomoto.com
 URL www.ajinomoto.com/aan
 URL <http://www.ajinomoto.com/csr/index.html>



EP-9-006

Others

elemental feeds

L-Lysine monohydrochloride, which reduces nitrogen excretion from livestock animals**Environmental performance**

Vegetable ingredients commonly used in animal feeds do not necessarily have the optimal amino acid profile for animals. Insufficient supply of a certain amino acid leads to increased excretion of nitrogen because of less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-Lysine reduces the nitrogen excretion from animals by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency, and contributes to the reduction of greenhouse gas emission and the alleviation of soil and water pollution since it is demonstrated that the nitrogen excreted from animals negatively affect them. In addition, because the usage of L-Lysine in the feeds can sustain the ideal growth of animals with a less amount of feeds, it helps save the land area for feed crop production.

Product performance

Supplementation of L-Lysine, generally the first limiting amino acid in pigs and the second limiting in chickens, can improve gain and feed utilization efficiency of animals.

Ajinomoto Co., Inc.

15-1 Kyobashi 1-Chome, Chuo-ku, Tokyo, 104-8315, Japan
 Tel +81-3-5250-8140 Fax +81-3-5250-8270
 E-mail tomo_takagi@ajinomoto.com
 URL www.ajinomoto.com/aan
 URL <http://www.ajinomoto.com/csr/index.html>



EP-9-007

Others

elemental feeds

AJIFOL

Environmental performance

Co-product from amino acid fermentation contains not only the nitrogen source but also abundant source of nutrition such as the amino acid, sugar and peptide. The co-product have been used as a fertilizer of agriculture or a feed of livestock. Furthermore, foliar fertilizer, AJIFOL series, which supplemented with some micro-components for importance of crop growth are developed and those are sold in Brazil, Peru, Bolivia, USA, Thailand, Indonesia and Viet Nam. The foliar fertilizer is absorbed directly from the leaf of crops, so the soil is hardly polluted. The AJIFOL is good agricultural materials for the environment.

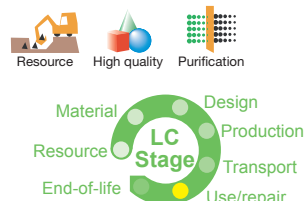
Product performance

The foliar fertilizer, AJIFOL series, contains amino acid, sugar, peptide and some micro-components. The AJIFOL is effective in the growth of crops and the improvement of yield. Furthermore, the AJIFOL is effective as for the quality of taste and the color improvement.

Ajinomoto Co., Inc.

1-1, SUZUKI-CHO, KAWASAKI-KU, KAWASAKI-SHI, 210-8681, JAPAN
 Tel +81-44-244-0922 Fax +81-44-211-8306
 E-mail asd_alink@ajinomoto.com
 URL www.ajinomoto.com/aan
 URL <http://www.ajinomoto.com/csr/index.html>

Available in: Japan, Asia, Europe, North America, South America



AJIFOL sold in each country

EP-9-008

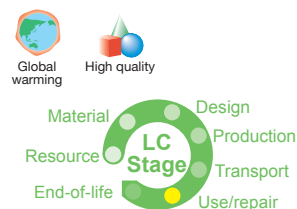
Others

fertilizers

TetsuRiki

Environmental performance

Plants need iron as well as human being. Because, Plants grow by photosynthesis, photosynthesis is performed in chlorophyll, and iron is indispensable element to elaborate chlorophyll. Therefore, efficient iron supply makes it possible to activate photosynthesis, encourage growing of plants, and produce more organic matter as photosynthetic products. Producing organic matter fix carbon dioxide in the atmosphere, carbon dioxide is considered as cause of global warming, in view of this, encouraging plants growth lead to prevention of global warming.



TetsuRiki-Agri

Aichi Steel Corporation

1.Wano-Wari, Arai-Machi, Tokai-Shi, Aichi-Ken, Japan

Available in: Japan

EP-9-009

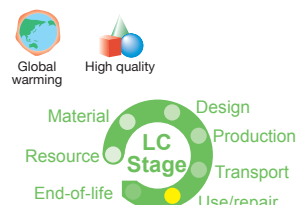
Others

fertilizers

TetsuRiki

Environmental performance

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Aichi Steel Corporation

1.Wano-Wari, Arao-Machi, Tokai-Shi, Aichi-Ken, Japan

Available in: Japan



TetsuRiki-Aqua

EP-9-010

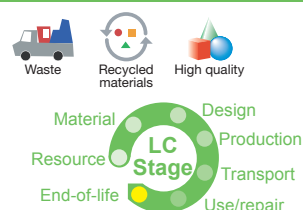
Others

fertilizers

Environment-friendly fertilizer made from beer yeast

Environmental performance

Our company Asahi Food & Healthcare Co., Ltd. sells the liquid fertilizer "Housakumonogatari (the good harvest story)" to agricultural producers. The fertilizer is made from the cell wall of brewer's yeast by enzymatic reaction. "Housakumonogatari" is based on the hydrolysate of the cell wall of brewer's yeast. It increases the plant's intrinsic immunity power by the activity of the β - glucan that exists in cell walls, and it promotes thereby the healthy growth of the plants. Since our raw material is natural yeast which is safe and secure to both humans, and the crops, we have received high evaluation from the users. Our company will continue development of the safe and secure goods by making use of the superior characteristics given by the hydrolysate made from the cell wall of brewer's yeast, such as "growth acceleration", "improvement of immunity", etc.



Asahi Food & Healthcare Co., Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan
Tel +81-3-5608-2771 Fax +81-3-5608-2773



Good Harvest Story

EP-9-011

Others

fertilizers

MesraAlam Kitchen Composter**Environmental performance**

Composting bin: has a 20kg capacity, an internal sieve for separating solid compost from the liquid compost tea, a bottom valve for compost tea collection and a tight fitting lid for hermetically sealed conditions. To be used in conjunction with MesraAlam Bokashi™.

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun,
Kuching, Sarawak, 93350, Malaysia
Tel 60-82-369080 Fax 60-82-361080
E-mail percival@mesraalam.com
URL <http://www.mesraalam.com>
URL <http://www.mesraalam.com/products.html>



Available in: Malaysia

EP-9-012

Others

fertilizers

Vermi compost produced with the help of earth worms**Environmental performance**

Vermi compost enriches the soil with low cost technology. Avoiding use of chemical fertilizers and also to avoid ruin the land. Its nitrogen and carbon ratio is high. Its preparation is easier; easy to adopt low cost technology

Product performance

Vermi compost enriches the soil with low cost technology with easy adaptability.

**Mother Theresa Development Research Institute**

No.4/3B, Freeman Street, Kottapattu, Golden Rock Post, Ponmalaipatti, Trichy,
620004, India
Tel +91-431-2491671
E-mail mtldri2000@gmail.com
URL <http://www.freewebs.com/mtldri>



Available in: Worldwide

Vermi compost produced with the help of earth worms

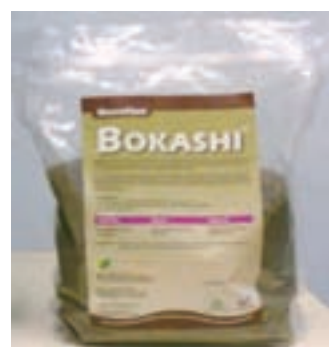
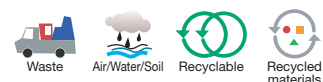
EP-9-013

Others

fertilizers

MesrAlam Bokashi**Environmental performance**

MesrAlam Bokashi™ is a unique in-house product used to recycle your kitchen waste into an organic soil conditioner. It consists of rice bran inoculated with Efficient Microbes that helps balance the microbial ecology of the soil and supply nutrients to your garden. Kitchen garbage makes up almost 50% of household waste. Help reduce landfill input by recycling your kitchen waste!

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>

Available in: Malaysia

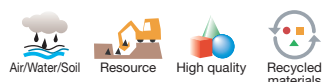
EP-9-014

Others

fertilizers

MesrAlam Bio Agri**Environmental performance**

MesrAlam Bio Agri is produced for use in organic production, working to replenish and maintain soil's naturally existing balance and ecology. Unlike toxic, chemical additives or synthetic sprays, which contaminate and leave soil nutrient depleted, MesrAlam Bio Agri™ inoculates soil and groundwater with soil-based nutrients which are found to naturally benefit agricultural environments. With MesrAlam Bio Agri™, soil is brought back to life! With proper application, crop quality and yield will improve over time.

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>

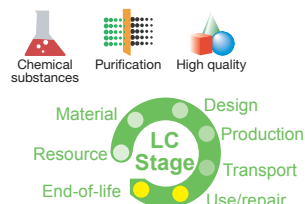
EP-9-015

Others

fertilizers

MesrAlam Bio Fertiliser**Environmental performance**

MesrAlam Bio Fertilizer™ is a natural organic fertilizer that helps increase and maintains the soil with all the nutrients and live microbes that produce natural N-P-K required for agriculture and plants. It also aids in the development of root systems that produce stronger healthier plants more able to resist pests and drought conditions.

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 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>



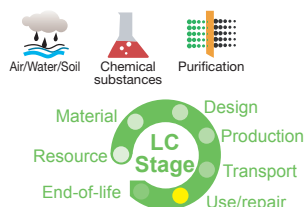
EP-9-016

Others

cleaning liquid

Plantex® All in One Solution Multipurpose Plant Extract Concentrate**Environmental performance**

A highly concentrated plant extract largely derived from *Musa paradisiaca*, other herbs, fruits and vegetables, which is in liquid form and containing a variety of nutrients, minerals and enzymes. The solution exhibits powerful bactericidal, fungicidal and virucidal action as such it could be used as disinfectant and odor eliminator in places where human and animal activities are very common.

**Trevis Internationale, Corporation**

No. 7 St. Martin St. Cityland Townhouse Brgy. Oranbo Pasig City, Philippines, Philippines
 Tel (+632) 9102678 Fax (+632) 6327076
 E-mail trevisintlcorp2003@yahoo.com
 URL www.plantexgreen.com



EP-9-017

Others

cleaning liquid

MesrAlam Bio Klean**Environmental performance**

MesrAlam Bio Klean uses nature's own design to break down and rid areas of pathogenic compounds which may be detrimental to the health and balance of an environment.

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>

EP-9-018

Others

livestock feed

MesrAlam Bio Livestock**Environmental performance**

The MesrAlam Bio Livestock™ is a liquid based feed/drink additive packed with a unique blend of naturally occurring beneficial bacteria which helps to boost and maintain the host's underlying microbial ecology. Its use as an additive is extremely safe to both livestock and the environment, with no occurring side effects. Used regularly, Bio Livestock™ can improve your animal's digestion and aid in feed conversion.

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>

EP-9-019

Others

livestock feed

MesrAlam Bio Feed**Environmental performance**

MesrAlam Bio Feed Additive™ represents the optimal and most inclusive assortment of bioactive compounds designed to increase feed efficacy, enhance growth and performance in the livestock industry. MesrAlam Bio FeedAdditive™ comprehensive mixture of components has a well established, evidence based beneficial effects on intestinal environment resulting in enhancement of digestion and absorption and subsequently, improvement in feed efficiency.

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>



EP-9-020

Others

pesticides

MesrAlam Pest Away**Environmental performance**

MesrAlam Bio Pest Away™ is a liquid base repellent which deters pests from treated areas by eliminating or altering the chemical signals which attracts them. It produced through a natural fermentation process (non-GMO) and offers a sustainable solution for organic farming and animal husbandry.

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>



EP-9-021

Others

pesticides

MesrAlam Disease Away**Environmental performance**

The MesrAlam Bio Disease Away™ is a liquid based solution which treats and prevents plant related diseases from occurring. And unlike most commercially available herbicides, MesrAlam Bio Disease Away™ does not comprise of toxic chemicals, which renders it safe from any potential side effects or damages to the plant and soil. It is brewed through a unique blend of local herbs with natural medicinal elements that effectively treats and prevents plant related diseases.

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>

EP-9-022

Others

soils

MesrAlam Aqua Zest**Environmental performance**

Use as a solid organic compound for treating the soil during preparation and treating the organic matter in the pond during rearing

**Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)**

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak, 93350, Malaysia
 Tel 60-82-369080 Fax 60-82-361080
 E-mail percival@mesraalam.com
 URL <http://www.mesraalam.com>
 URL <http://www.mesraalam.com/products.html>

EP-9-023

Others

odor reducers

MesrAlam Bio Odour Away

Environmental performance

MesrAlam Odour Away is an all-natural, biological odor reducer containing powerful microbes and enzymes which break down organic matter to eliminate odor from its source. MesrAlam Odour Away™ is environmentally safe, and its living benefits continue to work even after the initial application.



Mesra Alam Borneo Sdn. Bhd. (Co. Ltd.)

1st Floor, Lot 3180, Block 11, Jln. Kedandi, Tabuan Dusun, Kuching, Sarawak,
93350, Malaysia
Tel 60-82-369080 Fax 60-82-361080
E-mail percival@mesraalam.com
URL <http://www.mesraalam.com>
URL <http://www.mesraalam.com/products.html>



EP-9-024

Others

mineral water

I LOHAS

Environmental performance

I LOHAS is delicious natural water obtained from carefully chosen regions that are famous for their water. The product employs a 12g PET bottle called the "eco-ru bottle Shiboru" (520ml) - the lightest in Japan (*) that uses less plastic resin per container. It has not only a reduced impact on the environment, but also expected to save space because it requires little strength to make it compact after consumption by twisting the container to crush it.

In April 2010, I LOHAS started to employ next generation PlantBottle™ PET bottle, partially made from plants (5-30%), which is expected to advance its environmental friendly characteristics.

*For 550ml or smaller PET bottle, as of Oct.2010 (Source: Research by Coca-Cola Japan)

Coca-Cola Japan Company Limited

6-3, Shibuya 4Cho-me, Shibuya-ku, Tokyo, 150-0002, Japan
Tel +81-120-308509
URL <http://www.cocacola.co.jp/>
URL <http://i-lohas.jp/>



I LOHAS

Available in: Japan

EP-9-025

Others

beers

Can beer using "green energy"

Environmental performance

Asahi Breweries, Ltd. is making efforts to realize a "low-carbon society" through the promotion of natural energy and energy conservation. This product is produced by using "green power," the electrical power produced by natural energy, including solar and wind power, as well as biomass.

The Green energy Mark is put on the packaging of products produced using green power.

Also this is the first such effort in the food industry to use green power during self-manufacturing.

The Green energy Mark indicates that the product is produced using green power. Under the system, companies pay to register their mark to support the generation of electricity by natural energy.

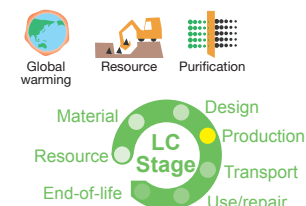
Asahi Breweries is committed to developing environmentally-friendly products.

Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan

Tel +81-3-5608-5195 Fax +81-3-5608-5201

URL <http://www.asahibeer.co.jp/english/>



Asahi Super Dry 350ml

EP-9-026

Others

paper products

Low-pollution, high-strength, environmentally friendly paper towels "LABO TOWEL"

Environmental performance

*An environmentally friendly low-halogen towel with low dioxin content in consideration of the environmental impact of its disposal and incineration

*Its embossed surface gives it excellent strength and durability as well as long life.

Product performance

*Wiping with this paper towel causes no residual contamination because of its low content of corrosion-causing materials such as chlorine, sulfur and fluorine. It is also suitable for wiping inspection/testing equipment and machines that need to remain free of contamination and corrosion and as a safe packaging material for precision components.

*Low risk of air contamination caused by fiber loss thanks to negligible fluff formation after use

*Excellent water/oil absorption rates and durability due to its embossed surface. Superior strength and durability due to the avoidance of fiber cutting in the embossing process

Unichemy Co.,Ltd.

1-11-1 Tenma-cho, Atsuta-ku Nagoya-shi, Aichi-ken, 456-0034, Japan

Tel +81-52-682-5619 Fax +81-52-679-6281

E-mail eigyobu@unichemy.co.jp

URL <http://www.unichemy.co.jp>

URL http://www.unichemy.co.jp/pdf_selectline/1-2catalog.pdf



LABOTOWEL

EP-9-027

Others

paper products

Low-pollution, high-strength, environmentally friendly paper wiper "Labo Wiper mini"

Environmental performance

*An environmentally friendly low-halogen towel with low dioxin content in consideration of the environmental impact of its disposal and incineration
 *Its crepe-finish surface gives it excellent strength and durability as well as long life.

