



Asian Productivity Organization



ECO-PRODUCTS
DIRECTORY 2009

For sustainable production & consumption

Eco-products Directory 2009

More than 800 eco-materials, -components, -products, and -services are included, with more than 400 categorized as effective in preventing global warming.

Environmental considerations in publishing the *Eco-products Directory 2009*

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Foreword

The *Eco-products Directory* is a groundbreaking APO publication that promotes the concept and practice of environmentally responsible purchasing among enterprises and consumers in the Asia-Pacific region.

Release of the four editions published thus far has coincided with the annual Eco-products International Fairs, and they have been circulated in Asia and beyond at various international events. For example, the *Eco-products Directory 2008*, the previous edition, was on display at the Environmental Showcase in the International Media Center of the G8 summit held in Hokkaido, Japan, 7-9 July 2008. It was also distributed to delegates to the Fourth Tokyo International Conference on African Development.

The fifth edition of the *Eco-products Directory* is being released in conjunction with the opening of the Eco-products International Fair 2009 in Manila, the Philippines, in March. The compilers aimed to make the latest edition even easier to use and understand. For example, a classified index of goods and services has been added. The descriptions of eco-products that have obtained environmental certification are illustrated with the relevant labels in the listings.

Several world leaders have spoken of their intention to ignite national economic activity by prioritizing public investment for improved energy efficiency and the promotion of renewable energy. Of the more than 800 products and services listed in the *Eco-products Directory 2009*, more than 450 are categorized as energy saving, more than 400 as effective in preventing global warming, and around 350 as helping to reduce the consumption of resources. The number of products and services listed and the percentage of providers in countries other than Japan were the highest since this publication started in 2004. I hope that this publication will contribute to an appreciation and expansion of eco-product and -service markets in the Asia-Pacific region.

Our sincere thanks go to Professor Ryoichi Yamamoto, Chairperson of the Committee on the Eco-products Database, and all members of the working group for their dedicated leadership and efforts that made this publication possible.

Shigeo Takenaka
Secretary-General

Tokyo
January 2009



Dear Readers

The area of the Arctic Ocean covered with sea ice in 2008 was the second smallest since satellite observation began. Although the coverage was slightly larger than the level seen in 2007, its actual volume was the smallest on record. Some even predict that summer sea ice will be completely gone in about ten years, and experts warn that if no action is taken, global warming will cause major disruptions to our health, ecosystems, industries, social infrastructure and various other areas.

Society has also developed a heightened level of sensitivity to the issue of global warming. Tokyo's Eco-Products 2008 exhibition (an event to showcase environmentally friendly products) attracted 174,000 visitors, with more than 752 businesses running booths. The Eco-products International Fair 2008 held in Hanoi, Vietnam, welcomed approximately 100,000 visitors. An increasing number of music concert and sports event organizers now make efforts to offset the CO₂ emissions generated from the events they host by planting trees. In addition, businesses have ventured into the area of food and other products bearing carbon footprint labels that indicate the total amount of CO₂ and other greenhouse gases emitted during their life cycles.

Environmental issues have also gained prominence in the media, with TV programs and newspapers reporting on environmental matters every day. Although more than 7,000 products now bear labels certifying their green status, information about products and services that help mitigate environmental impact often does not reach us. As a result, many people struggle to come up with a clear-cut answer when considering how to minimize damage to the environment.

To guide us toward the development of an environmentally friendly society, each one of us must have a solid understanding of the answers to the following two questions: "What problems does today's society face?" and "How can I help to address them?"

Industry can make a social contribution by providing goods and services that are environmentally friendly or that reduce their environmental impact - commonly referred to as eco-products.

Industry is actively working to develop eco-products and services and make them widely available to help society. However, regardless of how wonderful eco-products might be, if they do not gain enough popularity to replace existing products, they will not be effective in reducing environmental damage. Accordingly, efforts must be made to inform consumers of the types of eco-products and services available.

The *Eco-products Directory* has been published by the Asian Productivity Organization (APO) since 2004, and represents a comprehensive guide to a range of eco-products currently on the market. To date, 3,300 eco-products and services have been included in this directory.

The *Eco-products Directory 2009* offers consumers:

- Straightforward listings of more than 800 leading-edge eco-products
- Clear explanations of the varieties and characteristics of the eco-products listed

To satisfy the above conditions, the APO established the Eco-products Directory 2009 Working Group and held multiple meetings aimed at tailoring the information contained to ensure that it is genuinely useful in helping consumers to better understand the contents of the directory.

The year 2009 promises to be an extremely important period in the earth's history. Post-Kyoto Protocol negotiations on greenhouse gas emissions are underway worldwide in tandem with a global trend of efforts to overcome the current economic downturn caused by financial turmoil through the Green New Deal initiative. An integral part of these processes is the popularization and widespread use of environmental impact-reducing technologies and eco-products. We therefore believe that the *Eco-products Directory 2009*, which itemizes such technologies and products, is a tremendously valuable resource.

In editing this directory, we received the generous cooperation of parties across a wide variety of fields including universities, research centers and NPOs. The Society for Non-Traditional Technology also dedicated itself to the completion of the project. I would like to take this opportunity to express my sincere gratitude to all concerned.

Ryoichi Yamamoto

Professor, Institute of Industrial Science & International Research Center
for Sustainable Materials, University of Tokyo

Chairperson of the Committee on the Eco-products Database of the APO
Vice chairperson of the GP Advisory Committee of the APO

In 2008, a financial meltdown triggered by the US subprime mortgage crisis swept through Europe and Asia. As a result, the global economy has continued its nosedive into recession as consumption plummets and the real economy centered on the automobile industry slumps.

The global stock market has lost US\$30 trillion (approximately ¥3,000 trillion), and the large-scale credit crunch rapidly engulfing world markets has caused the real economy to begin shrinking. Many people have read of the Great Depression of 1929 and the New Deal launched by US President Franklin D. Roosevelt in response to concerns over future prospects for the global economy. Against this background, the Green New Deal Group, a UK-based organization, issued a report in July 2008 proposing a Green New Deal to combat the triple crunch of the financial crisis, accelerating climate change, and soaring energy prices (commonly referred to as the credit crunch, the climate crunch, and the global energy crunch), primarily through the introduction of new energy technologies.

With the aim of countering climate change and the energy crisis as well as stimulating the global economy, the International Energy Agency (IEA) has also called for a global revolution in which unprecedented investment amounting to US\$45 trillion (approximately ¥4,500 trillion) would be made to halve greenhouse gas emissions by 2050. British Prime Minister Gordon Brown and French President Nicolas Sarkozy have backed the IEA plan. In October 2008, the United Nations Environment Programme (UNEP) issued the Green Economy Initiative report, and UN Secretary-General Ban Ki-moon expressed expectations that new US President Barack Obama would launch a Global Green New Deal.

The Green Economy Initiative was developed in part in response to a request made in 2006 by the G8+5 group of nations and is based on the following three concepts: 1) valuing and mainstreaming nature-related services into national and international accounts, including GDP; 2) generating employment through green jobs and formulating related policies; and 3) introducing instruments and market signals to accelerate the transition to a green economy. The results of surveys conducted by the UNEP and other UN agencies on innovative market mechanisms, the impact of subsidies, etc., will be incorporated in proposals made to governments within 18 to 24 months for a comprehensive assessment and the creation of a tool kit for making the necessary transition. The initiative is backed by approximately US\$4 million in funding from the European Commission, Germany, and Norway, and the UNEP has asked the Deutsche Bank to lead the research required. The UNEP believes that the project will serve as an antidote to the current economic crisis and act as a springboard to

the establishment of a low-carbon, low-impact global economy characterized by high employment and better management.

The Green New Deal will overwhelmingly focus on renewable energy. Looking back on recent decades, the driving forces behind the economy and employment have been the Internet and IT in the 1990s and finance and real-estate business (housing investment) in the following decade. In today's world, a new growth sector is needed to serve as the engine for economic recovery. In the 21st century, renewable energy is expected to take over the economic role played by automobiles in the 20th century, and the sector is currently growing at a speed that will make it comparable in size to the automotive industry in 10 years' time. In addition to renewable energy, unprecedented levels of investment in the infrastructure for a low-carbon society are also foreseen, including financial stimuli to encourage the construction of well-insulated residences and the development of clean-energy automobiles and green power grids. There is now a need to create a new growth sector through large-scale investment in the infrastructure for a low-carbon society worldwide as well as to overcome the three crises mentioned above while creating employment (in the form of green jobs) and providing the political leadership to achieve these aims.

The Asian economy is expected to cool as a result of stagnating domestic demand and a downturn in export growth. Governments need to minimize this economic downturn and shift direction toward sustainable social and economic systems supported by appropriate policies. In the meantime, economic stimulus programs and job creation will be the keys to extricating ourselves from the crises currently engulfing the environment and the economy.