Product performance

*Wiping with this paper wiper causes no residual contamination because of its low content of corrosion-causing materials such as chlorine, sulfur and fluorine. It is also suitable for wiping inspection/testing equipment and machines that need to remain free of contamination and corrosion and as a safe packaging material for precision components and polished products due to its moderate softness combined with strength.
 *Low risk of air contamination caused by fiber loss thanks to negligible fluff formation after use
 *Excellent durability due to the avoidance of pulp fiber cutting in the crepe-finish surface

Unichemy Co.,Ltd.

1-11-1 Tenma-cho, Atsuta-ku Nagoya-shi, Aichi-ken, 456-0034, Japan
 Tel +81-52-682-5619 Fax +81-52-679-6281
 E-mail eigyobu@unichemy.co.jp
 URL <http://www.unichemy.co.jp>
 URL http://www.unichemy.co.jp/pdf_selectline/2-2_2-3catalog.pdf



Labowiper mini

EP-9-028

Others

mechanical rubber products

eco-friendly Rubber Track "ECO²-TRACK"

Environmental performance

Bridgestone manufactures developed high durability rubber under hard environment. The durability rubber enabled to protect steel codes more, prolong use phase, and improve comfortability and strong grip. In addition, Bridgestone has more technologies: anti-rust steel code, prevention to flow off (high-stiff design) or crack (pro-edge). The eco-friendly rubber track "ECO²-TRACK" is made by these technology and got much durability. "ECO²-TRACK" will contribute to cost down and reduce waste by the durability.

Product performance

- improvement silently
- less vibration in driving.
- lightweight
- low damage the road surface
- shorter hours of maintenance

Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan
 Tel +81-3-5202-8203 Fax +81-3-5202-6719
 URL <http://www.bridgestone.co.jp/english/index.html>

eco-friendly Rubber Track "ECO²-TRACK"

EP-9-029

Others

energy saving solutions

Energy Efficiency Service for HVAC by using ICT

Environmental performance

- Mitigation of climate change: 10-20% reduction of energy consumption by the reduced consumption of cool water, hot water and fan power and the prevention of excessive cooling and heating.
- Efficient use of resources: Control is executed by software. Minimization of hardware means resource saving in the manufacturing phase.

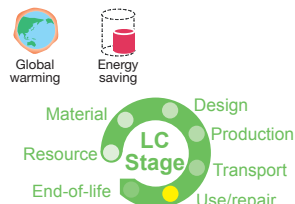
Product performance

- Comfortable environment: Air-conditioning control based on Predicted Mean Vote (PMV) maintains comfortable indoor environment.
- Product spec: Need BACnet/IP used as communication protocol with existing BMS (Building Management System).

TOSHIBA CORPORATION Smart Community Div.

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 Tel +81-3-3457-3043 Fax +81-3-5444-9312
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Neuro-PMV Control

EP-9-030

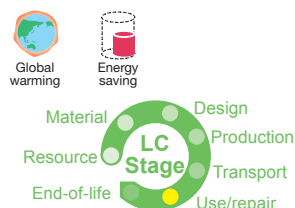
Others

water boilers

Industrial hot water supply equipment "Eco-cute" contributing to CO₂ emission reduction

Environmental performance

This is the Japan's Largest industrial hot water supply equipment using one of the NWFs, CO₂. The capacity of hot water supply is 80kW. It enables to supply 20 tons of water a day at 90 degrees Celsius. In comparison with the heavy oil burning boilers, it can reduce the CO₂ emission more than 40%.



This product has been developed jointly with CHUBU Electric Power Co., Ltd.

Mayekawa Mfg.Co.,Ltd.

3-14-15, Botan, Kotou-ku, Tokyo, 135-8482, Japan
 Tel 81-3-3642-8181 Fax 81-3-3643-7094
 E-mail pubic@mayekawa.co.jp
 URL <http://www.mayekawa.co.jp>

Available in: Japan

EP-9-031

Others

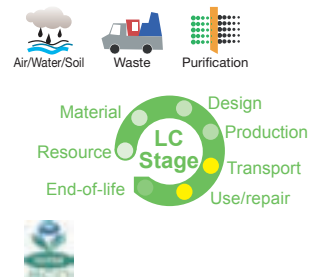
separators

"ClearBallast", Hitachi Ballast Water Purification Systems**Environmental performance**

This ballast water purification equipment is used to protect ocean ecosystems and prevent pandemic spread. It causes no secondary marine pollution and is an environment conscious system, as it does not use any disinfecting agents.

Product performance

An epoch-making ballast water purification system, which rapidly removes seawater organisms in ballast water on board using coagulant and magnetic separation method.

**Hitachi Plant Technologies, Ltd.**

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan
 Tel 81-3-5928-8100 Fax 81-3-5928-8701
 E-mail koho-senden@hitachi-pt.com
 URL <http://www.hitachi-pt.com>
 URL <http://www.hitachi-pt.com/products/es/ballast/index.html>
 URL <http://www.hitachi-pt.com/csr/index.html>



Available in: Japan

Process Outline

EP-9-032

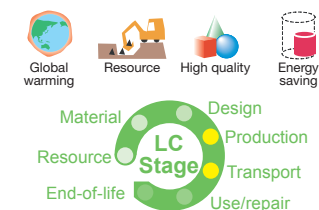
Others

daily disposable soft contact lenses

Daily disposable soft contact lens "Seed 1 Day Pure"**Environmental performance**

"Seed 1 Day Pure", the first full-scale Japanese production daily disposable soft contact lens is devoted to environmental consideration and user-friendliness. It adopts a 9 % less plastic package from existing lines with 31 % less solution inside. The 17 % lighter individual package makes the 32-lens box 9 % lighter while with 2 extra lenses. Downsizing also realized a 16% volume reduction in the individual package. The smaller and lighter package and the domestic production enable a drastic reduction of CO₂ emissions from transportation compared with imported products.

The production site, SEED Konosu Lab., is the first all-electric factory in the industry clean with Zero CO₂ emissions from its facilities. It is also water-saving equipped with a recycling system to internally reuse the water discharged in the course of lens production.

**SEED CO.,LTD.**

2-40-2 Hongo Bunkyo-ku Tokyo, 113-8402, Japan
 Tel +81-3-3813-0193 Fax +81-3-3813-0052
 URL <http://www.seed.co.jp/>



Available in: Japan

Seed 1 Day Pure

EP-9-033

Others

electronic paper

Electronic Paper Product "AeroBee™"

Environmental performance

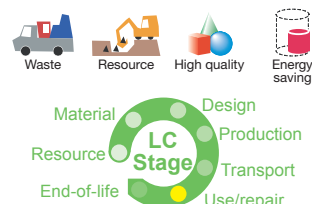
Bridgestone's electronic paper product "AeroBee™" provides paper like appearance. Such as paper white, wide viewing angles and comfortable reading under all lighting conditions including bright sunlight. We supply ultra-low power display solutions for Electronic Paper markets (ESL, Information board, E-reader and so on). Bridgestone's electronic paper product "AeroBee™" aims to become a new standard display technology for electronic paper applications and is expected to contribute the reduction of paper resources.

Product performance

- Quick Response Liquid Power Display technology
- keep display in power-off
- wide viewing angles and comfortable like a paper
- varied fonts and color photos
- speedy change of display
- enable to use under low temperature such as a refrigerator
- the biggest size, the thinnest size, flexibility, low cost

Bridgestone Corporation

10-1, kyobashi 1-chome, chuo-ku, Tokyo, 104-8340, Japan
 Tel +81-3-3563-6343 Fax +81-3-3563-6341
 URL <http://www.bridgestone.co.jp/english/index.html>
 URL <http://www2.bridgestone-dp.jp/global/adv-materials/QR-LPD/index.html>



Electronic Paper Product "AeroBee™"

EP-9-034

Others

manufacturing products

Nikon fieldmicroscope "Fabre Photo EX"

Environmental performance

Nikon fieldmicroscope "Fabre Photo EX" has the following characteristics, considering the environment.

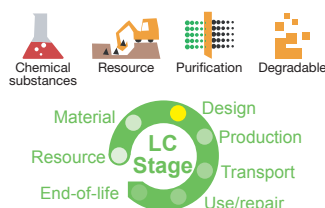
- (1) Use of plant-based plastic: Five microscope body parts are made from plant-based plastic, so we can save petroleum resource
- (2) Reduction of hazardous substances (comply with the EU RoHS Directive)
 - *Eliminate polyvinyl chloride (PVC) from body, case, strap, etc.
 - *Use of lead-free solder: achieve for the parts, such as electro circuit of illumination equipment
 - *Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

"Fabre Photo EX" enables microscopic observation of insects, plants and minerals at 20x magnification and digital photography during observation by the dedicated photographic light path. Nikon digital SLR cameras and digital compact cameras can be attached by optional camera attachments.

NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
 Tel +81-3-3214-5311
 URL <http://www.nikon.com/>
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>



Nikon fieldmicroscope "Fabre Photo EX"

Available in: Japan

EP-9-035

Others

manufacturing products

Nikon Laser rangefinder " Laser 350G "

Environmental performance

"Laser 350G" has the following characteristics, considering the environment.

- (1) Extended product life: achieve the long life by adopting waterproof mechanism, which filled body inside with nitrogen gas to prevent raindrops from soaking inside
- (2) Reduced mass: 14% mass reduction compared with Laser 500G
- (3) Reduction of hazardous substances (comply with the EU RoHS Directive)
 - *Eliminates polyvinyl chloride (PVC) from body, case, strap, etc.
 - *Use of lead-free solder: achieve for the parts, such as electro circuit
 - *Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

Laser rangefinder measures a distance by projecting laser beams to a target and measuring the traveling time taken by the beams to be reflected off the target and returned to the instrument. This "Laser 350G" is compact and high-performance laser rangefinder specially designed for golf.

NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
 Tel +81-3-3214-5311
 URL <http://www.nikon.com/>
 URL <http://www.nikon.com/products/sportoptics/lineup/laser/350/index.htm>
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Worldwide



Nikon portable rangefinder "Laser 350G "

EP-9-036

Others

manufacturing products

Nikon Binocular "4x10D CF"

Environmental performance

Nikon binocular "4x10D CF" has the following characteristics, considering the environment.

- (1) Reduction of weight
 Reduces 50% of the total weight by cutting 31% of the total number of parts compared to the previous model "6x15 CF". Contributes to waste reduction and resource saving.
- (2) Reduction of hazardous substances
 *Meets the Nikon Green Procurement Standards and the criteria of EU RoHS Directive
 *Non-use of Pb, Cd, Hg, Cr6+, PBB, PBDE
 *Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

- *The thinnest and lightest model in Nikon binoculars having been released so far
- *Convenient to carry by virtue of the flat body without protuberances
- *Easy to use, only needs to adjust eye width and focus
- *Provides the high quality of view, namely bright and razor-sharp images, by multi-coated lenses and prisms

NIKON CORPORATION

Shin-Yurakucho Bldg., 12-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
 Tel +81-3-3214-5311
 URL <http://www.nikon.com/>
 URL <http://www.nikon.com/about/csr/nikon-csr/index.htm>

Available in: Japan mainly



Nikon Binocular "4x10D CF"

EP-9-037

Others

manufacturing products

Paper packing tapes

Environmental performance

Recyclable, Waste reduction
- compostable and environmentally friendly



Deobureo Industry

10-108 Shihwa Tool Arcade, 1367-1 Jeongwang-dong, Shiheung-si, Gyeonggi-do, 429-450, Republic of Korea
Tel +82-31-430-3266 Fax +82-31-430-3268
E-mail kindkwon@paran.com
URL www.greentape.co.kr



Available in: Worldwide, Republic of Korea

EP-9-038

Others

manufacturing products

neo-art SE 80gsm

Environmental performance

1. Save resources by minimum using of pulp materials.
2. Reduce energy when manufacturing through an efficient drying process.
3. Eco-friendly products causing no environment pollution since no hazardous chemicals were used in the manufacturing process.
4. Use eco-friendly materials received FSC-CoC and PEFC-CoC certificates.
5. Minimize water pollution through biological/chemical treatment of wastewater generated in the manufacturing process.

Product performance

We produce papers for various types of premium books and printed materials including magazines, catalogues, brochures, leaflets and calenders.

Moorim Paper

505 Sinsa-dong, Gangnam-gu, Seoul., 135-887, Republic of Korea
Tel +82-2-3485-1671 Fax +82-2-3485-1566
E-mail brianjung@moorim.co.kr
URL www.moorim.co.kr
URL <http://moorim.co.kr/product/product.asp?pNum=MR04010201>
URL <http://www.moorim.co.kr/about/status.asp>



Premium double-sided coating paper with superior gloss and surface treatment. This paper contains neither blots nor paper dust and is without curl-up tendency.

Available in: Asia, Europe, U.S.A, Republic of Korea, South Africa

EP-9-039

Others

manufacturing products

neo-snow-white 80gsm

Environmental performance

1. Save resources by minimum using of pulp materials.
2. Reduce energy when manufacturing through an efficient drying process.
3. Eco-friendly products causing no environment pollution since no hazardous chemicals were used in the manufacturing process.
4. Use eco-friendly materials received FSC-CoC and PEFC-CoC certificates.
5. Minimize water pollution through biological/chemical treatment of wastewater generated in the manufacturing process.

Product performance

We produce papers for various types of premium books and printed materials including magazines, catalogues, brochures, leaflets and calenders.

Moorim Paper

505 Sinsa-dong, Gangnam-gu, Seoul., 135-887, Republic of Korea
 Tel +82-2-3485-1671 Fax +82-2-3485-1566
 E-mail brianjung@moorim.co.kr
 URL www.moorim.co.kr
 URL <http://moorim.co.kr/product/product.asp?pNum=MR04010202>
 URL <http://www.moorim.co.kr/about/status.asp>

Available in: Asia, Europe, U.S.A, Republic of Korea, South Africa



High quality flat coat paper highlighting subdued and elegant features.

EP-9-040

Others

manufacturing products

neo-label SE 75,80gsm

Environmental performance

1. Save resources by minimum using of pulp materials.
2. Reduce energy when manufacturing through an efficient drying process.
3. Eco-friendly products causing no environment pollution since no hazardous chemicals were used in the manufacturing process.
4. Use eco-friendly materials received FSC-CoC and PEFC-CoC certificates.
5. Minimize water pollution through biological/chemical treatment of wastewater generated in the manufacturing process.

Product performance

We produce papers for various types of product labels including beverage, liquor bottles, plastic containers.

Moorim Paper

505 Sinsa-dong, Gangnam-gu, Seoul., 135-887, Republic of Korea
 Tel +82-2-3485-1671 Fax +82-2-3485-1566
 E-mail brianjung@moorim.co.kr
 URL www.moorim.co.kr
 URL <http://moorim.co.kr/product/product.asp?pNum=MR04010301>
 URL <http://www.moorim.co.kr/about/status.asp>

Available in: Asia, Europe, U.S.A, Republic of Korea, South Africa



Double coated woodfree paper removed curl-up tendency, high smoothness and printing quality.

EP-9-041

Others

educational and learning support services

PET SOLAR CAR**Environmental performance**

Another clean-energy product from ELEKIT-PET SOLAR CAR! The kit contains the solar battery panel with the stand and the motor and tire sets to which you can set a PET bottle, a milk carton, or whatever around you to make your original eco-car! A perfect kit for a handicraft for summer.

Product performance

[Specifications]

Power source: Solar battery, Max.1.4V-350mA

Driving method: Front-wheel drive

Circular driving: OK

Gearshift: 2 shifts

Estimated assembly hour: Approx.1.5 hours

Target age: 10 and up

*PET bottle is not supplied.

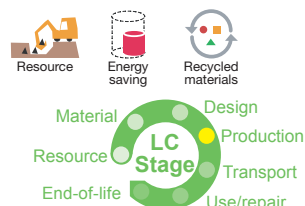
EK JAPAN CO.,LTD.

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan

Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail info@elekit.co.jpURL <http://www.elekit.co.jp>URL http://www.elekit.co.jp/material/english_product_html/JS-690.php

Available in: Japan, Worldwide



EP-9-042

Others

educational and learning support services

SOLAR HYBRID CAR**Environmental performance**

SOLAR HYBRID CAR that can run on land and water with its paddle wheels.

The well-designed body made of styrofoam, free from chlorine gas emission, is a remarkable feature of the model.

Product performance

[Specifications]

Power source: Solar Battery, Max.1.4V-350mA

Size: W166 x H79 x L240 (mm)

Weight: 140g

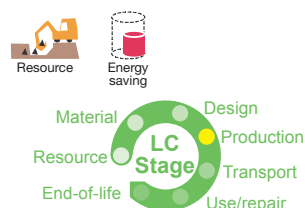
EK JAPAN CO.,LTD.

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan

Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail info@elekit.co.jpURL <http://www.elekit.co.jp>URL http://www.elekit.co.jp/material/english_product_html/JS-688.php

Available in: Japan, Worldwide



EP-9-043

Others

educational and learning support services

SUPER SOLAR CAR**Environmental performance**

SUPER SOLAR CAR, a pollution-free, low noise, "Sun-run vehicle" that carries the high performance motor and the gear structure is simple but sophisticated as a high-tech car.

Product performance

[Specifications]

Power source: Solar battery, Max.1.4V-350mA

Size: W145 x H45 x D225 (mm)

Weight: 140g

EK JAPAN CO.,LTD.

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan

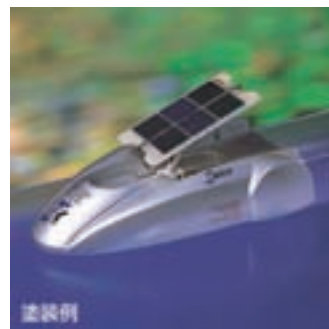
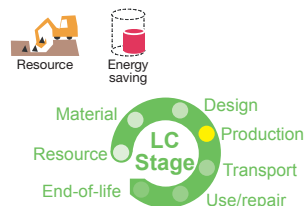
Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail info@elekit.co.jp

URL <http://www.elekit.co.jp>

URL http://www.elekit.co.jp/material/english_product_html/JS-685.php

Available in: Japan, Worldwide



EP-9-044

Others

golf tees

L'earth wheat composite golf tees**Environmental performance**

Made of wheat by-products which is an abundant and renewable source. It does not compete with food supply or require deforestation. High content of recycled and certified food-safe plastic used. This helps in the lowering of greenhouse emissions and slowdown of global warming. Less toxic gases are being emitted when incinerated.

Product can also be made oxo-biodegradable, thus helping to reduce landfill. Oxo-biodegradation leaves no harmful residues and fragments, and time to degradation is programmable.

Awards and Certifications for wheat-composite material:

1. Singapore Green Label certified
2. SEC-Senoko Power Green Innovation Award Winner 2010
3. SMa Sustainable Manufacturing Certified 2010-2012

With L'earth, it is simple, enjoyable, and sustainable embracing an eco-conscious and modern lifestyle.

Product performance

Non-toxic

Withstand temperatures -20 to 160 deg celsius

Durable and sturdy

Available in 2 natural colours: Beige and Brown

Customised colours available

Trial packs of 5 tees each available

L'earth S Pte Ltd

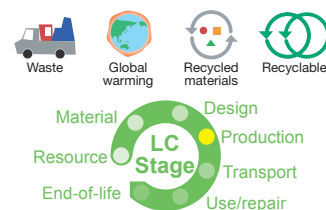
21 Toh Guan Road East, Toh Guan Centre, Singapore 608609, Singapore

Fax +6565154557

E-mail marketing@mylearth.sg

URL <http://www.mylearth.sg>

Available in: Worldwide



L'earth wheat composite golf tees

EP-9-045

Others

toys

Toys, Educational Toys, Green Toys

Environmental performance

PlanToys is a leader in green manufacturing. We were the first toy company in the world to use natural recycled rubberwood from trees that no longer produce latex. Our Green Concept Design means we use only eco-friendly materials to manufacture our products and so produce minimal waste. Only recycled and recyclable non-toxic materials are used, including soy-based inks for packaging and printing. Our factories operate on integrated energy sources using biomass and solar cells.

Product performance

Our Eco-product design concept is a systematic approach that always takes the environment into consideration during manufacturing and the end-of-life cycle for all our toys.

Plan Creations Co., Ltd.

114/1 Sathorn 10, North Sathorn Rd., Bangkok, 10500, Thailand
Tel +66 2237 9070
E-mail mktg@plantoy.com
URL www.plantoy.com
URL www.plantoy.com/about_sustainability.php

Available in: Worldwide



Green Toy - Green Company

EP-9-046

Others

toys

Wooden Educational Toys - Green Toys

Environmental performance

We select only eco-friendly materials for our products in addition to ensuring production with minimal waste.

Product performance

PlanToys products are decorated with safe, non-toxic water-based dye for coloring wood. And our printed materials and packaging, employs soy and water-based ink that is more readily biodegradable than chemical ink and printed on recycled paper.

Plan Creations Co., Ltd.

114/1 Sathorn 10, North Sathorn Rd. Bangkok, 10500, Thailand
Tel 66 (0) 2237-9070 Fax 66 (0) 2237-5790
E-mail mktg@plantoy.com
URL www.plantoy.com
URL www.plantoy.com/catalog.php
URL www.plantoy.com/about_sustainability.php

Available in: Worldwide



PlanToys: Green Toys - Green Company

EP-9-047

Others

rosary

Ring Tasbih Of Olive

Environmental performance

We have huge source of Olive in our areas
Small size of Olive seeds are found sufficient for the making of Olive Tasbih.
We have decided to Introduce a Ring Tasbih of 11 Beads to meet maximum demand of people.

Product performance

Beneficial and Merci full



Directly Scanned

New Environmental Enterprises Development (Need) Proposed

Village Chitian Qabran P.O Lora (Hazara) Via Rawalpindi Pakistan, 22360,
Pakistan
Tel 92-321-9843372 Fax 92-995-617697
E-mail fazalrahimawan@hotmail.com
URL www.oliveseeds.webs.com

EP-9-048

Others

rosary

Pure Olive Tasbih

Environmental performance

Many villages of Pakistan are surrounding by the huge quantity of Olive trees. Small size of Olive fruit can not provide sufficient quantity of Olive oil so it was known as useless. Large quantity of Olive fruit was eaten by goats and wildlife. Wood of Olive was known as for timber and fuel only. After successful home based Research in making of Pure Tasbih (Rosary) of Olive Seeds , Community training and exhibition response Now every farmer in villages know importance of Olive tree and protects it for more income and benefits.
We can no meet the demand of Hajj if we pluck Olive seeds from all over the hills of country.

Product performance

Historically appreciated , Pure and Rare Rosary of Olive as for first time.

New Environmental Enterprises Development (Need) Proposed

Village Chitian Qabran P.O Lora (Hazara) Via Rawalpindi Pakistan, 22360,
Pakistan
Tel 92-321-9843372 Fax 92-995-617697
E-mail fazalrahimawan@hotmail.com
URL www.oliveseeds.webs.com



Olive Seeds Tasbih

EP-9-049

Others

jewelry

Bracelets**Environmental performance**

Any body does not like to keep a Date Seed with himself after Eating of Date .Large quantity of Date Seeds are thrown away specially during the month of Ramadan.

This source has been successfully converted by us into a very attractive bracelet.

Product performance

Beneficial ,Beautiful and more attractive.



Directly Scanned

New Environmental Enterprises Development (Need) Proposed

Village Chitian Qabran P.O Lora (Hazara) Via Rawalpindi Pakistan, 22360, Pakistan

Tel 92-995-617697 Fax 92-321-9843372

E-mail fazalrahimawan@hotmail.com

URL www.oliveseeds.webs.com

EP-9-050

Others

nutrients

Banana Nutrient Powder**Environmental performance**

The raw material for this banana nutrient powder is made from organic banana which are free from chemicals. Using cow urine, cow dung, herbal decoction, vermin compost by earthworms, decomposed leaves and by using herbal pesticides these banana are grown. Thus the harmful chemical fertilizers and pesticides are avoided in the growing of banana itself.

The manufacturing process is very simple process of boiling, cooling and then grinding in a pollution-free environment.

Product performance

Banana powder is produced from the banana which is ready to ripen. By a simple process of boiling and cooling and then griding it we get powdered form of banana powder. This is a baby food, nutritive, easily digestible by the babies. No artificial or synthetic chemical are added in the banana powder. Banana powder gives energy to babies, easily digestible and affordable by the poor. This powder can be eaten by mixing boiled and cooled water (add sugar if the baby likes it) .

**Mother Theresa Development Research Institute**

No.4/3B, Freeman Street, Kottapattu, Golden Rock Post, Ponmalaipatti, Trichy, 620004, India

Tel +91-431-2491671

E-mail mtdri2000@gmail.com

URL http://www.freewebs.com/mtdri

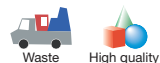
EP-9-051

Others

engine oil

AGIP Diesel Sigma Plus Engine Oil**Environmental performance**

Petroleum garbage is a mixture of many different kinds of petroleum and chemical waste dominated by used oil. To address Veredium Energy Ventures had adapted a recycling and retrieval system for 25% of their sold engine oil.

**Veredium Energy Ventures, Inc.**

EPC Complex 2074 JB Miguel St Bambang, Pasig City Philippines 1600,
Philippines
Tel (+632) 5711102 Fax (+632) 5711101
E-mail petteri@veredium.com
URL www.veredium.com



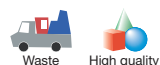
EP-9-052

Others

engine oil

AGIP Extra HTS Engine Oil**Environmental performance**

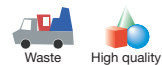
Petroleum garbage is a mixture of many different kinds of petroleum and chemical waste dominated by used oil. To address Veredium Energy Ventures had adapted a recycling and retrieval system for 25% of their sold engine oil.

**Veredium Energy Ventures, Inc.**

EPC Complex 2074 JB Miguel St Bambang, Pasig City Philippines 1600,
Philippines
Tel (+632) 5711102 Fax (+632) 5711101
E-mail petteri@veredium.com
URL www.veredium.com



EP-9-053	Others
	engine oil
<div>XTEC Fully Synthetic Engine Oil</div> <div>Environmental performance</div> <div><p>Petroleum garbage is a mixture of many different kinds of petroleum and chemical waste dominated by used oil. To address Veredium Energy Ventures had adapted a recycling and retrieval system for 25% of their sold engine oil.</p></div> <div>Veredium Energy Ventures, Inc.</div> <div><p>EPC Complex 2074 JB Miguel St Bambang, Pasig City Philippines 1600, Philippines Tel (+632) 5711102 Fax (+632) 5711101 E-mail petteri@veredium.com URL www.veredium.com</p></div>	



Eco-services



1 Product-related services

(maintenance, upgrading, repair/reform)

2 Reuse and recycling services

(collection, etc.)

3 Outsourcing services

(waste disposal, control of hazardous items, chemical treatment, facility management)

4 Management-related services

(consulting, accreditation, analysis, evaluation, etc.)

5 Others

(e-commerce, eco-tourism, hotels, information transfer, etc.)

In the *Eco-products Directory 2011*, “eco-services” refer not only “technological improvements” but also “ways to use products” and “environmental management” as well as “mechanisms that enable environmental impact reduction through financial products.” Typical eco-services include vehicle sharing, where, for example, 10 people share one vehicle instead of each driving his/her own. This results in fewer vehicles on the road, thus reducing the environmental impact of travel considerably. As another example of eco-service, regular maintenance and upgrading can be performed on conventional products so that they can be used longer. In this directory, “eco-services” also refer to “eco-funds where investments are made in business firms with excellent performance in caring for the environment.”

The technological development of eco-products normally requires time and money. However, eco-services often only require good ideas to promote environmental impact reduction. Eco-services have not yet been widely recognized by consumers. A system should be developed to publicize the availability and advantages of eco-services so that they permeate society, encouraging further environmental impact reduction.

ES-1-001

Product-related

printing on non-paper

NETLOOPASS : a system using IC-tags to manage returnable containers in logistics

Environmental performance

From the perspective of consideration for the environment, returnable containers are frequently used for logistics between enterprises. However, there are many new problems related to management such as a lack of containers when shipping a product or an excess of containers. These problems are caused by an inability to determine the number of containers in inventory or their whereabouts. We have developed NETLOOPASS as an optimal solution to such problems.

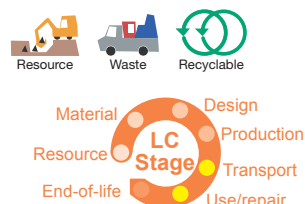
Product performance

By attaching IC-tags to returnable containers such as folding containers and palletes, it is possible to prevent containers from being lost, retained or purchased in excess by managing when, where and in what quantity they are shipped or returned.

Customers can choose 13.56MHz (ISO15693 Standard) or UHF (EPC global Class 1 Generation 2 Standard) IC-tags and it is possible to use IC-tags even if the container is made of metal.

TOPPAN PRINTING CO., LTD.

1, Kanda Izumi-cho, Chiyoda-ku, Tokyo, 101-0024, Japan
Tel +81-3-3835-5549 Fax +81-3-3835-0847
E-mail eco@toppan.co.jp
URL <http://www.toppan.co.jp/english/>
URL <http://www.toppan.co.jp/english/csr/>



ES-1-002

Product-related

hydraulic cement

Ecocement System

Environmental performance

Ecocement is the recycling system for incineration residues from MSW incinerators. Such residues are utilized as the major raw material of Ecocement with minimum addition of natural resources.

Characteristics of Ecocement

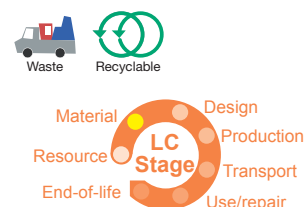
- (1) This system ensures that dioxins contained in residues are safely decomposed during high temperature in excess of 1,350°C
- (2) This system includes equipment that extracts and refines heavy metals contained in the incineration residues for recycling.
- (3) This system contributes to decrease of landfill burden.

Product performance

Ecocement is similar in quality to ordinary Portland cement. It is utilized to redy-mixed concrete, concrete product and soil stabilizer.

TAIHEIYO CEMENT CORPORATION RESEARCH & DEVELOPMENT CENTER

2-4-2, Osaku, Sakura City, Chiba Prefecture, , 285-8655, Japan
Tel +81-43-498-3840 Fax +81-43-498-3809
URL <http://www.taiheiyo-cement.co.jp>



Available in: Japan

Ecocement System

ES-1-003

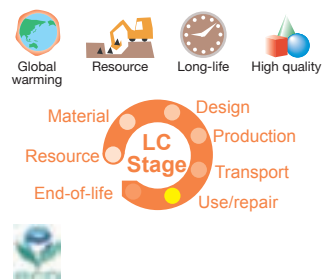
Product-related

treatment of metal surface

High-Performance Surface Treatment Technology "TRIBEC™" Series

Environmental performance

Various surface treatment technologies are applied to molds for extending their lives. Recently growing environmental awareness has resulted to change the type of lubricants along with other drastic modifications and has shortened the operating lifetime of molds. In an effort to improve their lifetime, Hitachi Tool Engineering developed "the TRIBEC™ series". By identifying the necessary performance attributes of each application based on extensive analysis on mold abrasion over many years, Hitachi Tool Engineering has achieved high-performance surface treatment of molds that is operating-environment specific. "The TRIBEC™ series" provides protection for molds used even in harsh conditions where environmentally conscious lubricating methods are used. In addition, because "the TRIBEC™" can suppress with minimal abrasion, the mold enables reuse by applying it again after polishing.



Hitachi Tool Engineering, Ltd.

SEAVANS North Building, 1-2-1, Shibaura, Minato-ku, Tokyo, 105-0023, Japan
 Tel 81-3-6858-2204 Fax 81-3-6858-2229
 URL <http://www.hitachi-tool.co.jp/e/index.html>
 URL http://www.hitachi-tool.co.jp/j/products/products_index_e.html
 URL <http://www.hitachi-tool.co.jp/e/environment/index.html>



Available in: Worldwide

Products with TRIBEC™ applied

ES-1-004

Product-related

monitor and control equipment

Mitsubishi Factory Automation Energy Management Solution

Environmental performance

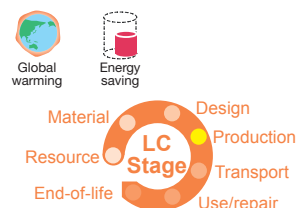
The solution introduced e&eco-F@ctory realizes production efficiency in the standpoint of energy consumption with four merits.

- (1) Detection of waste of industrial operation
- (2) Detection of variation in Quality
- (3) Preventive maintenance of productive facilities
- (4) Calculation of detailed manufacturing costs

Product performance

e&eco-F@ctory proposes four solutions for productivity improvement with Energy information.