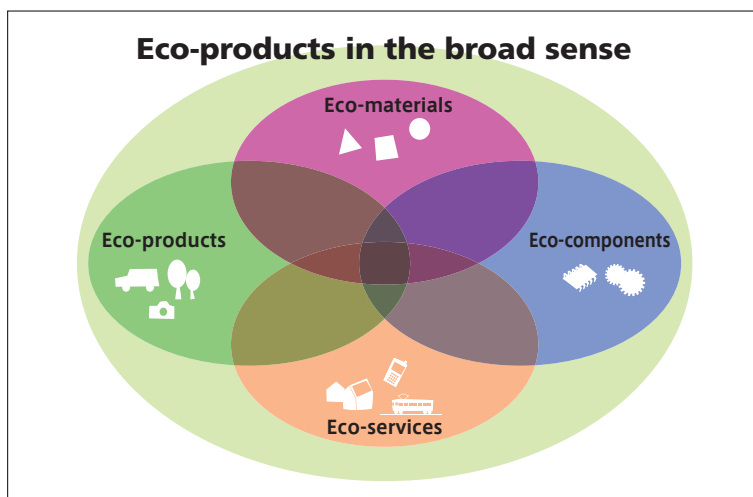
Hideki Nakahara

Professor, Faculty of Environmental & Information Studies, Musashi
Institute of Technology

Products listed in the *Eco-products Directory 2009*

About eco-products

"Eco-products" generally refer to environmentally friendly products, but there is no strict definition. In the *Eco-products Directory 2009*, eco-products are defined as "products and services that comply with environmental regulations or are environment-friendly, reflecting manufacturers' voluntary efforts to care for the environment." Eco-products include not only industrial products but also products and services in the areas of agriculture, tourism, and finance. They also include 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). In the *Eco-products Directory 2009*, eco-products are classified into four categories: materials, components, products, and services.



Eco-products listed in this Directory

Many eco-products come with environmental labels that state product features to inform and appeal to consumers. They certify that items are eco-products 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.

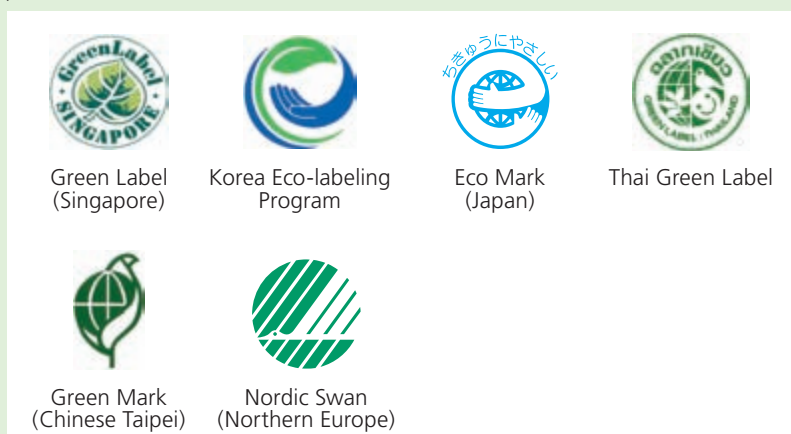
In addition to environmental labels, other initiatives are intended to raise consumers' environmental awareness, including the creation of databases where self-assessed products may be registered. Those initiatives are individual ones and thus differ.

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.

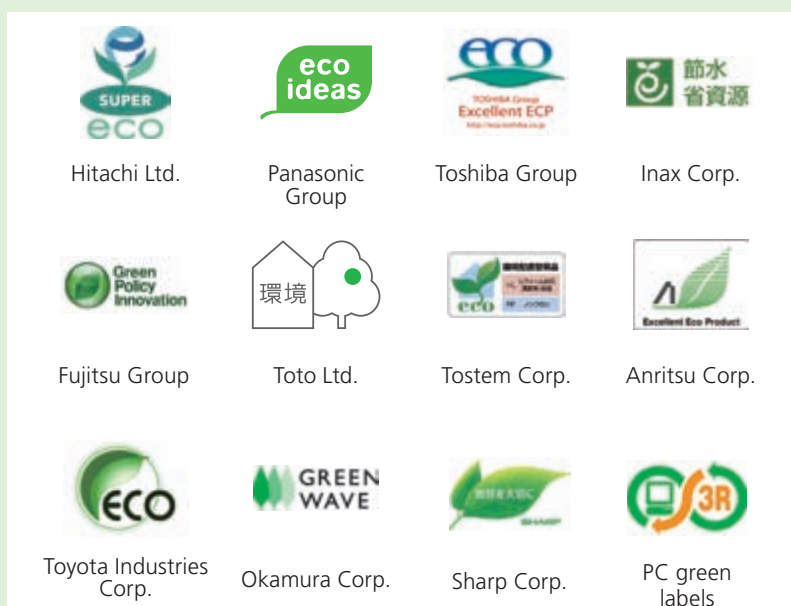
Examples:



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

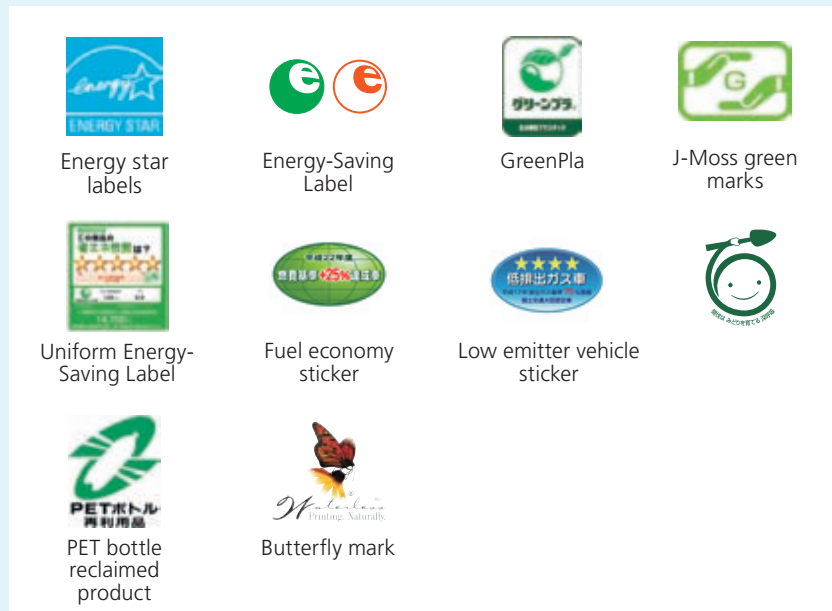
Description: Type III labels are managed in accordance with ISO14025 (environmental declarations). They use the life cycle assessment (LCA) method to show environmental information on products quantitatively from resource extraction to manufacturing/assembly, distribution, use, and discarding/recycling. 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 listed in the *Eco-products Directory 2009* are considered to be eco-products 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 have not been registered in the GPN Database, the Eco-products Database Working Group decided whether to include them based on the Purchasing Guidelines of the GPN.

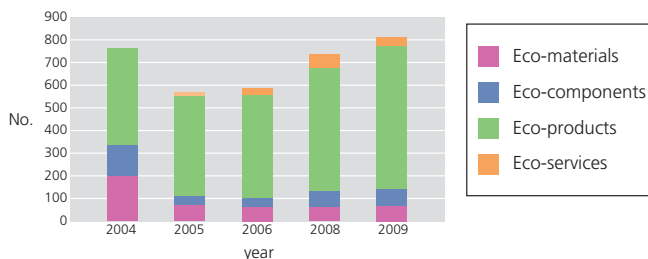
Properties of listed goods and services during 2004-2009

1. Number of eco-products and -services

- 1) The number of listed eco-products has been steadily increasing since 2004.
 - 2) Listed eco-products account for nearly 80% of the total in 2009.
 - 3) The total number of goods and services has gradually increased since 2005.
- *Data entry for eco-services started in 2005.

	2004	2005	2006	2008	2009
Eco-materials	199	80	71	70	73
Eco-components	134	39	39	73	83
Eco-products	421	432	453	526	604
Eco-services		16	28	56	44
Total	754	567	591	725	804

Figure 1. Number of listed goods and services



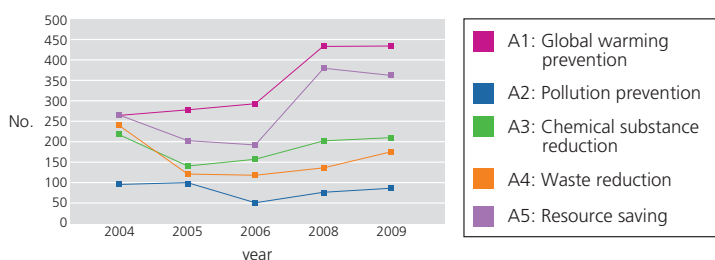
2. Number of products and services by category

Which environmental issues are eco-products intended to address?

- 1) More than 400 have been categorized as effective in preventing global warming since 2008.
- 2) Category A products and services are divided into two subgroups. The first subgroup comprises Categories A1 and A5 which have the highest percentage gain in number of entries. The second subgroup comprises Categories A2, A3, and A4 which continue to have few entries.

	2004	2005	2006	2008	2009
A1: Global warming prevention	263	274	289	429	441
A2: Pollution prevention	95	98	51	73	84
A3: Chemical substance reduction	215	140	153	199	207
A4: Waste reduction	238	119	117	135	173
A5: Resource saving	264	201	190	376	355

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



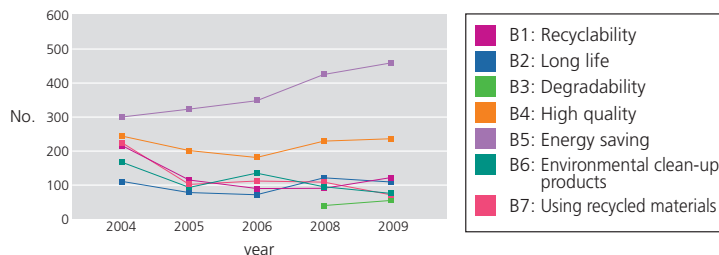
How do eco-products address environmental issues?

- 1) Products categorized as energy saving increased from about 300 to 500 from 2004 to 2009.
- 2) The number of products categorized as high quality has remained between 170 and 300 since 2004.

*Category B3 was newly added from 2008.