- (1) Measurement products
- (2) Visualizing products
- (3) Energy saving products
- (4) Energy saving application products



Mitsubishi Electric Corporation

2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310, Japan
 Tel +81-3-3218-9024 Fax +81-3-3218-2465
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://global.mitsubishielectric.com/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/environment/products/index.html>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>



Available in: Worldwide

The solution for Productivity improvement and Cost reduction with Energy information

ES-1-005

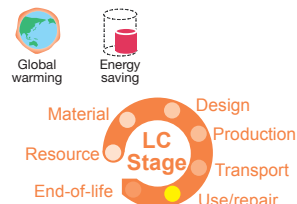
Product-related

air conditioners

Remote Energy Saving Tuning Service (for Building Air Conditioning)

Environmental performance

This product provides remote energy saving control for the VRV series and helps customers reduce CO₂ emissions. The energy saving control for this service optimizes control so as to eliminate unnecessary use of air conditioners based on accumulated air conditioner operations data and weather information in the locality of the customer's facility. As a result, the system reduces the likelihood of impaired comfort levels by the air conditioner when compared to ordinary on-and-off control systems.



DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan
 Tel +81-6-6374-9304 Fax +81-6-6373-4380
 E-mail kankyo@daikin.co.jp
 URL <http://www.daikin.com>
 URL http://www.daikin.com/global_ac/products
 URL <http://www.daikin.com/csr>



ES-1-006

Product-related

package software

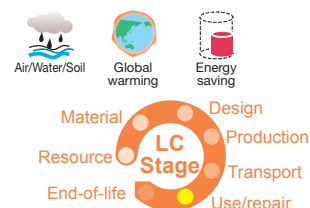
Interactive Whiteboards Software : StarBoard Software

Environmental performance

- (1) Reduce environmental load on people's transportation to distant place.
- (2) Reduce paper usage and increase the efficiency of business meeting or school teaching by making written documents on whiteboard reusable as PC data.

Product performance

- Improve the PC operation and handwritten input on interactive whiteboard (StarBoard). Enable remote communications between interactive whiteboards by sharing data, interactive writing.
- Express presentation in variegation by many kinds of pens and cooperation with another application. Support Windows 7 64bit and Windows Touch newly. DDC (Digital Data conference) function is available. Three users can annotate simultaneously.



Hitachi Solutions, Ltd.

4-12-7 Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
 Tel 81-3-5780-2111
 URL <http://www.hitachi-solutions.com/>
 URL <http://www.hitachisolutions-eu.com/en/products/index.php>
 URL http://hitachisoft.jp/csr/download/pdf/hsoft_csr2010e.pdf



Available in: Worldwide

StarBoard

ES-1-007

Product-related

parts, attachments and accessories of bicycles

emeters

Environmental performance

By cyclometer "emeters" and cycling SNS "emeters web" consumer may become more consciously aware of eco - a part of daily life. "Emeters web" converts bicycle running distance to "eco point". It means CO₂ emitted from vehicle per each 4.3km is about 1kg which is equivalent to 1 LEAF obtained by bicycle for the same distance. The amount of LEAF reflects contribution to global environment quantitatively.

*In case that fuel consumption of a vehicle is 10 km/L.

Product performance

Japan first cycling SNS "emeters web" is a service used together with cyclometer "emeters". Daily running distance and time, speed, accumulated distance, calories consumed can be measured and recorded by "emeters". User of this service may manage data obtained from "emeters", and also communicate with other registered user. The number of registrants to the web site exceeded ten thousands in October 2010.

Bridgestone Cycle Co., Ltd.

1-1 Nakazuma 3-chome, Ageo, Saitama Pref, 362-0072, Japan
Tel +81-48-773-2221 Fax +81-48-775-2299
URL <http://www.bscycle.co.jp/>



emeters+PC

ES-1-008

Product-related

technical services

Analytical services for the new energy and energy saving devices

Environmental performance

ITES expands the analytical and evaluation services for the energy saving devices; LED and OLED lighting and the new energy devices; PV cell and lithium ion battery. ITES contributes the Global warming prevention through the latest analytical technologies.

- (1) Reliability test and failure analysis for LED and OLED lightings
- (2) Reliability test and failure analysis for PV cell and module.
- (3) Construction and material analysis for lithium ion battery.

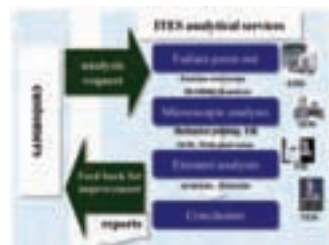
Product performance

ITES advantages are the sample preparation and observation techniques in nanometer level, the proposal report based on the much experience and total solution system through reliability test to analysis. ITES provides three values by the technologies and facilities.

- (1) Quality : high quality analysis result
- (2) Delivery : short delivery time and on time operation
- (3) Value : useful proposal report for the customers

International Test & Engineering Services Co., Ltd.

800 Ichimiya, Yasu-shi, Shiga, 520-2392, Japan
Tel +81-77-599-5020
URL <http://www.ites.co.jp/english/>
URL <http://www.ites.co.jp/english/analyze/index.html>



ES-1-009

Product-related

services

Solar Power Generation System Integration

Environmental performance

Compared to other renewable energy sources, solar power systems have made the most progress technologically and commercially, and play an important role in the creation of a low carbon society.

ORIX offers one-stop service covering solar power system procurement, installation, maintenance and recycling.

Specific examples include:

- Commercialization of mega solar power plants
- Provision of finance schemes including leases, hire-purchase and rental
- Direct sales to corporate clients or distributors by capitalizing on ORIX's sales network
- Promoting the reuse and recycling of used panels
- Solar panel and peripheral device procurement
- Creation of a network of contractors for installation and construction
- Program to promote the popularization of solar power systems in conjunction with local authorities in Japan

ORIX Corporation

12-15 Nihonbashi kobuna-cho, Chuo-ku, Tokyo, 103-0024, Japan

Tel +81-3-6667-2263 Fax +81-3-3249-1791

URL http://www.orix.co.jp/grp/index_e.htm

URL http://www.orix.co.jp/grp/co_e/environment/index.htm



ES-1-010

Product-related

gift bags

Conversion of Used Tetra Pack Into Gift Bag

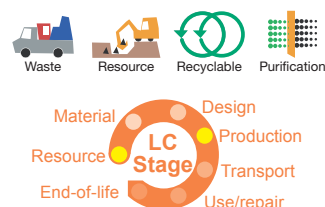
Environmental performance

Too much packets of Tetra Pack are thrown away as daily basis in road sides, empty plots and streets and these are increasing pollution.

Now this waste can be utilized in the making of Gift and school bags. We are available for services as trainers.

Product performance

Extensible and long life. Looks more better in hands.



New Environmental Enterprises Development (Need) Proposed

Village Chitian Qabran P.O Lora (Hazara) Via Rawalpindi Pakistan, 22360, Pakistan

Tel 92-321-9843372 Fax 92-995-617697

E-mail fazalrahimawan@hotmail.com

URL www.oliveseeds.webs.com

Gift Bag of tetra pack

ES-2-001

Reuse and recycling

recycling systems

"ECO CIRCLE" World's first totally closed-loop recycling system for polyester**Environmental performance**

The closed-loop recycling system of ECOCIRCLE™

- will produce no waste
- will suppress petroleum consumption
- will significantly reduce CO₂ emissions and energy consumption

Product performance

ECOCIRCLE™ is an advanced system that turns polyester products back into highly pure polyester raw material (99.99%). By separating additives and coloring agents, purity equivalent to raw material produced from petroleum can be achieved.

ECOCIRCLE™ is a trademark of Teijin Fibers.

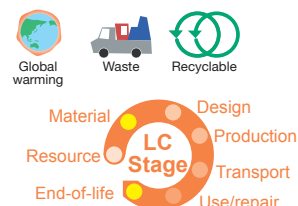
Teijin Fibers Limited

6-7, Minami-hommachi 1-chome, Chuo-ku, Osaka, 541-8587, Japan

Tel 0088-22-0175

E-mail tfj0604@teijin.co.jp

URL http://www.ecocircle.jp/index_e.html



Closed-loop recycling system

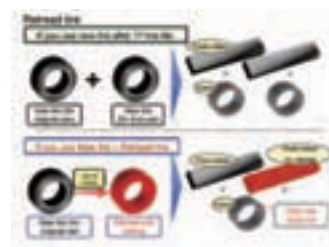
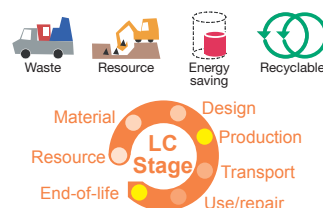
ES-2-002

Reuse and recycling

retreated tires

Retread tires for trucks and buses**Environmental performance**

With the Bridgestone Bandag retreading method, the CO₂ emission and energy consumption during tire manufacturing process can be significantly reduced as well as scrap tire reduction. In order to maximize the value of casing and reusing efficiency, Bridgestone provides high quality durable new tire which can be reused as retread casing. Bridgestone will make continuous effort by expanding retread tires which will contribute in reducing the transportation costs for trucking industry and environmental conservation for the society. Furthermore Bridgestone provides ECOPIA line up in retread products also to reduce The CO₂ emission and energy consumption not only at the tire manufacturing stage but also in the tire usage stage.

**Bridgestone Corporation**

10-1, Kyobashi 1-chome, Chuo-ku, Tokyo, 104-8340, Japan

Tel +81-3-3563-6082 Fax +81-3-3563-1165

URL <http://www.bridgestone.co.jp/english/index.html>

Retread tires image

ES-2-003

Reuse and recycling

portland cement

Ash Washing System

Environmental performance

Ash Washing System is a recycling system for incineration residues, otherwise known as soot & dust and bottom ash from MSW incineration, as a cement raw material. This system can be introduced at existing cement plants simply by installing pretreatment facilities of the Ash Washing system.

Characteristics of the Ash Washing System

- (1) Dioxins contained in the incineration residues are safely decomposed during the high temperature burning process at cement rotary kiln in excess of 1,450°C.
- (2) The pre-treatment of bottom ash requires only removing metals and screening other large foreign objects. Soot & dust includes many chlorides and need to be treated to remove them using water.
- (3) Soot & dust and bottom ash are utilized as a cement raw material after pre-treatment

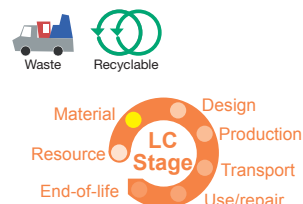
TAIHEIYO CEMENT CORPORATION RESEARCH & DEVELOPMENT CENTER

2-4-2, Osaku, Sakura City, Chiba Prefecture, 285-8655, Japan

Tel +81-43-498-3840 Fax +81-43-498-3809

URL <http://www.taiheiyo-cement.co.jp>

Available in: Japan



Ash Washing System

ES-2-004

Reuse and recycling

portland cement

AK System

Environmental performance

AK (Applied Kiln) System recycles household garbage into raw material and alternative fuel for ordinary Portland cement production. This can be introduced at existing ordinary Portland cement plants by modification and installation of specific equipment.

Characteristics of AK System

1. MSW is directly transported to the cement plant equipped with the AK System.
2. MSW is placed into a rotary digester and is aerated and fermented around 3 days. MSW converts into a homogeneous and stable product that can be utilized as fuel and raw material for cement production.
3. The generation of dioxins is suppressed during the high temperature burning process in excess of 1,450°C.

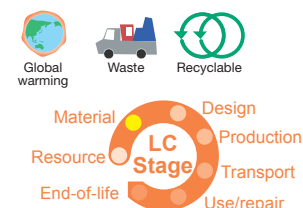
TAIHEIYO CEMENT CORPORATION RESEARCH & DEVELOPMENT CENTER

2-4-2, Osaku, Sakura City, Chiba Prefecture, 285-8655, Japan

Tel +81-43-498-3840 Fax +81-43-498-3809

URL <http://www.taiheiyo-cement.co.jp/>

Available in: Japan



AK System

ES-2-005

Reuse and recycling

regenerated non-ferrous pig metals and non-ferrous alloys

Tungsten Recycling System for Carbide Cutting Tools

Environmental performance

Tungsten is a refractory metal in its property, and tungsten carbide has high hardness at high temperature and is used for the cemented carbide cutting tools which are indispensable to metalwork a variety of parts and components in automobiles, household electric appliances, and other industries.

Tungsten is also known as one of the rare metals, and its resource in the world is very limited. Tungsten materials processed by the conventional recycling method are used in limited application areas because of its insufficient quality. MITSUBISHI MATERIALS group has developed a new recycling method to recycle tungsten, while ensuring the high quality of recycled tungsten.

Product performance

At present, we are the only manufacturer that can recycle used cemented carbide by metallurgical refining process. We recycle tungsten from used cemented carbide tools and alloys collected in the manufacturing process.

JAPAN NEW METALS CO.,LTD

1-6-64 Sennari-cho, Toyonaka, Osaka, 561-0829, Japan

Tel +81-6-6333-1171 Fax +816-6331-5358

URL <http://www.jnm.co.jp/eng/index.html>

URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan



Carbide Cutting Tool

ES-2-006

Reuse and recycling

industrial waste disposal business

Gasification Furnace

Environmental performance

ORIX Environmental Resources Management operates the core zero-emission plant at the Sai-no-kuni Resources Recycling Facility in Yorii-machi, Saitama Prefecture through a PFI partnership. Utilizing the latest thermal decomposition and gasification methods, the plant recycles waste without releasing any incinerator soot or airborne ash whatsoever. In addition to industrial waste from factories and offices, the plant provides waste processing services for many local governments. Waste is processed and converted into recyclable materials such as slag, metal, metallic hydroxides, industrial salt and synthetic gas. The synthetic gas is used as an efficient fuel to generate electricity. The plant processes 450 tons of waste daily, one of the largest processing volumes among private-sector facilities in Japan. The facility's defining feature is that it processes the waste it receives at roughly 2,000 degree C, enabling almost all of the waste to be recycled. In addition, the environment around the facility is protected through implementing self-regulations for controlling dioxin emissions to one-tenth of legal regulations.

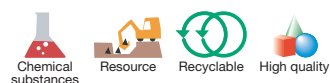
ORIX Environmental Resources Management Corporation

12-15 Nihonbashi kobuna-cho, Chuo-ku, Tokyo, 103-0024, Japan

Tel +81-3-6667-2280 Fax +81-3-3249-1975

URL http://www.orix.co.jp/grp/index_e.htm

URL http://www.orix.co.jp/grp/co_e/environment/index.htm



The zero-emission plant at the Sai-no-kuni Resources Recycling Facility

ES-2-007

Reuse and recycling

technical services

Kankichi-kun System

Environmental performance

Various spillages of fat and oil, including a management system for a grease-trap at food shops and food areas, such as in hotels, commercial buildings, shopping centers and food service chain shops, are improved and solved with nonconventional innovative services, realizing a more than 75% reduction of CO₂ emitted from facilities and more than 94% reduction of waste. Collected fat and oil are recycled and reclaimed into biomass fuel, enabling a reduction of fossil fuel use. In addition, inflow controls of highly-concentrated fat and oil into building pits and sewage systems lead to reduced effluent loads for good water regimes and the eradication of bad smells in towns. The developed products are provided as "green servicing," contributing to a reduction in emissions.

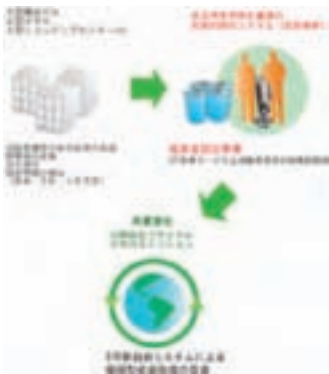
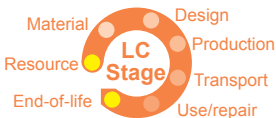
Product performance

An innovative and clean eco technology service to improve and resolve various spillages of fat and oil, including a management system for a high-environmental-burden grease-trap, in the food industry. This project is conducted under the Ministry of Economy, Trade and Industry's Development for Different Fields in New Business Policy

TBM,Inc.

2-1247 Ogawachou Kodairashi Tokyo, Japan

Available in: Japan



ES-3-001

Outsourcing

other products

An environmentally friendly, reliable data erasure service

Environmental performance

This is an environmentally friendly data erasure service with the following characteristics:

- (1) Data media are heated and carbonized and the data is then erased.
- (2) Combustion does not occur since oxygen is not used, thereby significantly reducing CO₂ emissions (compared with crushing and combustion after data erasure using strong magnetism).
- (3) The original materials (e.g., metal) and fuel (carbide) are both recycled.
- (4) External air pollution is prevented through the use of exhaust gas detoxification and deodorization devices.
- (5) Carbon offsets are purchased to compensate for the CO₂ discharged during the operation of this service.
- (6) Carbon offset and work completion certificates are issued.