	2004	2005	2006	2008	2009
B1: Recyclability	214	110	84	85	116
B2: Long life	106	76	65	118	104
B3: Degradability				33	55
B4: High quality	243	198	179	228	230
B5: Energy saving	297	321	348	428	469
B6: Environmental clean-up products	135	74	107	75	83
B7: Using recycled materials	177	79	87	86	80

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



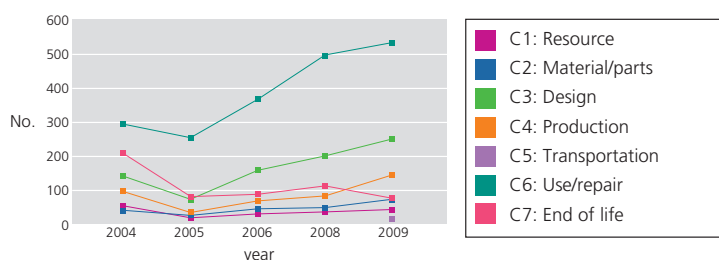
When and where in the product life-cycle do eco-products address environmental issues?

- 1) Except for Category C7, the number of goods and services has gradually increased from 2005.
- 2) In 2009, nearly 70% of products listed addresses environmental issues in the stage of design and product use.
- 3) Among them, the number categorized as use/repair accounts for about half of the total in Category C.

*Category C5 was newly added from 2009.

	2004	2005	2006	2008	2009
C1: Resource	63	23	35	43	48
C2: Material/parts	45	30	52	59	86
C3: Design	163	83	184	229	247
C4: Production	111	40	79	95	145
C5: Transportation					16
C6: Use/repair	298	256	363	499	525
C7: End of life	205	78	87	110	80

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



To ensure an accurate understanding of eco-products, the following three categories were developed for the *Eco-products Directory 2009*:

Which

A: Which environmental issues are eco-products intended to address?

This category helps consumers understand which environmental issues eco-products are intended to address. 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, one of the weighty environmental problems in Japan, 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 oxidization. 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.

How

B: How do eco-products address environmental issues?

This category explains how eco-products 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 do eco-products address environmental issues?

This category helps determine when and where within the life cycle environmental initiatives are reflected in eco-products. 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.

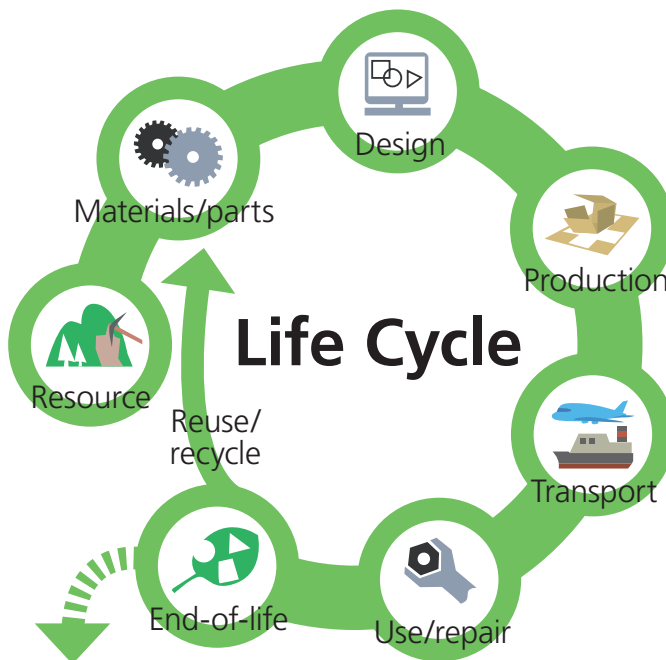


End-of-life

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.

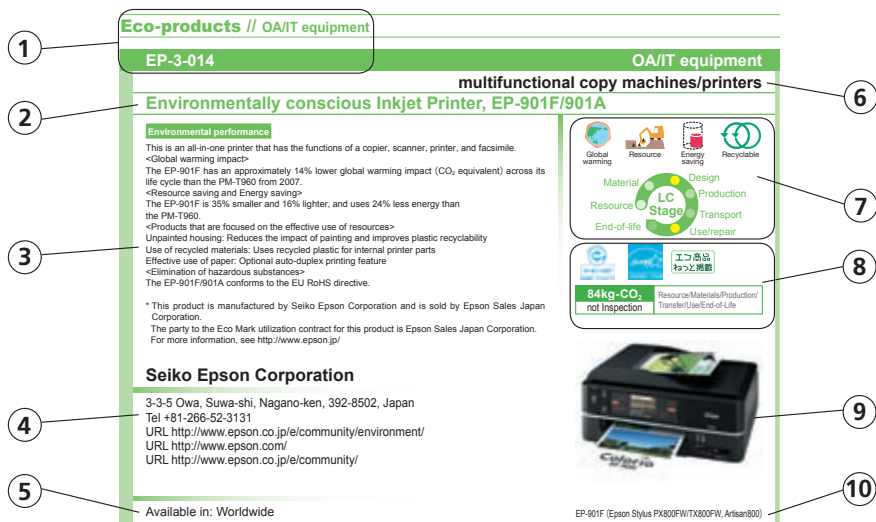
Each product listed in the *Eco-products Directory 2009* is categorized by a maximum of two items in categories A, B, and C.

Product life cycle stage: Schematic diagram



Product data display in the *Eco-products Directory 2009*

The *Eco-products Directory 2009* is intended to enlighten people, mainly in the Asia-Pacific region, on eco-products and -services available. As many as possible are listed in this directory. To make it simple and easy for all environment-minded individuals to understand, the product data are sorted and arranged in the directory as shown below. We thank the providers for information on the products and services listed.



- | | |
|---|---|
| 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 greenhouse gas emissions |
| ④ Company information | ⑨ Product photo |
| ⑤ Sales territory | ⑩ Photo caption |

① Product ID number

All product ID numbers are displayed as shown below:

EP-3-014

Classification1 Classification2 product item no.

(1) Classification1

In the *Eco-products Directory 2009*, the information on each eco-product is provided in four categories: 1. Materials, 2. Components, 3. Products, and 4. Services. The product data also use frames of different colors for different main entries (1. pink, 2. blue, 3. green, and 4. orange).

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

(2) Classification²

Each main entry is divided into subentries 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 subentries are shown the right side of the line for product ID numbers 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 subentry lists product items in numerical order in accordance with the Japan Statistical Standard Industry Classification.

② Title (product name and features)

Brief descriptions of how products have been improved to contribute to environmental impact reduction are provided in this section.

③ Product description (environmental performance and product performance)

Detailed descriptions of how products have been improved to contribute to environmental impact reduction are provided in this section.

④ Company information

The contact details of product providers are listed in this section including respective URLs for the Websites of providers, the listed product and provider's CSR report.

⑤ Sales territory

Where each product is available can be found in this section.
(Sales territories are not always stated, as this is a free-listing section.)

⑥ Common product name

The common name of each product is given in this section
(e.g., camera, pencil, desk, etc.).

⑦ Categories

How eco-products reflect certain environmental initiatives is indicated graphically under the following three categories:

A: Which environmental issues are eco-products intended to address?

B: How do eco-products address environmental issues?

C: When and where in the product life cycle do eco-products 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

B: "How"



Recyclable



Long-life



Degradable



High quality



Energy saving



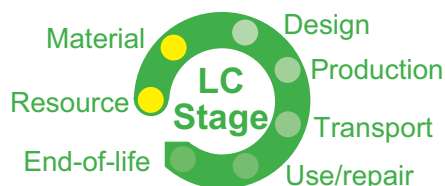
Purification



Recycled materials

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

C: "When" and "Where"



⑧ Environmental labels and greenhouse gas emissions

Up to four eco-labels granted to products 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 2009*.

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 is inserted for each product.

⑩ Photo caption

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

Eco-materials

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

In the *Eco-products Directory 2009*, “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

mold steel

Advanced Plastic Mold Steel "CENA1®α"

Environmental performance

CENA1®α is applied for large size plasma display frames and liquid crystal display frames where welded lines are not allowed on frame surfaces. "CENA1®α" is the only mold material for applications where welded lines on the surface are not allowed.

The characteristics are as follows:

- (1) Super-large sizes of products with high toughness are available.
- (2) Showing excellent polishability, machinability, rust resistance and weldability.

"CENA1®α" can contribute to total cost reduction of molds and reducing production lead-time due to good machinability. Oil free machining, which "CENA1®α" can realize contributes to environmental protection. Furthermore, "CENA1®α" can achieve parting line free surfaces of plastics that do not need painting. This paint free plastics enhance recyclability.

Hitachi Metals, Ltd.

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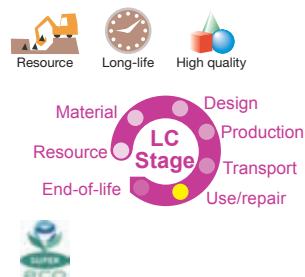
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URL http://www.hitachi-metals.co.jp/e/prod/prod19/p19_10.html

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



Example of molds for weld line measures and forming

EM-1-002

Metals

mold 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 reduce energy material to be used and fabrication time for making various molds for automobile industries, and other industrial fields where molds are necessary.

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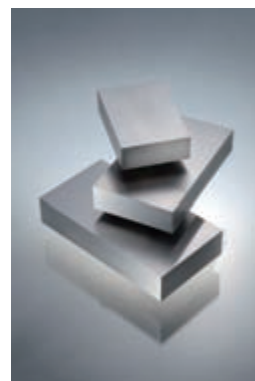
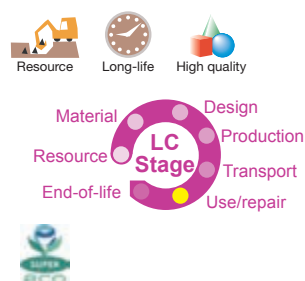
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URL http://www.hitachi-metals.co.jp/e/prod/prod19/p19_11.html

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



EM-1-003

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.



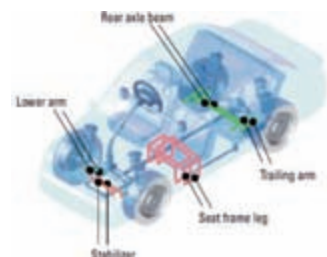
Global warming



Energy saving



High quality



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EM-1-004

Metals

steel pipes

Martensitic Stainless Steel Tubes/Threaded Joints

Environmental performance

13% Cr OCTG (oil country tubular goods) and 12% Cr line pipe for production and transport of oil and natural gas, 9% Cr steel pipe for high-efficient power generation and threaded joints are materials having long life and low environmental loads. As for threaded joints used in combination with oil well tubes, new products using no environmental pollutants are provided.



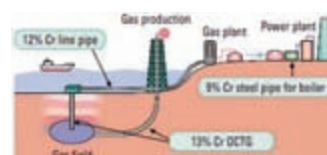
Resource



Long-life



High quality



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EM-1-005

Metals

steel materials

High Strength Steel Plates for Large Containers in Marine Applications

Environmental performance

These steel plates are manufactured using Super-OLAC. Compared to existing grade plates, they have high yield strength (up to 460Mpa) and superior weldability and the high-heat input welding zone shows excellent low temperature toughness. The lightening of ship hulls that is achieved through reducing the plate thickness contributes to reductions in transport energy as well as construction costs.



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EM-1-006

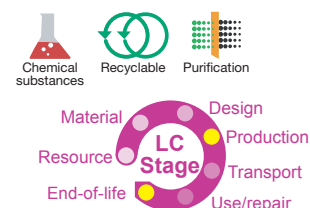
Metals

steel materials

Lead-free free-cutting steel (steel bars)

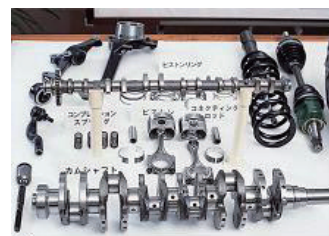
Product performance

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.



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EM-1-007

Metals

sheet steel

High Tensile, Thin Walled Drum Can "Eco Feather"

Environmental performance

Using high tensile strength steel with high workability enabled us to increase the drum can strength and make the walls thinner, making this can a contribution to resource conservation.



Global warming



Energy saving



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EM-1-008

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.



Global warming



Resource



Energy saving



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EM-1-009

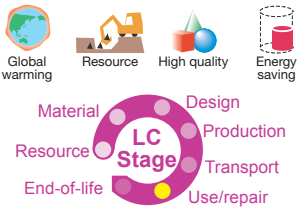
Metals

sheet steel

Electrical Steel Sheets for Hybrid Cars

Environmental performance

Highly efficient and non-oriented electrical steel sheets, when adopted in driving motor cores, improve automotive fuel economy and contribute to downsizing/weight reduction of automobiles. Meanwhile, highly efficient and silent electrical steel sheets containing 6.5% Si (known as "Super Core") are adopted in reactor cores for boost converter power systems.



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EM-1-010

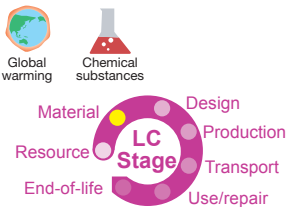
Metals

sheet steel

Universal Bright F

Environmental performance

This award-winning steel sheet product enables can manufacturers to skip coating and printing processes, and thereby eliminates harmful substances and reduces CO₂ emissions.



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Eco-materials // Metals

1
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3
4
5
6
7

Eco-components

Eco-products

Eco-services

EM-1-011

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.



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EM-1-012

Metals

sheet steel

Chromate-free coated steel sheet

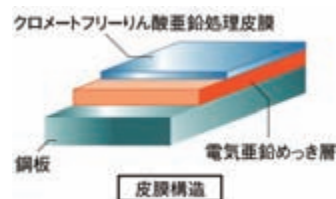
Environmental performance

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.



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EM-1-013

Metals

sheet steel

An exhaust manifold material "JFE-WX1"

Environmental performance

An exhaust manifold material, JFE-WX1 is the only ferritic stainless steel in the world, which can be used at ultra-high temperature. It improves auto fuel economy, reduces CO₂ emissions, and contributes to exhaust gas purification.



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EM-1-014

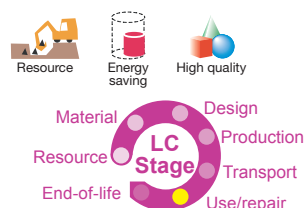
Metals

sheet 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.



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EM-1-015

Metals

sheet steel

The New S-TEN1, high corrosion resistance steel material

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.



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EM-1-016

Metals

sheet steel

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

Product performance

The steel plates for ships, buildings, bridges and other large structures are prone to coarsening when exposed to the heat required during the welding process (coarsening which namely reduces toughness). 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 need 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 of 1400 degrees Celsius and more. The HTUFF steel sheet drastically improved the welding efficiency of users and contributed toward energy savings. The HTUFF is the recipient of the 36th Ichimura Industrial Award presented by the New Technology Development Foundation in FY2003.



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EM-1-017

Metals

sheet steel

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

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.



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EM-1-018

Metals

sheet steel

High-endothermic steel sheet

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.



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EM-1-019

Metals

coated steel

Flat rolled magnetic steel sheet/strip for high electrical 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.



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EM-1-020

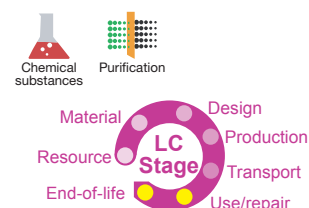
Metals

coated steel

Lead-free steel sheet for car fuel tank

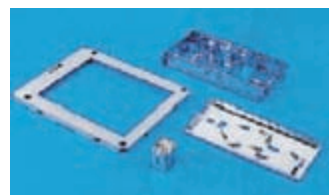
Product performance

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.



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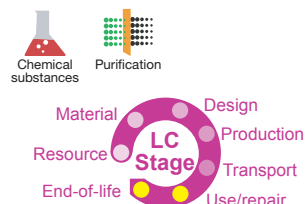
Metals

coated steel

Steel sheet coated with chromate-free film

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.



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EM-1-022

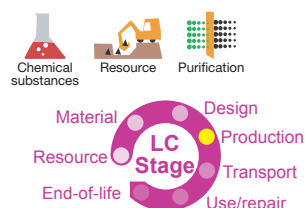
Metals

construction methods

Pre-coated steel sheet; to eliminate painting

Product performance

Nippon Steel's prepainted steel sheet (trademarked as Viewcoat) is used in washing machines, refrigerators and outdoor air conditioner units. Customers can specify their chosen color and this eliminates the painting process following fabrication and assembly. Pre-painted on a dedicated painting line, Viewcoat excels in paint film quality, minimizes paint loss, and greatly reduces environmental impact.



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EM-1-023

Metals

copper alloy

BZ1 (leadless forging brass with dezincification corrosion resistance)

Environmental performance

Lead is added to general free-cutting brass and forging brass to improve machinability and workability. BZ1's excellent machinability without the addition of lead significantly reduces its burden on the human body and the environment while maintaining full compliance with RoHS regulations. It also has excellent recyclability as it is primarily manufactured from recovered scrap such as shavings.

Product performance

- Excellent dezincification corrosion resistance, erosion/corrosion resistance and hot forgeability with a level of performance similar to that of existing forging brass.
- Ordinary free-cutting brass with dezincification corrosion resistance requires heat treatment after hot working. As BZ1 does not require this, it offers cost advantages from shortened processing.
- ☆ Patent acquired (No. 3966896). International patents applied for. Already patented in China. Patent pending in the U.S., Europe and South Korea.
- Stronger than bronze
- Corrosion resistance and machinability equivalent to those of bronze
- Cost reduction thanks to a level of forgeability that is impossible to achieve with bronze
- ☆ Based on these characteristics, we recommend switching from bronze casting to brass forging using BZ1.



SAN-ETSU METALS Co., Ltd.

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EM-1-024

Metals

copper alloy

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



Mitsubishi Shindoh Co., LTD (the former Sambo Copper Alloy Co., LTD)

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 URL <http://www.mmc.co.jp/corporate/en/product/electronics/0801.html>
 URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Except North America & Europe

Machined products using ECO BRASS rods

EM-1-025

Metals

coated aluminum metal

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

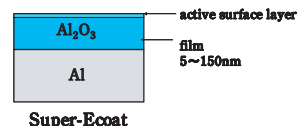
In this newly developed surface treatment product, non-porous, dense and thin aluminum oxide film with active surface layer is formed on aluminum. Corrosion resistance, adhesion and bonding strength more than equal to that of conventional chromate treatment are obtained. It is now widely used in home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

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【Feature and film composition of Super-Ecoat】
①aluminum oxide film (high safety)
②non-porous and dense film (corrosion resistance)
③chemical bond by active surface layer (adhesion and bonding strength)
④It forms with anodic oxidation treatment (high-speed processing and uniformity)



EM-1-026

Metals

granulated blast furnace slag

Construction method using thin-sheet steel

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.



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URL <http://www.nsc.co.jp/en/eco/index.html>



EM-2-001

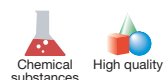
Polymers

epoxy molding compound

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



EM-2-002

Polymers

wafer coating 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



EM-2-003

Polymers

laminates material systems

Laminates Material System for Rigid/Flex Printed Circuit Board "CUTE"

Environmental performance

Ultra thin and bendable materials contribute to reducing the size and improving the performance of mobile devices and medical equipment.