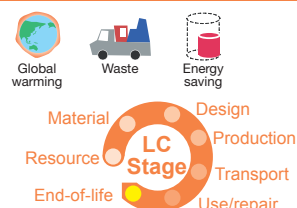
Product performance

Completely erases data on magnetic tapes, optical discs, floppy disks and hard disks at a location designated by the client, enabling protection of information, the environment and customers.

Imation Corp. Japan

Aoyama Oval Building, 52-2, Jingumae 5-chome, Shibuya-ku, Tokyo, 150-0001, Japan

Available in: Japan



Truck put on the equipment & Carbonized cartridge

ES-3-002

Outsourcing

professional services

Energy Solutions and GHG Consulting

Environmental performance

We provide kind of services on Green House Gas (GHG) management and carbon offset, including technical support in development of renewable energy, survey on planning and proposing GHG emission reduction strategies and solutions, support in registration of Clean Development Mechanism (CDM) and Joint Implementation (JI) projects.

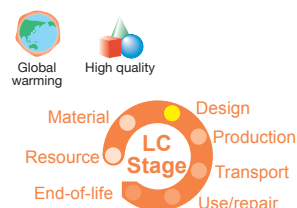
Product performance

Feasibility study of renewable energy project, Investigation of Wind-Energy, simulation, Technical/ Market research on GHG reduction technologies, Support for CDM/JI project, business climate regarding post-Kyoto Protocol, Support for NAMA (Nationally Appropriate Mitigation Action) / bilateral credit, Survey on GHG emission sources, GHG monitoring and reporting services

E&E Solutions Inc.

AKIHABARA UDX BLDG., 14-1, SOTOKANDA 4-COHME, CHIYODA-KU
TOKYO, 101-0021, Japan
Tel +81-3-6328-0080 Fax +81-3-5295-2051
URL <http://www.eesol.co.jp/en>

Available in: Japan, Worldwide



ES-3-003

Outsourcing

professional services

Environmental Due Diligence

Environmental performance

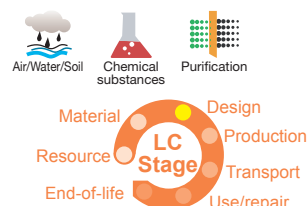
E&E Solutions has conducted more than 1,000 environmental due-diligence projects worldwide.

We also conduct site assessments to evaluate project-site conditions in accordance with protocols established by the American Society for Testing and Materials (ASTM). Our engagements range from standard methods to custom-designed investigations.

E&E Solutions Inc.

AKIHABARA UDX BLDG., 14-1, SOTOKANDA 4-COHME, CHIYODA-KU
TOKYO, 101-0021, Japan
Tel +81-3-6328-0080 Fax +81-3-5295-2051
URL <http://www.eesol.co.jp/en>

Available in: Japan, Worldwide



ES-3-004

Outsourcing

building maintenance services

Water-saving flushing system for newly built hot and cold water pipes

Environmental performance

The amount of wash water used in the flushing for newly made hot and cold water pipes is significantly reduced using a transmission barrier filter. At the same time, the number of working hours involved in filling pipes with water are also reduced by using a vacuum pump. The flushing method for hot and cold water pipes conserves resources by significantly reducing the volume of wash water used as well as the number of working hours involved.

The technique is expected to be used in cogeneration systems for district cooling and heating and for pipes to cool large-sized machinery.

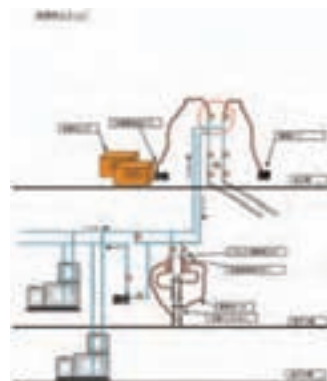
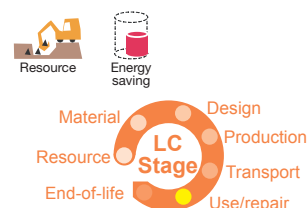
Product performance




Fewer frequencies of water changes needed: conventionally, 50 to 100 t of wash water are required to flush a pipe with a capacity of 10 t, but the new method takes only about 20 t to complete washing.

NIHON MIZU-SHORI KOUGYOU CO., LTD.

8-14 Sugahara-chou, Kitaku, Osaka, 530-0046, Japan
Tel +81-6-6363-6330 Fax +81-6-6363-6372
E-mail mizushori@nifty.com
URL <http://www.mizu-shori.com>

Available in: Japan, Asia



ES-3-005	Outsourcing
	industries unable to classify
Remediation system of PCB contaminated soil	
<div>Environmental performance</div> <div><ul style="list-style-type: none">- Remediation plant of PCB contaminated soil operates as it meets the demand of society to contribute its safety.- The treated soil is recycled as cement materials</div> <div>Product performance</div> <div><ul style="list-style-type: none">- GEOSTEAM TM*1 method is received evaluation of Practical level by the public proof examination of the Ministry of the Environment.- Equipment : 11,000t/year- In July, 2010 : Permission was acquired as certified contaminated soil treatment plant in compliance with Japan's Soil Contamination Countermeasures Law.- Supports it in total from Investigation and Analysis to Purification.<p>*1 :GEOSTEAM is a registered trademark of Toshiba.</p></div> <div>TOSHIBA CORPORATION Social Infrastructure Systems Company</div> <div><p>1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan Tel +81-3-3457-4844</p></div>	<div><p>Waste Purification</p></div> <div><p>Material Design Resource Production End-of-life Transport Use/repair</p></div> <div><p>(Process Description)</p></div> <div><p>Remediation system of PCB contaminated soil</p></div>

ES-4-001

Management-related

package software services

Storage Management Software ETERNUS SF

Environmental performance

The Eco Mode function of ETERNUS disk storage systems provides power saving facilities for the disk drives. ETERNUS SF AdvancedCopy Manager and Storage Cruiser apply the power saving features to greatly reduce the power consumption of disk storage system for backup drives that are used infrequently.

For example, about 10% of power saving of an ETERNUS DX80 D2D backup environment is possible.

In addition to that, ETERNUS SF Storage Cruiser can visualize power consumption and temperature of disk storage system.

Product performance

ETERNUS SF AdvancedCopy Manager provides fast backup/restore and replication by using Advanced Copy Function of ETERNUS disk storage system.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/services/computing/storage/eternus/products/eternus-sf/>

URL <http://www.fujitsu.com/global/about/environment/communication/report/>

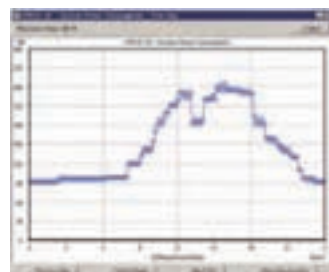
Available in: Worldwide



Global warming



Energy saving



graphical presentation of power consumption of ETERNUS disk storage system

ES-4-002

Management-related

package software services

Server Management Software ServerView Resource Coordinator VE

Environmental performance

ServerView Resource Coordinator VE realizes the optimum arrangement of virtual servers tailored to business execution status. Approximately 17% of power consumption is reduced with intensive virtual servers by turning off the free servers at night when CPU utilization rates are low.

Product performance

* Consolidated operation of multiplatform

Standardized operation and observation that differs by virtual environment and platform prevents complications. Daily operation, such as the starting, rest and rebooting of servers, and indication of server information, can be operated on a single display.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>

URL http://ts.fujitsu.com/products/standard_servers/system_management/serverview_rcve.html

URL <http://www.fujitsu.com/global/about/environment/communication/report/>

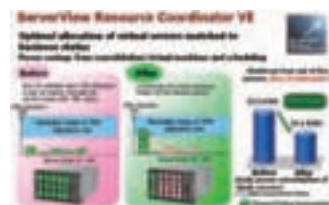
Available in: Worldwide



Global warming



Energy saving



Power savings by ServerView Resource Coordinator VE

ES-4-003

Management-related

package software services

Systemwalker Desktop Patrol V14g

Environmental performance

Systemwalker Desktop Patrol V14g raises PC user's awareness of environment (reduce power consumption) by displaying the estimated amount of consumed power. It also provides functions to encourage PC power saving settings and force users to do it consistently, and allow administrator (management server) to compel the power saving setting without depending on user's moral.

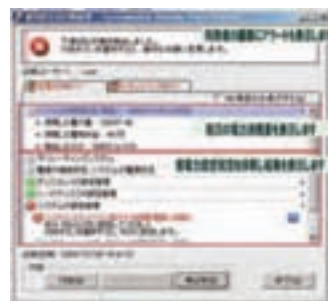
Moreover, effects and contribution to environmental conservation by power-saving efforts in organization-wide can be confirmed by auto-created reports. This supports to take new measures in response to situation and business of each branch.



Resource



Energy saving



Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan

ES-4-004

Management-related

package software services

Interstage XWand

Environmental performance

Resource Saving:

- With the storage of financial documents in XBRL (*1) format, you can move toward paperless office environment.

- Making your business activities more efficient:

- Business rules created with XBRL Formulae ensure that reporting organizations can fully validate their documents before filing. This reduces time and cost for business reports submission.
- Information can be automatically extracted from XBRL filings in your business systems. This reduces re-typing errors and makes efficient use of financial information.

(*1) The Extensible Business Reporting Language (XBRL) is a royalty-free, open specification to describe financial information for public and private companies and other organizations.

Product performance

FINANCIAL REPORTING AND XBRL

Interstage XWand provides support for all the phases in the financial information lifecycle including the preparation, validation, analysis and dissemination of XBRL reports. A key component of Interstage XWand is its flexible programming interfaces allowing organizations to make XBRL an integral part of their reporting process at the application level. Interstage XWand consists of an integrated set of easy to use tools that allow users to quickly create, analyze, and view XBRL reports.

PRODUCT DETAILS

Interstage XWand provides support for all the phases in the financial information lifecycle including the preparation, validation, analysis and dissemination of XBRL reports. A key component of Interstage XWand is its flexible programming interfaces allowing organizations to make XBRL an integral part of their reporting process at the application level. Interstage XWand consists of an integrated set of easy to use tools that allow users to quickly create, analyze, and view XBRL reports.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/services/software/interstage/solutions/xbrl/>

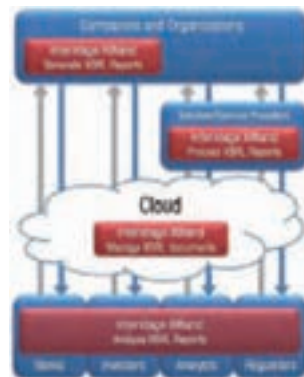
URL <http://www.fujitsu.com/global/about/environment/communication/report/>



Resource



Energy saving



Available in: Japan, Asia, Oceania, Europe, North America, U.S.A., Indonesia, Singapore, Thailand, Philippines, Malaysia, Republic of Korea, Taiwan (Rep. of China), China, South Africa

ES-4-005

Management-related

data processing services

PLEMIA/ECODUCE

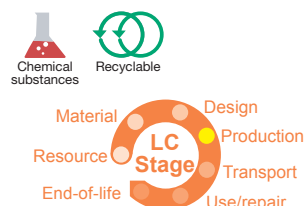
Environmental performance

The product makes it possible to save energy for the enormous works which relate to the business: designing, supplying, information collecting and offering. The main feature is as follows. (1) "Design for Environment (DFE)" is realized. Constituent chemical substances are summarized every product, every unit, on the basis of the parts data table. Compliance with the acts of RoHS, REACH, ELV, etc and with the regulation of company is possible. (2) The efficiency of the inquiry-answer business has been enhanced. The process from the inquiry request to the answer has been unified. It has become possible to carry out the survey business for clients step by step, while confirming the progress. Input-output by JPG, AIS data files and output by IDMS (XMS) data file is possible.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan
 Tel +81-44-754-3413 Fax +81-44-754-3326
 URL <http://www.fujitsu.com/global/>
 URL <http://jp.fujitsu.com/group/fns/services/plm/ecoduce/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



ES-4-006

Management-related

data processing services

Chemical-material information management system, McConcierge

Environmental performance

McConcierge is a business package produced for companies in the processing industry, which totally manages raw and component materials of chemical goods, physical-chemical data and safety-related information on laws and regulations. Since 2001 it has been compulsory to attach MSDS (Material Safety Data Sheet) to chemical products, and MSDS and labels have been required to correspond to GHS since 2007. In addition, the PRTR Law (Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management), Industrial Safety and Health Act and Poisonous and Deleterious Substances Control Act were strengthened in 2007, forcing companies to follow the laws and acts. This system allows companies to conduct total management of GRC on the safety of chemical products as part of their CSR activities.

Product performance

*Information on the dangerousness and harmfulness of chemicals contained in chemical material products to people and the environment are totally managed.

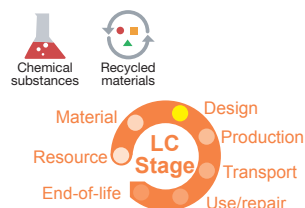
*Chemical material products are automatically classified according to their dangerousness and harmfulness based on the international rules on classification and indication on chemicals, the Globally Harmonized System of Classification and Labeling of Chemicals.

*Information required to use products safely is outputted in the form of the Chemical Material Safety Data Sheet, etc.

Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan
 URL <http://www.fujitsu.com/global/>
 URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



ES-4-007

Management-related

data processing services

Total Building Management System Futuric/SX Series

Environmental performance

The building management system Futuric/SX series is building automation (BA) systems to collectively manage and control information about electricity supply, air-conditioning, lighting, and crime/disaster prevention, while sharing information with users.

For the protection of the environment and conservation of energy, facility data, such as air-conditioning data, are transmitted to servers and remote PCs in cooperation with BEMS (Building and Energy Management System) to maintain the optimum operating conditions. The system is used to tally up accumulated energy data in order to visualize the amount of CO₂ and environmental load with the aim of supporting efforts to reduce CO₂ emissions.

Fujitsu Limited

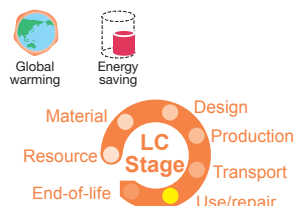
Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>

URL <http://fenics.fujitsu.com/products/futuric/>

URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



ES-4-008

Management-related

data processing and information services

Data Collection, Operation and Analysis Support Software SLIMOFFICE/SLIMOFFICE EX

Environmental performance

Software to support the collection, operation and analysis of data on the environmental performance (environmental performance results) of organizations. This product is useful in creating ISO 14001 support, environmental accounting, environmental report and initiative promotion plans to prevent global warming. Since various ordinances, regulations and controls (revised Law Regarding the Rationalization of Energy Use is covered) are also available, this software has functions to make environmental information visible in order to increase the value of the company by making reduction plans and conducting environmental analysis management.

Product performance

Environmental management information system "SLIMOFFICE EX" is software exclusively for the total management and analysis of companies. The software supports everything from the collection of environmental-performance data to the environmental accounting of organizations. Environment-related information is collected and analyzed efficiently from various bases to highlight the environmental performance of organizations. Template-ledger sheets for environmental accounting are fitted as standard, enabling users to introduce environmental management easily. This product can be utilized to create ISO 14001 support, environment accounting, environmental reports and initiative promotion plans to prevent global warming. Various ordinances, regulation and controls (revised Law Regarding the Rationalization of Energy Use supported) are also available.

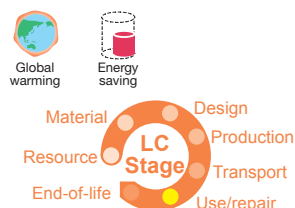
Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/about/environment/communication/report/>

Available in: Japan



ES-4-009

Management-related

package software services

LCA software "MiLCA:Multiple Interface Life Cycle Assessment"

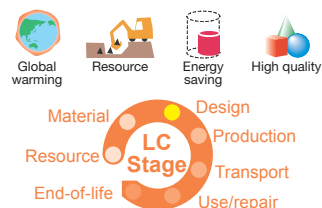
Environmental performance

MiLCA is the LCA software developed by Japan Environmental Management Association for Industry (JEMAI). The previous version of the MiLCA, JEMAI-LCA software, has been available since 2000, and over 1000 copies have been sold, occupying the largest share in Japan's LCA software market. The software is equipped with the following functions: -A modifiable inventory database containing a wide range of processes with resource consumption and emissions. -New data adding through a process sheet or visual input output sheet. -Process tree management. -Estimation of environmental impact in overseas countries using electricity data and an import model of 200 countries/regions. -Inventory analysis and impact assessment including the Japanese method. -Report writing support based on the format outlined in the ISO 14040s specifications.