Product performance

This laminates material system offers an excellent dimensional stability by using novel low elastic modulus resin system, ultra thin glass fabric, and hard segments in the resin system.



Hitachi Chemical Co., Ltd.

1500 Ogawa Chikusei-shi, Ibaraki, 308-8521, Japan
 Tel +81-296-20-2217 Fax +81-296-28-6128
 URL <http://www.hitachi-chem.co.jp/english/index.html>
 URL <http://www.hitachi-chem.co.jp/english/products/index.html>
 URL <http://www.hitachi-chem.co.jp/japanese/csr/index.html>



Available in: Japan, U.S.A., EU, Korea, China, Taiwan, Singapore

TC-C-300/TC-F-300

EM-2-004

Polymers

biodegradable resin

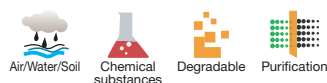
GCS-PLA GC8000 (Pellet)

Environmental performance

1. These biodegradable products contribute to reduced environmental problems caused by conventional plastic wastes.
2. These biodegradable products are stable in the atmosphere but they are decomposed by living microorganisms in compost, wet soil, and the sea.
3. These biodegradable products can be recycled several times in most conventional plastic processing equipment.

Product performance

GCS-PLA GC8000 is used for biodegradable garbage bags, compost bags, shopping bags, etc.



Green Chemical Co., Ltd

17-3, Yangpyeong-Ri, Moga-Myeon, Icheon-City, Kyunggi-Do, 467-873, Korea
 Tel +82-31-632-9152 Fax +82-31-632-9152
 E-mail gcspla@yahoo.co.kr
 URL www.gcspla.co.kr

Available in: Worldwide

Application use: Biodegradable bag for 2008 Beijing Olympic team

EM-2-005

Polymers

biodegradable resin

GCS-PLA GC8000T

Environmental performance

1. These biodegradable products contribute to reduced environmental problems caused by conventional plastic wastes.
2. These biodegradable products are stable in the atmosphere but they are decomposed by living microorganisms in compost, wet soil, and the sea.
3. These biodegradable products can be recycled several times in most conventional plastic processing equipment.

Product performance

This biodegradable resin (GC8000T) is used for injection and extrusion of molded products such as spoons, forks, knives, chopping boards, and straws.



Green Chemical Co., Ltd

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Tel +82-31-632-9152 Fax +82-31-632-9153
E-mail gcspla@yahoo.co.kr
URL www.gcspla.co.kr

Available in: Worldwide

Applicable products : spoon, fork, knife, chopping board

EM-2-006

Polymers

biodegradable resin

GCS-PLA GC8000R (Pellet)

Environmental performance

1. These biodegradable products contribute to reduced environmental problems caused by conventional plastic wastes.
2. These biodegradable products are stable in the atmosphere but they are decomposed by living microorganisms in compost, wet soil, and the sea.
3. These biodegradable products can be recycled several times in most conventional plastic processing equipment.

Product performance

GCS-PLA (GC8000R) is used for biodegradable garbage bags, compost bags, and shopping bags.



Green Chemical Co., Ltd

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E-mail gcspla@yahoo.co.kr
URL www.gcspla.co.kr

Available in: Worldwide

Application use : Biodegradable garbage bag and shopping bag and roll bag

EM-2-007

Polymers

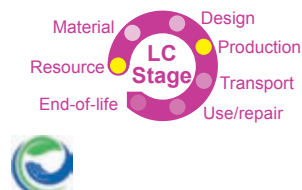
biodegradable resin

GCS-PLA GC8400 (Pellet)**Environmental performance**

1. These biodegradable products contribute to reduced environmental problems caused by conventional plastic wastes.
2. These biodegradable products are stable in the atmosphere but they are decomposed by living microorganisms in compost, wet soil, and the sea.
3. These biodegradable products can be recycled several times in most conventional plastic processing equipment.

Product performance

GCS-PLA (GC8400) is used for biodegradable compost bags, shopping bags, etc. The base materials are AP (PLA) + starch

**Green Chemical Co., Ltd**

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 Tel +82-31-632-9152 Fax +82-31-632-9153
 E-mail gcspla@yahoo.co.kr
 URL www.gcspla.co.kr

Available in: Worldwide

Application use: Biodegradable shopping bags

EM-2-008

Polymers

plastic bags

R3plas Oxo-biodegradable plastic packaging**Environmental performance**

Degrades with presence of UV, thermal and oxidation.
 Environmental friendly and good transparency
 Supports Governmental and ISO 14000
 Meets ATSM standards. member of Oxo-Biodegradable Plastics Institute(USA)
<http://www.oxobio.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 cutlery
 R3plas Oxo-biodegradable agricultural seeding bags
 Rplas 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 winrigo@singnet.com.sg
 URL www.winrigo.com.sg
 URL www.winrigo.com.sg
 URL www.winrigo.com.sg

Available in: All countries

R3plas Oxo-biodegradable garbage bag in roll and R3plas Oxo-biodegradable shopping bag

EM-2-009

Polymers
plastic resin

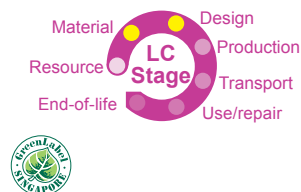
R3plas Eco-label Recycled Plastic resin

Environmental performance

Collection from post industrial waste like runner, end of life products, post industrial packaging and post consumer packaging etc

Product performance

R3plas Recycled PC
R3plas Recycled PS
R3plas Recycled PP
R3plas Recycled PE
R3plas Recycled ABS
R3plas Recycled LCP
R3plas Recycled PA
R3plas Recycled PPS



WINRIGO (S) PTE LTD

No.21 Toh Guan Road East #04-09 Toh Guan Centre Singapore, 608609, Singapore
Tel +65-98715058 Fax +65-65154557
E-mail salewin@singnet.com.sg
URL www.winrigo.com.sg
URL www.winrigo.com.sg
URL www.winrigo.com.sg

Available in: All countries

R3plas Eco-label recycled plastic resin after color compounding

EM-3-001

Natural materials
bamboo flooring

Eco-friendly Solid Bamboo Flooring

Environmental performance

Bamboo is one of the world's most renewable and strongest natural resources, and an ideal alternative to wood. Bamboo is ready for harvesting in 4 to 6 years, while trees take 20 to 80 years to mature. There is also no need to replant bamboo as it grows out from its own shoots, in direct contrast with forests which require expensive and time-consuming reforestation efforts. We only use mature bamboo harvested from government-certified forests, which ensures that the bamboo plants have enough time to re-grow.

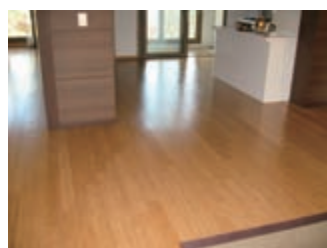
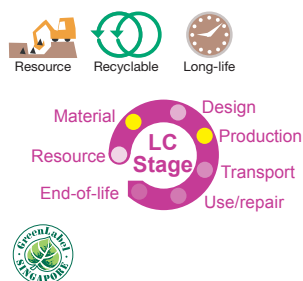
Product performance

Our eco-flooring is made of 100% solid bamboo using European technology and comes prefinished with a German scratch-resistant polyurethane coating. The products exceed the strict international E0 standard (<0.5mg/L) for formaldehyde emissions, ensuring a healthy environment for our customers.

Star Bamboo (S) Pte Ltd

51 Bukit Batok Crescent #06-41 Unity Centre, 658077, Singapore
Tel +65-6565-9217 Fax +65-6565-0508
E-mail info@starbamboo.com
URL <http://www.starbamboo.com>
URL <http://www.starbamboo.com/bamboo-flooring>

Available in: Singapore, China, Europe, Asia



Bamboo flooring in luxury apartment showroom

EM-3-002

Natural materials
tatami matting

"Kanryoso®"; stronger skin rush

Environmental 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.

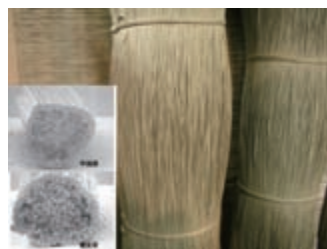
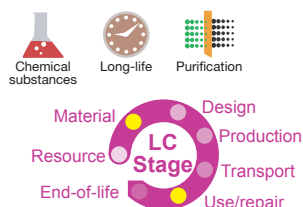
Product performance

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. 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.

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



KANRYOUSOU®

EM-3-003

Natural materials

heat-resistant polylactic acid

BIOFRONT®, heat resistant polylactic acid

Environmental performance

BIOFRONT® has been developed in an effort to provide a more eco-friendly alternative to traditional oil-based plastics, offering very high heat performance as well as high crystallization rate.

Product performance

The BIOFRONT® is a stereocomplex PLA that has a melting point of 210°C, or 40°C higher than conventional PLA. This meets practical requirements in high-end markets such as Automotive, Office Equipment and Electrical & Electronics.

Fibers: Interior products and materials requiring heat-resistant, dye-affinity and anti-bacterial properties.

Films: Optical applications requiring transparency and heat resistance

Plastic resins: Electric/Electronic parts and chassis requiring heat resistance and molding.

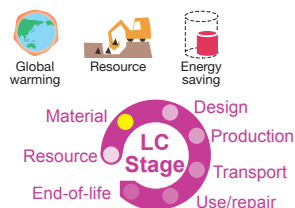
Teijin Limited

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>

CO₂ Circulation

EM-3-004

Natural materials

biodegradable films

Environment-friendly biodegradable film

Environmental performance

1. These biodegradable films are stable in the atmosphere but are decomposed by living microorganisms in compost, wet soil, and the sea.
2. As an environment mark accreditation product, it is an environment-friendly raw material that can convert into H₂O and CO₂ upon complete dissolution by a soil microorganism after use.
3. These biodegradable films can be recycled several times in most conventional plastic processing equipment.

Product performance

- Garbage bags, food & drink garbage bags, shopping bags, luxury shopping bags, mulching film for agriculture, film for landscape architecture work
- Disposable gloves, disposable table cloths, roll bags

Korea UB Clean Co, Ltd.

459-11, Gilseong-ri, Hyangnam-myeon, Hwaseong-si, Gyeonggi-do, 445-921, Republic of Korea

Tel +82-1600-1649 Fax +82-31-3599177

E-mail ub@kubc.co.kr

URL <http://www.kubc.co.kr>



Available in: Korea, Japan, Australia, United Kingdom, Hong Kong, China, Kuwait, America, etc.

EM-3-005

**Natural materials
biodegradable trays**

Eco-friendly disposable molded trays

Environmental performance

We introduce ourselves as an SME engaged in manufacturing eco-friendly, biodegradable, compostable products. All our products are manufactured using sustainable materials such as cotton waste, crop waste, etc. The energy requirements of the manufacturing process are very low.

Product performance

We manufacture various types of trays and products from crop waste. These include:

- 1) Plant baskets
- 2) Punnets
- 3) Kidney trays
- 4) Egg trays

All the above products are manufactured using crop waste as raw material and are compostable and biodegradable. These products are comparable in performance with the toxic, polluting plastic versions of the same.

Ideas & Solutions

A3/19, Sarita Vihar, 119/3 Parvati, Sinhadgad Road, Pune-411030, India
Tel +91-9850008082
E-mail ecofocusin@gmail.com
URL www.ecofocusin.com

Available in: Worldwide



Degradable trays

EM-3-006

**Natural materials
corn fiber**

CornWare

Environmental performance

CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

Product performance

CornWare is sturdy, reliant and safe for use for adults and kids alike. It doesn't snap or break easily due to its strong structure.

CornWare is microwaveable, acid & alkali proof, water & leakage proof and able to withstand temperatures from -20°C to 150°C. It is certified safe and toxin-free by the FDA.

Olive Green Marketing Pte Ltd.

63 Hillview Avenue #03-08 Lam Soon Industrial Building, 669569, Singapore
Tel +65-67671301 Fax +65-67679908
E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg

Available in: Singapore



EM-3-007

Natural materials

corn fiber

CornWare

Environmental performance

CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

Product performance

CornWare is sturdy, reliable, and safe for use for adults and kids alike. It doesn't snap or break easily due to its strong structure. CornWare is microwaveable, acid- and alkali-proof, water- and leakage-proof, and able to withstand temperatures from -20°C to 150°C. It is certified safe and toxin-free by the FDA.



Global warming



Degradable



Biodegradable cups made from corn

Olive Green Marketing Pte Ltd.

63 Hillview Avenue #03-08 Lam Soon Industrial Building, 669569, Singapore
Tel +65-67671304 Fax +65-67679908
E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg

EM-3-008

Natural materials

corn fiber

CornWare

Environmental performance

CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

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Global warming



Degradable



Biodegradable 6" dessert plate

Olive Green Marketing Pte Ltd.

63 Hillview Avenue #03-08 Lam Soon Industrial Building, 669569, Singapore
Tel +65-67671304 Fax +65-67679908
E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg

EM-3-009

Natural materials
corn fiber

CornWare

Environmental performance

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Tel +65-67671304 Fax +65-67679908
E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg



Biodegradable dessert bowl

EM-3-010

Natural materials
corn fiber

CornWare

Environmental performance

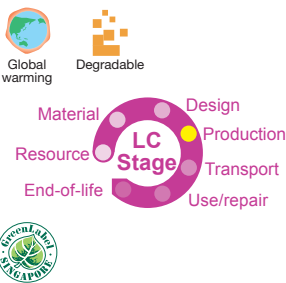
CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

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Tel +65-67671304 Fax +65-67679908
E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg



Biodegradable lunch box

Eco-materials // Natural materials

- 1
- 2
- 3
- 4
- 5
- 6
- 7

Eco-components

Eco-products

Eco-services

EM-3-011

Natural materials

corn fiber

CornWare

Environmental performance

CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

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Global warming



Degradable



Biodegradable noodle bowls

Olive Green Marketing Pte Ltd.

63 Hillview Avenue #03-08 Lam Soon Industrial Building, 669569, Singapore
Tel +65-67671304 Fax +65-67679908
E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg

EM-3-012

Natural materials

corn fiber

CornWare

Environmental performance

CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

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Global warming



Degradable



Set of biodegradable cutlery

Olive Green Marketing Pte Ltd.

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E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg

EM-3-013

Natural materials

corn fiber

CornWare

Environmental performance

CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

Product performance

CornWare is sturdy, reliable, and safe for use for adults and kids alike. It doesn't snap or break easily due to its strong structure.

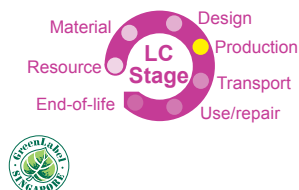
CornWare is microwaveable, acid- and alkali-proof, water- and leakage-proof, and able to withstand temperatures from -20°C to 150°C. It is certified safe and toxin-free by the FDA.



Global warming



Degradable



Biodegradable dessert spoon

Olive Green Marketing Pte Ltd.

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E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg

EM-3-014

Natural materials

corn fiber

CornWare

Environmental performance

CornWare is a range of eco-friendly, 100% biodegradable disposable tableware made from corn. It will biodegrade after 90 days upon discharge and is also carbon neutral. CornWare has also been awarded accreditations by Green Label Singapore & ISO for Biodegradability & Environmental Management.

Product performance

CornWare is sturdy, reliable, and safe for use for adults and kids alike. It doesn't snap or break easily due to its strong structure.

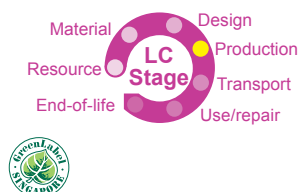
CornWare is microwaveable, acid- and alkali-proof, water- and leakage-proof, and able to withstand temperatures from -20°C to 150°C. It is certified safe and toxin-free by the FDA.



Global warming



Degradable



Biodegradable 9" plate

Olive Green Marketing Pte Ltd.

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Tel +65-67671304 Fax +65-67679908
E-mail marketing@olivegreen.com.sg
URL www.olivegreen.com.sg

EM-3-015

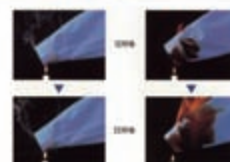
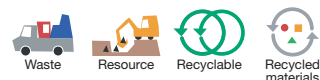
Natural materials

cotton fabrics

BREVANO ECO: Anti-flaming, antistatic fabric of ecology-specs

Product performance

Fabric made from blending of excellent flameproof acrylic fiber and unused cotton generated during spinning process accounting for 10% of total material. - 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 JIS8118:friction static electrical charge less than 7micro C/m²) - Refreshing and easy-to wear, due to their excellent sweat absorption. - Will not pill. - Good coloring, good color fastness. - Designated "EcoMark certified product", Japan's environmental label. *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.



Combustion test

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/>

EM-3-016

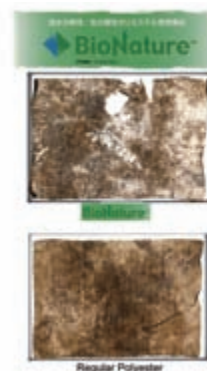
Natural materials

cotton fabrics

BioNature: Eco-oriented soil-returnable fabric

Product performance

A brand-new polyester and cotton mixed fabric using hydrolyzable, biodegradable polyester of DUPONT's "Biomax". When BioNature is left for a long time in a water-rich environment with appropriate temperature and lots of microorganisms, it eventually turns into water and carbon dioxide, as the result of biodegradation, after passing through the process of hydrolysis. As the process of biodegradation is very slow, it will not adversely affect animals, or plants. The amount of carbon dioxide emitted from burning this fabric is less, compared to the emitted amount when burning general fabrics, and combustion calories are also low. It is also proved that the ash does not contain any harmful substance. The fabric will hardly deteriorate in ordinary use.



Fabrics buried in the ground for 10 months

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/>

EM-3-017

Natural materials

cotton fabrics

Return Cotton — an eco-friendly material for a sound recycling society

Product 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. (An Eco Mark-certified product)



KURABO INDUSTRIES LTD.

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



Brand logo

EM-3-018

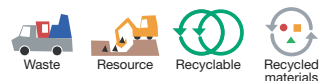
Natural materials

cotton fabrics

EARTH DENIM: New feel denim born from our ECO-oriented research.