Japan Environmental Management Association for Industry (JEMAI)

2-1 Kajicho 2-chome, Chiyoda-ku, Tokyo, 101-0044, Japan
Tel +81-3-5209-7708 Fax +81-3-5209-7716
E-mail jemai-lca@jemai.or.jp
URL <http://www.jemai.or.jp/>
URL <http://www.milca-milca.net/english/>

Available in: Worldwide



MILCA

ES-4-010

Management-related

embedded software services

Life Cycle Assessment Software :Easy-LCA for WEB V5.0

Environmental performance

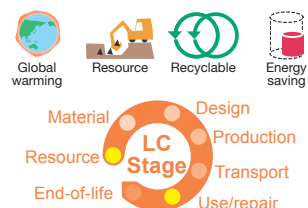
Easy-LCA is a supporting tool to conduct life cycle assessment (LCA) effectively. It evaluates quantitatively the influence of the product on the environment at the stage of design, and combines scientifically the results with the analysis and improvement of the product.

Main features

- The latest database based on the economical statistics table of fiscal year 2000 (published in 2004) has been included.
- Assessment of the discharge of environmental loading is possible according to the distinction of units and parts.
- Comparison of an old product and the new one is possible
- Impact evaluation
- Inventory evaluation of 30 kinds of products including CO₂ / NO_x / SO_x is possible.

TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

Muza Kawasaki Central Tower, 1310, Omiya-cho, Saiwai-ku, Kawasaki-Shi, 212-8551, Japan
Tel +81-44-548-7711 Fax +81-44-548-7884
E-mail eco.master@toshiba-tpsc.co.jp
URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>
URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Easy-LCA screens

ES-4-011

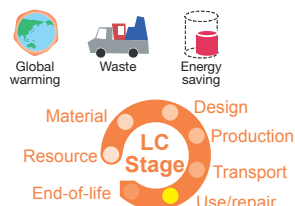
Management-related

embedded software services

Environment Education Contents Series :Environmental Communication Club

Environmental performance

"Environmental Communications Club" is an environmental educational package for understanding global environmental problems and the negative environmental impact, and for considering the environment. Contents include animation and games. Users can enjoy and learn about environmental issues. These contents are used for study by school children's class trips to the garbage incinerator and the recycling plaza of the municipality.



TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

Muza Kawasaki Central Tower, 1310, Omiya-cho, Saiwai-ku, Kawasaki-Shi,
212-8551, Japan
Tel +81-44-548-7711 Fax +81-44-548-7884
E-mail eco.master@toshiba-tpsc.co.jp
URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>
URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Various Contents

ES-4-012

Management-related

package software

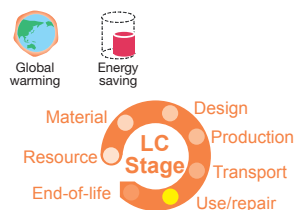
Bioinformatics Software for DNA/RNA/Amino Acid Sequence Analysis

Environmental performance

DNASIS Pro reduces the man-hour by 88% by adding the coordinated function with the reagent order site, and contributes to energy saving.

Product performance

Life science research is making great advances in such broad applications as drug discovery, food safety and environmental conservation. DNASIS Pro bioinformatics software contributes to life science research by helping scientists be more productive. DNASIS Pro lets researchers edit, annotate and analyze DNA, RNA and amino acid sequences. It includes a comprehensive set of analytical tools that can be expanded with optional homology search, multiple alignment, and base calling and sequence assembly modules. Its unique, customizable features are designed to save researchers time and accelerate life science research.



Hitachi Solutions, Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Tel 81-3-5780-2111
URL <http://www.hitachi-solutions.com/>
URL <http://hitachisoft.jp/products/lifescience/lineup/dnasis/DNASISPro/>
URL http://hitachisoft.jp/csr/download/pdf/hsoft_csr2010e.pdf



Available in: Japan

DNASIS Pro

ES-4-013

Management-related

agricultural information management

Agricultural Information Management System: GeoMation Farm

Environmental performance

Remote sensing technology can judge the percentage of dryness of the ears of wheat. By using this information, farmers can harvest the enough dry wheat according to the priority and this lead to the energy-saving drying. According to the evaluation result by SI-LCA index, saved energy for drying wheat and increasing efficiency of production control by using GeoMation Farm is equivalent to reduction of CO₂ emission by 33%.

Product performance

- 1) By analyzing the relation between fertilizer and quality/quantity of the crop, farmers can judge the suitable amount of fertilizer. This leads to the low environmental load.
- 2) By plotting scattering of the outbreak of disease or harmful insect on the farmland map, farmers can prevent and exterminate these pest with low agricultural chemical.

Hitachi Solutions, Ltd.

4-12-7 Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

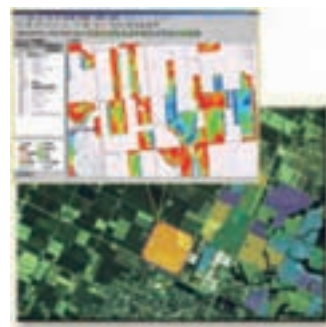
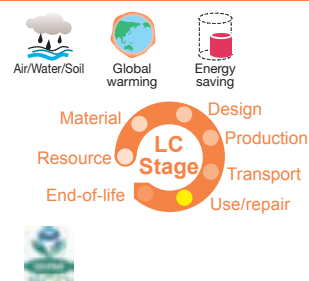
Tel 81-3-5780-2111

URL <http://www.hitachi-solutions.com/>

URL <http://www.hitachi.com/environment/showcase/solution/it/geomation.html>

URL http://hitachisoft.jp/csr/download/pdf/hsoft_csr2010e.pdf

Available in: Worldwide



Agricultural Information Mgmt: GeoMation Farm

ES-4-014

Management-related

library systems

A library system "Livre"

Environmental performance

By using "Livre", paperless of the books card and the management ledger and efficiency improvements of the clerical work are achieved. Compared with the system unavailable (operation with paper), we can reduce CO₂ of 66.6%.

Product performance

"Livre" is library system, which Hitachi Solutions, Ltd. offers.

The characteristics of "Livre" are as follows.

- Enable easy operation for the loan and the return of the library book.
- Enable quick search for books.
- Provide variety of statistics associated with the library operation.

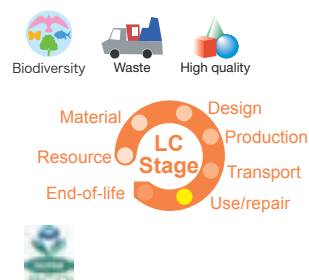
Hitachi Solutions, Ltd.

Nagoya Lucent Tower, 6-1 Ushijima-cho Nishi-ku, Nagoya, 451-6028, Japan

Tel 81-52-569-2128 Fax 81-52-569-2132

E-mail livre-sales@hitachi-solutions.com

URL <http://www.hitachi-system.co.jp/lvr/>



Main Menu of 'Livre'

ES-4-015

Management-related

document management system

Document Solution "LIBINITY"

Environmental performance

"LIBINITY" is an unified brand of the document solution of Hitachi Solutions, Ltd. It reduces the consumption of the paper, which leads to the reduction of the CO₂ emission associated with the transportation of the paper by 42.3%. This reduction is achieved by replacing distribution of the conventional paper with information sharing on the network.

*It is a value calculated in our model case.

Product performance

"LIBINITY One" is next-generation document management system. It adopted Rich client technology with realizing high user interface, and it greatly improved usability.

"LIBINITY Millemasse" is a high-performance filing system to keep a large quantity of documents and images for unification. It easily realizes high document management at a low cost.

Hitachi Solutions, Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan

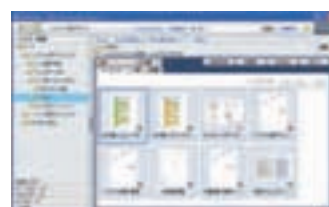
Tel 81-3-5780-2111

E-mail webmaster@hitachi-solutions.com

URL <http://www.hitachi-solutions.co.jp/>

URL <http://www.hitachi-system.co.jp/libinity/>

Available in: Japan



Screen image of "LIBINITY One"

ES-4-016

Management-related

energy savings

ESCO (Energy Service Company)

Environmental performance

Hitachi has achieved reduction of approximately 16,000 tons per year of CO₂ emission reductions in 2009.

It contributes to the prevent global warming.

Product performance

The ESCO business offers comprehensive services for energy savings to customers, and covers cost required for repairing relevant quipment with a budget saved by energy saving. The service includes energy saving diagnosis, energy saving proposal, equipment installation, finance, and maintenance. Taking advantage of the Group's collective strength, Hitachi has already achieved remarkable success in a wide variety of sites, including factories, hospitals, office buildings, and research facilities. The project contributes to reduce energy consumption and CO₂ emissions. Award of "Excellent ESCO bussiness" for 4 consecutive years, receiving a high evaluation from outside the company. (sponsored by The Energy Conservation Center, Japan)

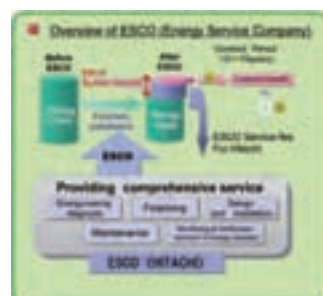
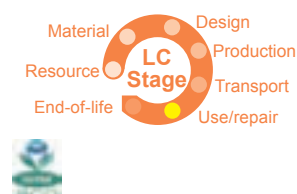
Hitachi, Ltd. Urban Planning and Development Systems Company

14-1, Sotokanda 4-chome, Chiyoda-ku, Tokyo, 101-8010, Japan

Tel 81-3-3620-1040 Fax 81-3-5697-2624

E-mail info.toshi.bk@hitachi.com

URL <http://www.hitachi.co.jp/products/urban/energy/index.html>



Overview of ESCO

ES-4-017

Management-related

energy savings

ecoFORTE EMS (Energy Management Service)

Environmental performance

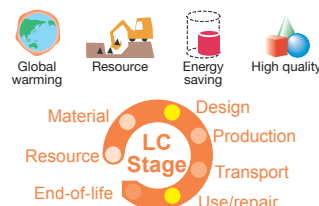
ecoFORTE EMS use computer-aided tools to monitor the energy consumption (electricity, gas and other utilities) of manufacturing plants, office buildings or stores, and to propose business solutions to manage and reduce energy consumption and achieve energy savings.

ITOCHU is using software development technology and telecommunication technology built up in its ICT business to develop more sophisticated center systems capable of offering wholly integrated EMS, covering the measurement and control of air-conditioning, lighting and ICT equipment power consumption and the proposal of energy-saving solutions.

Product performance

ecoFORTE EMS is a cloud type energy saving support service which makes it possible to measure the energy consumption of an entire building and control air-conditioning and lighting equipment easily.

By implementing the expertise in the measurement and control of air-conditioning systems and other equipment into ecoFORTE EMS, it improves and accelerates the development of extendible cloud-type center systems that can be adapted to suit diverse customer equipment and energy-saving requirements.



ITOCHU Corporation

5-1, Kita-Aoyama 2-chome, Minato-ku, Tokyo, 107-8077, Japan

Tel +81-3-3497-2451 Fax +81-3-3497-4181

E-mail support01@ecoforte.jp

URL <http://www.itochu.co.jp/en/>

URL <http://www.ecoforte.jp/>

URL <http://www.itochu.co.jp/en/csr/>



Available in: Japan

ecoFORTE EMS -Energy Management Service-

ES-4-018

Management-related

research and information services

ecoFORTE Reporter-SaaS for complying with Energy Saving Regulation-

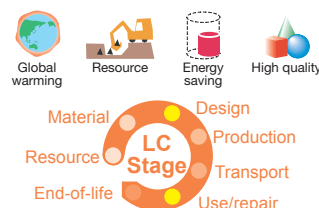
Environmental performance

ITOCHU is leveraging know-how and technology it has cultivated through its IT services to offer Energy Conservation & Management Services, including solutions backed by new methodology and integrated energy control systems that benefit from IT devices, to companies with large offices and factories, universities, hospitals, large retail and restaurant franchises, and other clients.

Product performance

Energy Conservation Service "ecoFORTE" -compliant with the Revised Law Concerning the Rational Use of Energy-

Once the Revised Law Concerning the Rational Use of Energy has enforced since April 2010, each company has to report the energy used for its entire operation to a Regional Bureau of Economy, Trade and Industry. ecoFORTE supports series of processes required for the reporting.



ITOCHU Corporation

5-1, Kita-Aoyama 2-chome, Minato-ku, Tokyo, 107-8077, Japan

Tel +81-3-3497-2451 Fax +81-3-3497-4181

E-mail support01@ecoforte.jp

URL <http://www.itochu.co.jp/en/>

URL <http://www.ecoforte.jp/>

URL <http://www.itochu.co.jp/en/csr/>



Available in: Japan

ecoFORTE Reporter- SaaS for complying with Energy Saving Regulation-

ES-4-019

Management-related

research and information services

GreenDrive - Consulting for chiller efficient operation

Environmental performance

ITOCHU is leveraging know-how and technology it has cultivated through its IT services to offer Energy Conservation & Management Services, including solutions backed by new methodology and integrated energy control systems that benefit from IT devices, to companies with large offices and factories, universities, hospitals, large retail and restaurant franchises, and other clients.

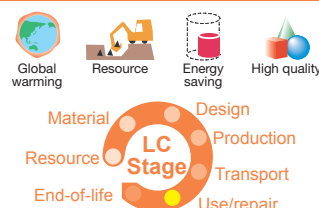
Product performance

GreenDrive is the consulting service to support the customer's energy conservation by providing the efficient operation method of central cooling and heating facilities such as chiller, boiler and co-generations.

ITOCHU Corporation

5-1, Kita-Aoyama 2-chome, Minato-ku, Tokyo, 107-8077, Japan
 Tel +81-3-3497-2451 Fax +81-3-3497-4181
 E-mail support01@ecoforte.jp
 URL <http://www.itochu.co.jp/en/>
 URL <http://www.ecoforte.jp/>
 URL <http://www.itochu.co.jp/en/csr/>

Available in: Japan



ecoFORTE - SaaS for complying with Energy Saving Regulation-

ES-4-020

Management-related

technical services

Consulting service for geothermal and hydraulic power generation

Environmental performance

Mitsubishi Materials has long been actively involved in geothermal and hydraulic energy development and utilization acquired through our own underground resources business.

Geothermal power generation utilizes steam energy extracted from underground by drilling wells as deep as 2,000 m. It requires specialized techniques and technology to utilize effectively high temperature-underground resources in all stages of site survey, drilling, and maintenance of output power.

We developed and now operate two geothermal power plants applied mining technology, and have accumulated the necessary techniques.

With this experience, we are actively participating in geothermal area surveys and technological development projects, and evaluating the potential for further geothermal development.

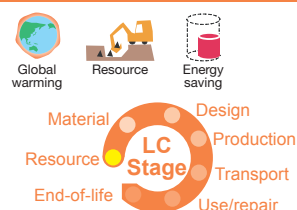
Product performance

We have six hydroelectric power plants (approx. 17MW total) and two geothermal power plants (59.5MW total) in Japan.