Product performance

EARTH DENIM makes effective reuse of waste from each stage of production. It makes possible a super dark blue color as unmatched by normal dyeing. And it contributes to reduction of CO₂. -EARTH DENIM is made by recycling denim production waste. -A pair of jeans made of EARTH DENIM reduces CO₂ in a quantity equivalent to the quantity absorbed by about 180 four-leafed-clovers a year. -Super dark blue and White core



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Tel +81-6-6266-5326 Fax +81-6-6266-5204
E-mail Casual_sect@kurabo.co.jp
URL <http://www.kurabo.co.jp/>



Brand logo

EM-3-019

Natural materials
pure worsted yarn

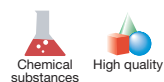
ECO-WASH: Eco-friendly shrink-resistant wool

Product 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. While in Kurabo's ECO-WASH treatment, 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. Thus, 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
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E-mail Takashi_Kanda@kurabo.co.jp
URL <http://www.kurabo.co.jp>



Water repellent test of various treated wool

EM-4-001

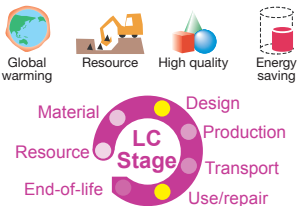
Foam

phenolic foam insulation

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

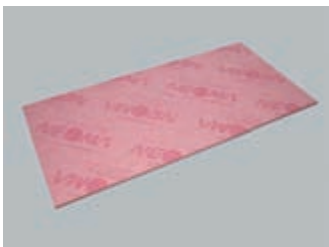
Environmental performance

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>



Eco-materials // Foam

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7

Eco-components

Eco-products

Eco-services

EM-5-001

Ceramics and glass

optical glass

Optical glass (Eco-glass) without harmful lead and arsenic

Environmental performance

There are more than 100 types of optical glass and, in the past, generally, huge amounts of lead has been used for about half of them, and a small amount of arsenic also used in most types. These two elements have high risks of damaging to the environment.

However, Nikon has developed almost full types of optical glass referred to Eco-glass without these two elements, and has applied them to Nikon's products.

Product performance

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

Nikon has developed optical glasses in collaboration with optical design division, and has established production technologies and mass-production system by Nikon's own glass production facilities. The produced glasses have contributed to achieve high performances of Nikon's products.

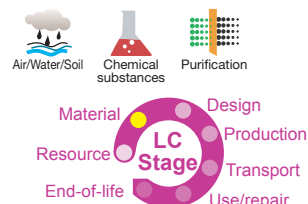
NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan

Tel +81-3-3214-5311

URL <http://nikon.com/>

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



Available in: Worldwide

Lenses and prisms made with Eco-glass

EM-5-002

Ceramics and glass

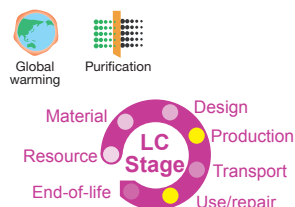
ceramic, stone, and clay products

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-5-003

Ceramics and glass

ceramic bearing balls

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 (3 times longer). 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-5-004

Ceramics and glass

granulated blast furnace slag

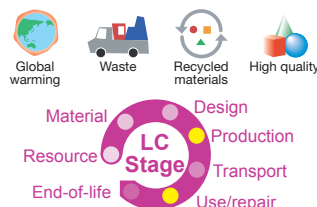
VCEM brand, ground granulated blast furnace slag (GGBS)

Environmental performance

GGBS's raw material is a by-product of the iron-making industry derived from iron blast furnaces. The manufacture of GGBS reduces landfill problems and cuts gas emissions at steel plants. Every ton of GGBS reduces almost 1 ton of CO₂ by replacing Ordinary Portland Cement (OPC), a material normally used in concrete. Every ton of GGBS produced consumes only 10% of the energy required to produce 1 ton of OPC.

Product performance

Using GGBS in concrete improves workability, high compressive and flexural strengths, and resistance to damaging / aggressive chemicals. GGBS lowers permeability in concrete, therefore reducing the potential for reinforcing steel to corrode when exposed to chlorides. GGBS reduces the risk of thermal cracking in large concrete pours. GGBS's off-white color reduces the "urban heat island" effect by making lighter-color concrete, enabling it to reflect more light and cooling structures and pavements with exposed concrete.



70kg-CO₂
Inspection

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



EnGro Corporation Ltd.

29 International Business Park, #08-05/06 Acer Building Tower B, 609923, Singapore
 Tel +65-6561-7978 Fax +65-6561-9770
 E-mail vincent.loh@engro-global.com
 URL www.engro-global.com
 URL www.vcem-global.com

EM-5-005

Ceramics and glass

carbon-fiber sheets for repairing

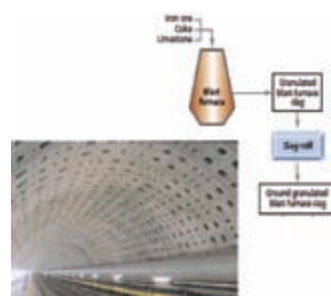
Granulated Blast-Furnace Slag, Superior alternate material for clinker and cement

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 such as Al₂O₃, MgO and others. 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. Recent concerns for global warming highlighted the value of GBFS and GGBFS. GBFS and GGBFS contributes to reduce CO₂ emission amount equal to approximately 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 supplies GBFS or GGBFS from 5 steel works that are distributed across Japan to domestic as well as overseas customers.

Nippon Steel Corporation

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Tel +81-3-3275-5144 Fax +81-3-3275-5979
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-5-006

Ceramics and glass

blast furnace cement

P4246 High Slag Portland Blast Furnace Cement (HSPBFC) is a homogeneous blend of OPC and GGBS

Environmental performance

GGBS emits 20 times less CO₂ as compared to OPC. In P4246 HSPBFC, GGBS replaces a high percentage of OPC, up to 75%. GGBS replaces OPC, a material that contributes about 1 ton of CO₂ for each ton of OPC produced. By using more GGBS, it helps to conserve primary resources, reduce CO₂ emissions caused by OPC, and enhance a building's energy efficiency through mitigation of the heat island effect.

Product performance

Key features of HSBFC

- 1) Good workability
- 2) Prolonged slump retention
- 3) Higher ultimate compressive strength
- 4) Higher flexural strength
- 5) More aesthetically pleasing appearance of lighter color in HSBFC concrete

Key benefits of using HSPBFC

- 1) Reduces the risk of early-age thermal cracking especially in mass concreting
- 2) Improves resistance to sulphate and chloride attacks on concrete, especially for marine structures
- 3) Eliminates the risk of damage caused by alkali-silica reaction (ASR) in concrete
- 4) Improves long-term strength development of concrete



EnGro Corporation Ltd.

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Tel +65-6561-7978 Fax +65-6561-9770
E-mail vincent.loh@engro-global.com
URL www.engro-global.com



EnGro's P4246 brand of HSPBFC is Green Label certified

EM-5-007

Ceramics and glass

steel bars

Tow Sheet, maintenance and reinforcement material for concrete structures

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

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 Tel +81-3-3275-5144 Fax +81-3-3275-5979
 E-mail kankyo@nsc.co.jp
 URL <http://www.nsc.co.jp/en/eco/index.html>



EM-6-001

Composites
reconstituted wood

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.

* ECOWOOD Co., Ltd.

12-1, Hlbikimachi, Wakamatsu-ku, Kitakyushu-shi, 808-0021, Japan
Tel +81-93-751-2424 Fax +81-93-751-2430 E-mail info@eco-wood.jp

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-6-002

Composites
adhesive products

Water-based emulsion adhesive products with various foams

Environmental performance

These are pressure-sensitive adhesive (PSA) products which have no organic solvent. Conventional PSA has organic solvent, which is half the weight of undiluted solution of adhesives. Therefore, conventional PSA has emitted a lot of organic solvents in the air, and caused air pollution and sick house syndrome.

New type PSA solves these problems. It has water instead of organic solvents, but its performance is equal to conventional one. It's very easy on the environment.

New PSA is applicable to various products. For example, polyurethane foam, polyethylene foam, and EPDM foam.



Water-based Emulsion adhesive products with various foams

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>

EM-6-003

Composites

rubber-reforming materials

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

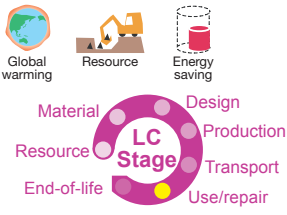
Sulfron™, a modified aramid derived from Twaron®, is a unique rubber ingredient that has been chemically processed from cut fiber. When absorbed by the tread of a tire, it disperses inside the rubber and as it conforms to the rubber, the tire becomes more durable. It also reduces rolling resistance,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



Eco-materials // Composites

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Eco-components

Eco-products

Eco-services

EM-7-001

Others

polycrystalline silicon

Polycrystalline Silicon (Materials for solar power systems)

Environmental performance

We are producing polycrystalline silicon for semiconductor and solar cell from metallurgical silicon by processing it through chlorination, distillation and reduction processes.

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.

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.



Mitsubishi Materials Corporation (Yokkaichi Plant)

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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, USA, Europe, and Southeast Asia

Polycrystalline silicon

EM-7-002

Others

columnar-crystal large-diameter silicon

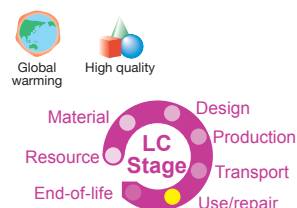
Columnar-crystal large-diameter silicon for solar cell and semiconductor apparatus

Environmental performance

From the view-point of the global environmental problems, the product contributes to energy saving and CO₂ emission reduction as solar cells. In comparison with the competitive Si product in the same field, our product is superior in the efficiency of component manufacturing owing to its large diameter. 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.



JEMCO Inc.

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/0101.html>

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

Available in: Global

Columnar Crystal Silicon of plate type

EM-7-003

Others

construction materials

Environmentally friendly EcoValue Wood made from recycled wood materials

Environmental performance

Unused lumber from thinning and discarded timber are manufactured into EcoValue Wood, a homogeneous, high-quality wood material. This type of environmental conservation initiative is possible only as a community-based enterprise. Sekisui helps to turn unused wood materials into resources by leveraging the know-how acquired in the development of EcoValue Wood. To pursue the concept of local production for local consumption, we will work to turn the region's unused timber into resources, and propose the establishment of environmental partnerships to realize such a virtuous circle.