Mitsubishi Materials Corporation (Geothermal & Electric Power Center)

1-297, Kitabukuro-cho, Omiya-ku, Saitama-shi, Saitama, 330-8508, Japan
 Tel +81-48-641-5624 Fax +81-48-641-5632
 URL <http://www.mmc.co.jp/corporate/en/index.html>
 URL <http://www.mmc.co.jp/corporate/en/corporate/business/energy.html>
 URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Worldwide



Ohnuma Geothermal Power Plant (9.5MW)

ES-4-021

Management-related

wastewater management

Wastewater Treatment Technology-MSABP™, HiPOx™ and ELCAT™

Environmental performance

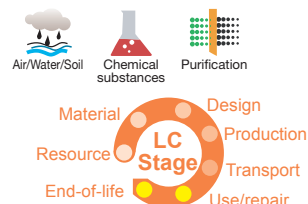
Comprehensive Waste Water Treatment Solutions for water recycle/reuse through our environmentally friendly and advanced technologies

Product performance

- 1) MSABP™: Multi-Stage Activated Biological Process with micro-organism food chain
 - *No excess sludge, nor its disposal cost (less energy & CO₂)
 - *Capable for treating highly concentrated effluent without dilution
 - *Decomposes hard to decompose effluents; detergents, antiseptics etc
 - *Applicable to food/chemical/pharma industries
- 2) HiPOx™: Innovative Advanced Oxidation Process (AOP) with hydrogen peroxide & multiple ozone injection
 - *Less ozone injection compared to treatment with ozone alone, reducing running costs
 - *Decomposes 1,4-Dioxane, PPCPs and EDCs, chlorine-based solvents etc
- 3) ELCAT™: Consists of 2 stages, Electrolytic and Catalyzed reaction
 - *High treatability for toxic, non-biodegradable materials; dye, detergent, phenols etc

Teijin Limited

2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-8585, Japan
 Tel +81-3-3506-4593
 E-mail wpt@teijin.co.jp
 URL <http://www.teijin.co.jp/english/index.html>



ES-4-022

Management-related

professional services

Forest Certification System PEFC

Environmental performance

Forest certification is a third party certification system for assuring sustainable management of forests. PEFC is the world largest forest certification system with over 220 million hectares of forests certified to PEFC, covering 27 countries. Sustainably managed forests make much contribution to the environmental problems by absorbing CO₂, protecting bio-diversity, soil and water quality and landscape.

Product performance

PEFC-certified wood and paper products assure that the materials used for the products are from sustainably managed forests, and therefore buying PEFC-certified goods make a large contribution to the promotion of sustainable forest management of the world.

PEFC Asia Promotions

3-11-5 Iidabashi, Chiyoda-ku, Tokyo, 103-0072, Japan
 Tel +81-3-3556-5081 Fax +81-3-3556-5082
 E-mail info@pefcasia.org
 URL www.pefcasia.org



Available in: Worldwide

PEFC-certified products

ES-5-001

Others

railways

Operation of the world's first diesel hybrid railcar

Environmental performance

In July 2007, the world's first diesel hybrid railcars, the Kiha E200 Type, entered service on the Koumi Line. Diesel hybrid railcars operate efficiently by using electricity generated by a diesel engine to charge a battery which reduces emissions and by regenerative brakes, which charge the battery when braking. Efficiency in tests was approximately 20% better than a standard diesel railcar*. The diesel hybrid railcar is quiet when idling at a station (approx. 30dB). Hazardous substances in the exhaust, such as NOx and graphite, are reduced approximately 60%.

*Results are based on test runs on level ground. On the Koumi Line, which has steep grades, efficiency improved by approximately 10%.

Product performance

*maximum running speed:100km/h

*passenger capacity:117 (seating capacity 46)

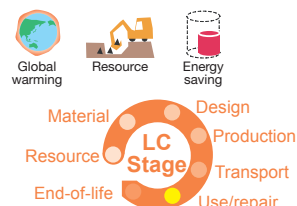
East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan

Tel +81-3-5334-1122

URL <http://www.jreast.co.jp/eco/>

Available in: Japan



The world's first diesel hybrid railcar Kiha E200 Type

ES-5-002

Others

railways

Environmentally Friendly E231 Series

Environmental performance

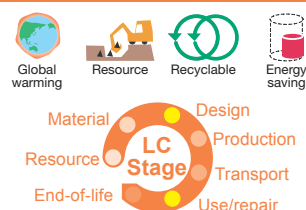
The E231 series reduces operational energy consumption by 50% compared to that of the 103 series, measured between Sep. 1985 and Sep. 1986 on Yamanote line, and in terms of weight, 90% of the E231 series railcar can be recycled. Servicing the Yamanote, Takasaki, Utsunomiya, and other metropolitan lines, the E231 series currently realizes the most environmentally friendly design.

Product performance

E231-500 series for Yamanote line

*maximum running speed:120km/h

*passenger capacity in a train set:1752 (seating capacity 502)



E231 series run on the Utsunomiya Line

East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan

Tel +81-3-5334-1122

E-mail eco@jreast.co.jp

URL <http://www.jreast.co.jp/eco/>

Available in: Japan

ES-5-003

Others

railways

E2-Series of Railcars Conserved Energy

Environmental performance

As for energy consumption, by making improvements such as reduction in the weight of railcar bodies, the Shinkansen's energy consumption was reduced by about 30% compared to 20 years ago. Regenerative brakes utilize energy generated during the braking, and return this electricity to the overhead wires.

Product performance

(1) E2-1000 series for Tohoku Shinkansen line (10-car sets)

*maximum running speed:275km/h

*passenger capacity in a train set:814

(2) E2-0 series for Nagano Shinkansen line (8-car sets)

*maximum running speed:260km/h

*passenger capacity in a train set:630

East Japan Railway Company

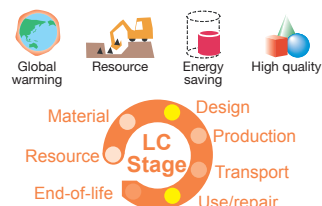
2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, 151-8578, Japan

Tel +81-3-5334-1122

E-mail eco@jreast.co.jp

URL <http://www.jreast.co.jp/eco/>

Available in: Japan



E2-series for Asama and Hayate Shinkansen trains

ES-5-004

Others

railways

The series N700 with enhanced energy efficiency

Environmental performance

The Tokaido and Sanyo Shinkansen, playing an important role in the main intercity transportation in Japan, can be regarded as a transportation mode with more energy-efficient performance (e.g. lower CO₂ emissions per unit carriage of passengers) compared with other transportation modes such as airplanes. The Series N700, newly developed and commercially launched in the summer 2007 with the three concepts of "The fastest cutting edge rolling stock", "Superior comfort", and "Superior environmental performance", realized further energy efficiency, for example, by reducing air resistance as a result of the thorough pursuit of smooth body surface by developing a new nose shape and cover-all hood, and by introducing the body inclining system. JR Central and JR West plan to introduce 96 trainsets over the five years ending FY2011.

Central Japan Railway Company / West Japan Railway Company

Central Japan Railway Company

JR Central Towers, 1-1-4, Meieki, Nakamura-ku, Nagoya, Aichi, 450-6101, Japan

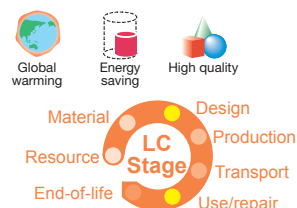
URL <http://jr-central.co.jp>

West Japan Railway Company

4-24, Shibata 2-chome, Kita-ku, Osaka, 530-8341, Japan

URL <http://www.westjr.co.jp>

Available in: Japan



Series N700

ES-5-005

Others

financial services

J-MRV (JBIC's Measurement, Reporting and Verification of GHG Emission Reductions in JBIC's loan, GREEN.)

Environmental performance

To shift to a Low Carbon Growth, key factor is funding particularly in emerging economies and developing countries. JBIC has started a new environment financing initiative called GREEN (Global action for Reconciling Economic growth and Environmental preservation) to support greenhouse gas (GHG) emission reduction projects. JBIC intends to mobilize US\$40 billion by the end of 2012 through public private finance in developing countries.

Product performance

JBIC has set a benchmark for improving the effectiveness of GREEN in terms of climate change mitigation, based on the so-called MRV (Measurement, Reporting and Verification), for its financed projects. JBIC has established J-MRV as its own MRV guideline based on its financial experience regarding energy efficiency and renewable energy, CDM experience and methodology, and also ISO experience. JBIC intends that J-MRV should be simple and practical for quantification of GHG emission reductions, and also internationally used and accepted. "Internationally accepted" is another key factor for J-MRV, since it is an instrument for evaluating the priority of climate change mitigation projects. JBIC welcomes comments from industry, financial institutions or other parties. JBIC would like to share the new instrument, J-MRV, to measure GHG emission reductions for the efficiency of funding in terms of climate change mitigation.



Japan Bank for International Cooperation, JBIC

1-4-1, Otemachi, Chiyoda-ku, Tokyo, 100-8144, Japan

Tel +81-3-5218-3037 Fax -81-3-5218-3433

URL <http://www.jbic.go.jp/en/>

URL <http://www.jbic.go.jp/en/about/news/2010/0427-01/index.html>

URL <http://www.jbic.go.jp/en/about/news/2010/0730-01/>



ES-5-006

Others

financial services

SMBC Environmental Assessment Loan

Environmental performance

This Loan provides an environmental assessment for customers. Diagnosis sheets will be presented to customers after the financing to help their effort for environment.

This Loan will support customers' environmental management.

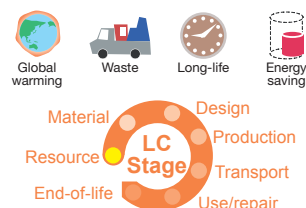
Product performance

The Environmental Assessment Loan uses a proprietary standard defined by SMBC and Japan Research Institute Limited, the think tank of SMFG, and they directly assesses customers based on the standard.

The assessment has seven grading levels, and interest rates for companies that achieve a top-three grading, may be reduced. For more information, please contact the nearest SMBC Corporate Business Office.

*1. Other designated investigations besides the Environmental Assessment are required for this financing.

*2. The composition of finances and mortgages as well as the results of the Environmental Assessment will be taken into consideration for the decision of interest rates.



Sumitomo Mitsui Banking Corporation

1-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-0005, Japan

URL <http://www.smbc.co.jp/global/>

URL <http://www.smbc.co.jp/investment/english/>



Available in: Japan

ES-5-007

Others

financial services

Lease/Rental/Sharing

Environmental performance

Financing or equity participation in waste management and renewable energy projects in Malaysia will further contribute to the ongoing efforts to reduce the global environmental impact by encouraging the acquisition and adoption of such new technologies and its related equipment by industries and business without straining their existing cashflow and capital employed.

Product performance

ORIX Leasing Malaysia has primarily been providing Corporate Financial Services such as finance lease, hire-purchase as well as operating leases for the last 37 years in Malaysia. In doing so, we have been financing equipment, some of which are either green or eco friendly and as such assist in the development of a low carbon society.

ORIX Leasing Malaysia Berhad

12th Floor Menara Promet Jalan Sultan Ismail 50250 Kuala Lumpur, 50250, Malaysia
Tel 603-2059-7000 Fax 603-2148-5713
E-mail info1@orix.com.my
URL www.orix.com.my



ES-5-008

Others

services

Rentals of Environment-related Analytical Equipment

Environmental performance

As environmental consideration is increasing, ORIX Rentec has enhanced its product lineup and offers rental and used equipment sales of environment-related analytical equipment to be compatible with chemical safety related RoHS and REACH, calls for food safety including pesticide residue, airborne particulates (PM2.5), asbestos, dioxins and PCBs. ORIX Rentec is also aiming to expand equipment for the new energy market such as solar power generators and rechargeable batteries for electric automobiles to reduce the burden on the environment.



ORIX Rentec Corporation

5-7-21 Kitashinagawa, Shinagawa-ku, Tokyo, 141-8681, Japan
Tel +81-3-3473-7561 Fax +81-3-3473-7549
URL <http://www.orixrentec.jp/cgi/en/>
URL http://www.orix.co.jp/grp/co_e/environment/index.htm



A gas chromatograph mass spectrometer to be compatible with chemical safety related REACH

ES-5-009

Others

services

Car sharing

Environmental performance

"Car sharing" is a membership-based car rental system in which numerous individuals share the use of several cars. Car sharing is cost effective as customers pay a fee according to the duration of vehicle use and driving distance. The popularization of car sharing is expected to reduce the total number of vehicles used by society as a whole, leading to fewer CO₂ emissions and less traffic congestion, among other benefits.

<Benefits of ORIX Car sharing>

- Linking Car sharing With Railway Transport

Reduction of CO₂ emissions will be achieved by using railway transport for a long distance travel and using a car sharing vehicle from the point that is close to the destination.

- Facilitating "Eco Drive" with In-vehicle Car sharing Device

Each ORIX Auto vehicle for car sharing service carries an in-vehicle device which indicates "fuel consumption" and "CO₂ emission" on displays of car navigation systems after a drive. This is effective in promoting drivers' awareness of "Eco Drive" and helping to change their driving behaviors.

- Carbon Offset

CO₂ emissions of the car sharing business have already been offset using carbon credits.



An electric vehicle for car sharing

ORIX Auto Corporation

3-22-8 Shiba, Minato-ku, Tokyo, 105-8589, Japan

Tel +81-3-6436-6000 Fax +81-3-6436-6901

URL http://www.orix.co.jp/grp/index_e.htm

URL http://www.orix.co.jp/grp/co_e/environment/index.htm

ES-5-010

Others

general goods rental and leasing

Mannequin Rental Service

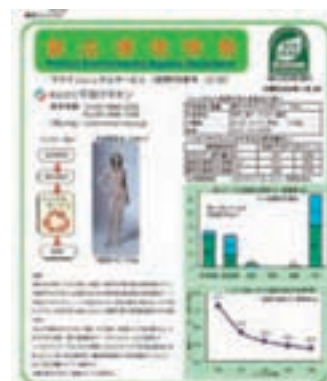
Environmental performance

The Mannequin reusable rental service controls the amount of production, extending the life spans of products and decreasing the environmental burden while promoting "Reuse".

The company's nationwide network allows products to be delivered and returned by the shortest distance to customers, reducing the environmental burden in the phase of commodity distribution.

Product performance

Mannequins are produced after many processes using clay models. They are produced not only to sell but also to be rented for repeated use.



MANNEQUIN Rental Service

HEIWA MANNEQUIN CO.,LTD

1-22-3 Kitaotuka Toshimaku Tokyoto, 117-0004, Japan

URL <http://www.heiwa-mq.co.jp/>

Available in: Japan

ES-5-011

Others

new year's cards

Eco Green New Year's Cards (name-printing service)

Environmental performance

In 2008, we initiated a carbon offset business through afforestation and launched Green Eco New Year's Cards as part of the business. Using part of the proceeds from these sales, we plant trees in Nenga-no Mori (the New Year's Card Forest) in Hokkaido's Bihoro town, thereby offsetting approximately two kilograms of CO₂ for every 10 cards. In 2008, we sold 95,000 cards with a projected offset of about 19,000 kg of CO₂ in 2009. In 2009, we sold 200,000 cards with a projected offset of about 200 tons of CO₂ in 2010.

Product performance

We develop environmentally friendly products. In 1988 in Hokkaido, we introduced an on-demand printer that uses only the amount of paper absolutely necessary to print New Year's cards. In 2004, we launched Cardbox - an e-commerce website for greeting cards and New Year's cards. Through these efforts, we have extricated ourselves from the conventional flow of business, which is characterized by significant print loss, and succeeded in labor savings.

Chemical substances

Resource

Purification

Recycled materials

Material

Design

Production

Transport

Use/repair

End-of-life

LC Stage



Green Eco New Year's Cards

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan
URL <http://www.pripress.co.jp/>

Available in: Japan

Classified index of goods and services

Classified index of goods and services

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------------------------	--

■ Advisers

Mr. Yoichi Morishita	Corporate Counsellor Panasonic Corporation
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Mr. Masatoshi Yoda	Former President of Ebara Corporation
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Mr. Etsuhiko Shoyama	Chairman Emeritus Hitachi, Ltd.
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Mr. Kazuyoshi Terashima	Former Vice President of Ebara Corporation
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■ Members

Mr. Takeshi Kurashige	Chief Producer Social & Environmental Management Department Asahi Breweries, Ltd.
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Mr. Hidehiro Shinohara	General Manager Environment & Safety Department Ajinomoto Co., Inc.
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Mr. Toshiroh Ikegami	Director Urban Gauss Inc.
----------------------	------------------------------

Mr. Katsuhiko Sugie	General Manager East Japan Sales Division Sales Department Resource Management Department Amita Corporation
---------------------	---

Mr. Seiichi Ueyama	Managing Director Aeon Retail Co., Ltd.
--------------------	--

Mr. Hitoshi Maekawa	General Manager Administrative Division, Environmental Management Department Itoki Corporation
---------------------	--

Mr. Tsutomu Ishibashi	Senior Manager Corporate Environmental Management Department Ebara Corporation
Mr. Yasuhiro Maruyama	General Manager Environment Management Department, Sustainable Management Office Oji Paper Co., Ltd.
Dr. Yuichiro Yamaguchi	Manager CSR & Environment Department Osaka Gas Co., Ltd.
Ms. Miki Mitsuoka	Environmental Planner as Earth Republic General Manager Energy and Eco Services Business Headquarters Administration Management Department ORIX Corporation
Mr. Koichi Yanagita	Vice President Environment and Safety Kao Corporation
Mr. Kazuo Ochiai	General Manager Responsible Care Department, Production Technology Division Kaneka Corporation
Mr. Yasuhiko Imai	General Manager Environment Department Kikkoman Corporation
Mr. Kazutoshi Nakamura	General Manager Environment Standards Division Environment Planning Center Environment Headquarters Canon Inc.
Mr. Keiji Matsuura	General Manager CSR Promotion Division, Corporate CSR Promotion Division Kyocera Mita Corporation
Ms. Mizue Tsukushi	Founder and CEO The Good Bankers Co., Ltd.
Mr. Takashi Hongo	Special Advisor Head, Environment Finance Engineering Department Japan Bank for International Cooperation
Mr. Shinichi Saitou	Section Chief Corporate Management Division Kokuyo Co., Ltd.
Mr. Yusuke Saraya	President Saraya Co., Ltd.
Mr. Ryo Sasaki	President Sun Ace Corporation
Dr. Masamitsu Takaya	Executive General Manager Environmental Sustainability Strategy Division Suntory Holdings Limited

Mr. Shingo Sumi	General Manager, Environment Management Department Corporate Environment Center, Environmental Management H.Q., Innovation Group Sanyo Electric Co., Ltd.
Mr. Futoshi Abe	Staff Deputy General Manager Corporate Planning Department JFE Holdings, Inc.
Mr. Kiyoshi Osaki	General Manager Environmental Sustainability Office JVC Kenwood Holdings, Inc.
Mr. Takeshi Nishibori	CSR Manager General Planning Department The Shiga Bank, Ltd.
Dr. Tatsumi Sato	General Manager Global Environmental Management Department Shimadzu Corporation
Dr. Hiroshi Morimoto	Executive Officer, Group General Manager Environmental Protection Group Sharp Corporation
Mr. Teruo Furuyama	Senior Manager Technical Group, Environmental Affairs Division Nippon Steel Corporation
Mr. Yasuhito Hirashima	Manager Global Environmental Policy Department Seiko Epson Corporation
Mr. Teruyuki Hayashi	President Seibu Landscape Co., Ltd.
Mr. Masayasu Taniguchi	General Manager Environmental Management Group, CSR Department Sekisui Chemical Co., Ltd.
Mr. Masaaki Sasaki	Senior Manager Environment Improving Department Sekisui House Ltd.
Mr. Seiichi Jimbo	Deputy General Manager Environmental Affairs Department Sony Corporation
Mr. Satoru Fujimoto	Manager Global Environment Department Daikin Industries, Ltd.
Mr. Hiroshi Obana	Executive Officer Taiheiyo Cement Corporation
Mr. Wataru Iida	G-Project Inc.
Mr. Yoshihisa Kitamichi	General Manager, Corporate Strategic Marketing Office Corporate Strategy Division Teijin Limited

Mr. Kyoji Tomita	Manager Environment Department Tokyo Gas Co., Ltd.
Mr. Yoshihiro Kageyama	General Manager Environment Department Tokyo Electric Power Company
Mr. Kiyoshi Sanehira	General Manager Corporate Environment Management Division Toshiba Corporation
Mr. Hiroyuki Kimura	Manager Product Planning Promotion Department, Marketing Planning Division Toto Ltd.
Mr. Tetsuo Miyazawa	General Manager Environment Department Toyo Seikan Kaisha, Ltd.
Mr. Kazuaki Takabayashi	General Manager Corporate Marketing Planning Department Toray Industries, Inc.
Mr. Yasushi Iwao	General Manager Marketing Department Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd.
Mr. Takamori Kawaguchi	Project General Manager, Consolidated Environmental Management Group Environmental Affairs Department, Environmental Affairs Division Toyota Motor Corporation
Mr. Hideki Yuzawa	Executive General Manager Principal Consultant Nikken Sekkei Research Institute
Mr. Masahiko Iwasaki	Manager Environment Management Group, Global Government Affairs Department- Environmental and Safety Technologies, Planning and Advanced Engineering Development Division Nissan Motor Co., Ltd.
Ms. Megumi Tsukamoto	Governmental Programs Executive Manager of Governmental Programs IBM Japan, Ltd.
Mr. Ryuji Takagi	Vice President CSR Division Japan Tobacco Inc.
Mr. Masayuki Saita	General Manager, Environmental Management Division NEC Corporation
Dr. Narito Shibaike	Manager Environmental Planning Group, Corporate Environmental Affairs Division Panasonic Corporation
Mr. Yoshinobu Shizukuishi	Biznet Corporation
Mr. Yoichi Takahashi	Deputy General Manager Environmental Strategy Office Hitachi, Ltd.

Mr. Shuji Kato	Director, Member of the Board Chief Social Responsibility Officer Bic Camera, Inc.
Mr. Hiroyuki Akiyama	Group Manager Environment Management Group & Corporate Citizenship Group, Corporate Social Responsibility Department Fuji Xerox Co., Ltd.
Mr. Mitsugu Sato	General Manager ICT Solution Group Fujitsu FIP Corporation
Mr. Masahiro Fukuoka	General Manager Ecology and Quality Management Division CSR Division FUJIFILM Corporation
Mr. Choiku Yoshikawa	Assistant General Manager Mayekawa Research Institute Mayekawa Mfg. Co., Ltd
Mr. Seiichi Jo	General Manager CSR Department Sumitomo Mitsui Banking Corporation
Mr. Koji Yamashita	General Manager Corporate Environmental Sustainability Group Mitsubishi Electric Corporation
Mr. Yukio Yamamoto	General Manager Environment & Resources Division Mitsubishi Materials Corporation
Mr. Takashi Akita	Director Corporate Planning Division Mitsubishi Rayon Co., Ltd.
Mr. Yoshitaka Moriide	Manager Marketing Department Ministop Co., Ltd.
Mr. Shinji Hirano	General Manager for Special Task Corporate Environmental Policy Planning Office Meidensha Corporation
Mr. Takashi Masuda	Vice Department Manager, Corporate Social Responsibility Department, Department Manager Environment Promotion Office, CSR Planning Office/Corporate Ethics Office Unicharm Corporation
Mr. Hiroshi Uramoto	Senior Management Corporate Environment Division Ricoh Company, Ltd.
Mr. Kenichi Nakajima	Chairman Re-Tem Corporation

APO Green Productivity Advisory Committee for the Establishment of the Eco-products Database

(as of January 2011)

■ **Chairperson**

Dr. Ryoichi Yamamoto
Emeritus Professor
University of Tokyo

■ **Members**

Mr. Takeshi Kurashige
Chief Producer
Social & Environmental Management Department
Asahi Breweries, Ltd.

Mr. Shuji Kato
Director, Member of the Board
Chief Social Responsibility Officer
Bic Camera, Inc.

Mr. Takashi Tobe
Associate Staff Manager
Environment Legislation Department, Environment Planning Center,
Environment Headquarters
Canon Inc.

Mr. Yasushi Iwao
General Manager
Marketing Department
Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd

Mr. Koichi Yanagita
Vice President
Environment and Safety
Kao Corporation

Mr. Shinichi Saitou
Section Chief
Corporate Management Division
Kokuyo Co., Ltd

Mr. Koji Yamashita
General Manager
Corporate Environmental Sustainability Group
Mitsubishi Electric Corporation

Mr. Teruo Furuyama
Senior Manager, Technical Group
Environmental Affairs Division
Nippon Steel Corporation

Mr. Masahiko Iwasaki
Manager
Environment Management Group, Global Government Affairs
Department-Environmental and Safety Technologies, Planning and
Advanced Engineering Development Division
Nissan Motor Co., Ltd.

Mr. Yasuhiro Maruyama	General Manager Environment Management Department, Sustainable Management Office Oji Paper Co., Ltd.
Ms. Miki Mitsuoka	Environmental Planner as Earth Republic General Manager Energy and Eco Services Business Headquarters Administration Management Department ORIX Corporation
Mr. Ryuji Shimono	Councilor Corporate Environmental Affairs Division, Environmental Planning Group Panasonic Corporation
Mr. Kenichi Nakajima	Chairman Re-Tem Corporation
Mr. Hiroshi Uramoto	Senior Management Corporate Environment Division Ricoh Company, Ltd.
Dr. Hiroshi Morimoto	Executive Officer, Group General Manager Environmental Protection Group Sharp Corporation
Mr. Seiichi Jo	General Manager CSR Department Sumitomo Mitsui Banking Corporation
Mr. Yoshitane Hirata	Specialist Corporate Environment Management Division Toshiba Corporation

Eco-products Directory 2011 Working Group

(as of January 2011)

■ Chairperson

Dr. Norihiro Itsubo
Associate Professor
Faculty of Environmental and Information Studies,
Tokyo City University

■ Members

Ms. Emiko Aoyanagi
Advisory Specialist for Consumer's Affairs
Environment Committee,
Nippon Association of Consumer Specialists (NACS)

Mr. Gakuji Fukatsu
Vice-Director at secretariat
Secretariat
Green Purchasing Network (GPN)

Mr. Masayuki Kanzaki
General Manager
Ecoleaf Office
Japan Environmental Management Association for Industry (JEMAI)

Dr. Keijiro Masui
Senior Research Scientist,
Environmentally Conscious Design and Manufacturing Group Advanced
Manufacturing Research Institute
National Institute of Advanced Industrial Science and Technology (AIST)

Dr. Tateki Mizuno
Special Researcher
Society of Non-Traditional Technology (SNTT)

Mr. Katsuyuki Nakano
Project Leader
LCA Development Office
Japan Environmental Management Association for Industry (JEMAI)

Ms. Takako Tsuzaki
Eco Mark Office,
Japan Environment Association (JEA)

Ms. Yumiko Yamashita
Program Officer
Industry Department
Asian Productivity Organization (APO)

Environmental label management organization

(as of February 2011)

■ Biomass Mark : Japan Organics Recycling Association (JORA)



Bajichikusan-kaikan, 2-6-16 Shinkawa, Chuo-ku, Tokyo, 104-0033 JAPAN
http://www.jora.jp/jora_news_site/txt/eng/

■ Butterfly Mark : Japan Waterless Printing Association (WPA)



2-31-14 Kohinata, Bunkyo-ku, Tokyo, 112-0006 JAPAN

■ Eco Leaf (Japan) : Japan Environmental Management Association for Industry (JEMAI)



Mitsui-sumitomo Building 6F/7F, 2-1, Kaji-cho 2 chome, Chiyoda-ku, Tokyo, 101-0044 JAPAN
E-mail: webmaster@jemai.or.jp
<http://www.jemai.or.jp/english/>

■ Eco Mark (Japan) : Eco Mark Office, Japan Environment Association (JEA)



Bakurocho Daiichi BLDG., 1-4-16 Nihonbashi Bakurocho, Chuo-ku, Tokyo, 103-0002 JAPAN
Tel: +81-3-5643-6255 Fax: +81-3-5643-6257
E-mail: ecomark@japan.email.ne.jp
<http://www.ecomark.jp/english/>

■ The Environmental Declaration of Products (EDP) Program : Korea Eco-Products Institute (KOECO)



613-2, Bulgwang-dong, Eunpyeong-gu, Seoul, 122-706, KOREA
E-mail: jung60@koeco.or.kr / mozzi@koeco.or.kr / sgkang@koeco.or.kr (Eco-Label)
ksg@koeco.or.kr (MRA,Eco-Label) / kohung@koeco.or.kr (EDP,Carbon Footprint)
<http://www.koeco.or.kr/eng/>

■ Korea Eco-Label: Korea Environmental Industry & Technology Institute (KEITI)



Korea National Environmental Information Center, 215 Junheung-ro, Bulgwang-dong,
Eunpyeong-gu, Seoul, 122-040 Republic of Korea

■ Green Choice Philippines: The Philippine Center for Environmental Protection and Sustainable Development, Inc. (PCEPSDI)



Development Academy of the Philippines Building, San Miguel Avenue, Pasig City, 1600 Philippines
<http://www.pcepsdi.org.ph/>

■ **Energy star labels / Energy-Saving Label / Uniform Energy-Saving Label :**
The Energy Conservation Center, Japan



GEO Hatchobori Bldg. 5F, 3-19-9, Hatchobori, Chuo-ku, Tokyo, 104-0032 JAPAN
<http://www.asiaeec-col.eccj.or.jp/>



■ **EPD (Sweden) : :Environmental Product Declarations**



1-4-10 Akasaka, Minato-ku, Tokyo, 107-0052 JAPAN

■ **Fuel economy sticker / Low emitter vehicle sticker :**
Ministry of Land, Infrastructure, Transport and Tourism (MLIT)



2-1-3 Kasumigaseki, Chiyoda-ku, Tokyo, 100-8918 JAPAN



■ **Green Energy Mark : The Institute of Energy Economics, Japan (IEE JAPAN)**



Sumitomohudousan Higashiikebukuro Bldg 2F, 3-13-2, Higashiikebukuro, Toshima-ku, Tokyo, 170-0013 JAPAN

■ **Green Label : Singapore Environment Council**



1 Cluny Road, House No 3, Singapore 259569
E-mail: info@sec.org.sg (Mr. Howard Shaw)
<http://www.sec.org.sg/>

■ **Green Mark (Republic of China) : Environment and Development Foundation**



Rm212, Bldg.53, #195 Chung-Hsin Rd. Sec.4, Chutung, Hsinchu, TAIWAN 300
E-mail: ningyu@edf.org.tw (Ning Yu)
<http://greenliving.epa.gov.tw/GreenLife/green-life/english.aspx>

■ **GreenPla : Japan BioPlastics Association (JBPA)**



Universal Bldg.6F, 5-11 Nihonbashi-Hakozakicho, Chuo-ku, Tokyo, 103-0015 JAPAN
<http://www.jp paweb.net/english/>

■ **J-Moss green marks : Japan Electronics and Information Technology Industries Association (JEITA)**



Chiyoda First Bldg.South Wing, 3-2-1, Nishi-Kanda, Chiyoda-ku, Tokyo, 101-0065 JAPAN
<http://www.jeita.or.jp/english/>

■ **Kizukai-cycle mark : Japan Wood-Products Information & Research Center (JAWIC)**



1-7-12 Koraku, Bunkyo-ku, Tokyo 112-0004 Japan

■ PEFC Forest Certification : PEFC Asia Promotions



20 Sankyo Bldg 904 3-11-5 Iidabashi, Chiyoda-ku, Tokyo, 102-0072 JAPAN

E-mail: info@pefcasia.org

<http://www.pefcasia.org/>

■ Registered in the GPN Database : Green Purchasing Network (GPN)



Bakurocho Daiichi BLDG., 1-4-16 Nihonbashi Bakurocho, Chuo-ku, Tokyo, 103-0002 JAPAN

Tel: +81-3-5642-2030 Fax: +81-3-5642-2077

E-mail: gpn@net.email.ne.jp

<http://www.gpn.jp/English/>

■ Thai Green Label : Thailand Environment Institute



16/151-154, Muang Thong Thani, Bond Street, Pakkred District, Nonthaburi 11120

E-mail: pathom@tei.or.th (Mr. Pathom Chaiyapruksaton)

<http://www.tei.or.th/>

■ Thinned Wood Mark : J Forest (JBPA)



Corp Bldg.4F, 1-1-12, Uchikanda, Chiyoda-ku, Tokyo, 101-0047, JAPAN

■ WaterSense Label : U.S. Environmental Protection Agency



Office of Wastewater Management (4204M), 1200 Pennsylvania Avenue, N.W.Washington, D.C. 20460

The related organizations

(as of February 2011)

■ Ecomaterials Forum, The Society of Non-Traditional Technology (SNTT)

Shinbashi-Amano Bldg. 6F, 1-5-10 Nishishinbashi, Minato-ku, Tokyo, 105-0003 JAPAN

Tel: +81-3-3503-4681 Fax: +81-3-3597-0535

E-mail: ecomat@sntt.or.jp

http://www.sntt.or.jp/index_en.html

■ Federation of Malaysian Manufacturers

Wisma FMM, No.3 Persiaran Dagang, PJU 9, Bandar Sri Damansara, Kuala Lumpur, 52200 Malaysia

<http://www.fmm.org.my/>



Asian Productivity Organization

1-2-10, Hirakawa-cho, Chiyoda-ku, Tokyo 102-0093, Japan

Tel. (81-3) 5226-3920 Fax. (81-3) 5226-3950

e-mail: apo@apo-tokyo.org

URL: www.apo-tokyo.org