SEKISUI CHEMICAL CO., LTD.

2-3-17 TORANOMON, MINATOKU, TOKYO, 105-8450, Japan



EM-7-004

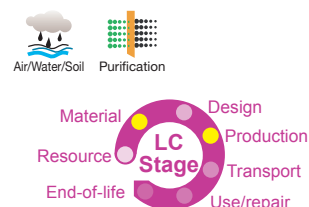
Others

demister

P.P MESH DEMISTER

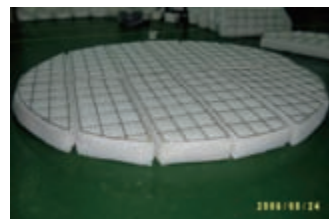
Environmental performance

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 INDUSTRIAL 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-7-005

Others

concrete blocks

Environment-conscious porous concrete

Product performance

Environment-conscious construction methods are recently required for bank protection work. Porous concrete has been developed to be a material for bank protection to satisfy both strengthening and environmental functions. The void size of this environment-conscious porous concrete (maximum diameter size of inscribed circle: 14 mm) is about double that of conventional porous concrete, which improves the living environment for various plants and animals and enables cheap soil filling materials to be used. In spite of its large void size, its compressive strength is 10N/mm², which is a necessary condition for a porous concrete bank. This product can be made from aggregate (5~40 mm) from crushed concrete. The related construction costs are reduced because it can be produced using crushed concrete at the construction site itself. Efficient large-scale construction is possible using the admixture machines and quality control methods that we have developed.

Kajima Corporation

6-5-11, Akasaka, Minato-ku, Tokyo, 107-8348, Japan
 Tel +81-3-5544-0741 Fax +81-3-5544-1733
 E-mail env-act@ml.kajima.com
 URL http://www.kajima.co.jp/tech/env_planning/seitaikei/seitaikei02.html



Purification



Environment-conscious porous concrete

EM-7-006

Others

photo voltaic systems

KRISTAL™ Multi-functional PV System

Environmental performance

Enable your roof, facade, or wall to generate electricity, provide skylighting, and many more functions with our Kristal™ Multi-functional PV System. Grenzone Kristal™ Multi-functional PV System is a versatile customizable system that can be easily integrated for roofing, wall, or facade that has a different look and feel.

Product performance

The durability of Kristal™ is enhanced by the use of UV-resistant, outdoor weather-proof polyurethane (PU) which is extensively used by the automotive industry. The molded frame enables different designs and components to be embedded and hence is easily customizable. The possibility of configuring a roof or facade meeting your unique requirements is highly achievable by Kristal™.

Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
 Tel +65-6579-0560 Fax +65-6579-0561
 E-mail info@grenzone.com
 URL www.grenzone.com



Global warming



Energy saving



Kristal Multi-functional PV System

Available in: Global

EM-7-007

Others

poly lactic acid

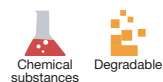
PLA LID

Environmental performance

- 100% biodegradable and compostable and environmentally friendly
- Harmless to the human body

Product performance

- Coffee & fast food stores -Take out stores (Beverages, ice cream, etc)



HANCHANG PAPER CO., LTD.

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



EM-7-008

Others

ammonia

Ecoann™ ammonia produced from recycled plastics

Environmental performance

Compared with the traditional process of producing ammonia from naphtha or natural gas, Ecoann™ partially produced from recycled plastics helps reduce CO₂ emissions by around 35% (in the case of Showa Denko).

Product performance

Ammonia produced is mainly used for fertilizing agricultural crops. Ammonia is also used for the production of plastics, synthetic fibers, resins, adhesives, explosives, pharmaceuticals, and intermediates for dyes. In addition to above, Ecoann™ is used for removing nitrogen oxide emissions from thermal electric power stations and other plants, contributing to reductions in environmental impact.



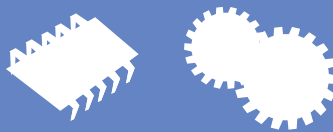
Showa Denko K.K

5-1, Ougi-machi, Kawasaki-ku, Kawasaki-shi, Kanagawa, 210-0867, Japan
Tel +81-44-329-0768 Fax +81-44-329-0798
E-mail Kazunori_Ando@sdk.co.jp
URL <http://www.sdk.co.jp/html/english/index.html>
URL http://www.sdk.co.jp/aa/english/news/2008/aanw_08_0938.html



ammonia produced from recycled plastics

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 2009*, “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

fiber wall materials

"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. 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.

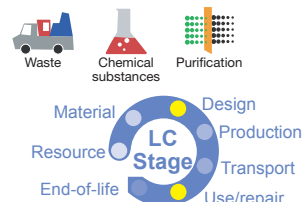
Product performance

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

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

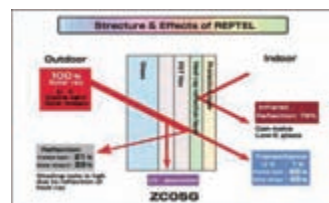
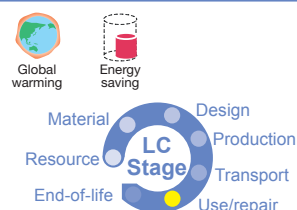
Reftel® is the world's first highly transparent and heat reflective insulating film developed by Teijin.

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 visible light transmittance to meet any requirement. It has high infrared reflectivity and thus yields high energy saving effectiveness.

N.I. Teijin Shoji Co., Limited

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)

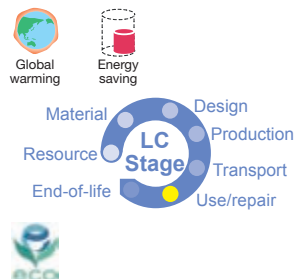
EC-2-001

Electrical and electronic
wire cables

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

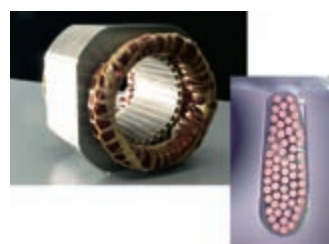
Environmental performance

- "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 adhesion with impregnating varnish compared to existing self-lubricated enameled wires.



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 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>



Stator of high efficiency motor that used, "KOMAKI"

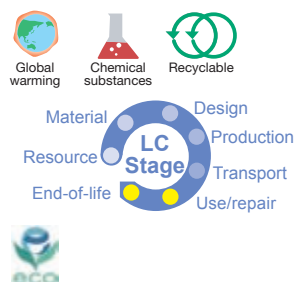
EC-2-002

Electrical and electronic
wire cables

Eco-green® 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.



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 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>



Eco-green® Environment-conscious type

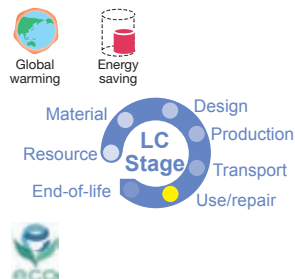
EC-2-003

Electrical and electronic
wire cables

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 contribute to the longer life of motors.



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 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>



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

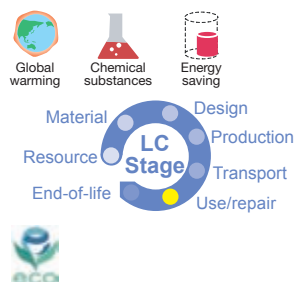
EC-2-004

Electrical and electronic
wire cables

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 super-soft annealing copper wire that is suitable for thin type Si cells.



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 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-2-005

Electrical and electronic
motors

A dual-rotor direct-drive motor for drum-type washing machines

Environmental performance

Compared with motors with the conventional inner-rotor-type structure, this product excels in energy and resource savings with the following characteristics: Energy saving

① The dual-rotor structure allows a dewatering efficiency of 80%, an improvement of two percentage points on the inner-rotor-type structure's figure of 78%.

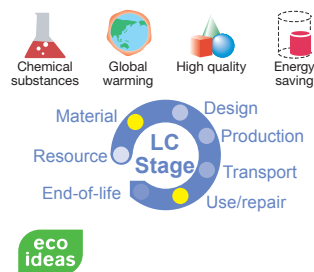
Resource saving

② Compared with the inner-rotor-type structure, the output density is 1.9 times higher and motor weight 600 g (11%) lower.

③ Hazardous chemical substances: compliant with the EU RoHS directive.

Product performance

This product is a brushless motor for drum-type washing machines. Boasting the world's first dual-rotor structure, it enables high output density and noise reduction at the same time.



Panasonic Corporation, Motor Company

7-1-1, Morofuku, Daito, Osaka, 574-0044, Japan
Tel +81-778-22-8743 Fax +81-778-23-0218
URL <http://panasonic.net/csr/>

EC-2-006

Electrical and electronic
motors

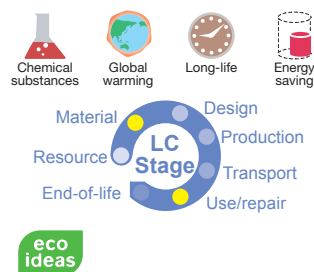
Motor for electric vacuum cleaners

Environmental performance

- Long life: Improvement by 30% of the wear life of brushes (which determines the life of the commutator motor) compared with conventional models.
- Higher durability extends the life cycle and helps conserve resources.
- Hazardous Chemical Substances: compliant with the EU RoHS directive and efforts to reduce environmental burdens.

Product performance

- This product is a commutator motor to create suction in electric vacuum cleaners. Its higher level of performance enables superior suction power in such cleaners.
- Due to the improved efficiency of the motor and fan units that rotate the motor fan with long life and excellent performance, it improves PQ efficiency at an air volume of 1.6 m³/min. by 1.5 percent over that of conventional models with no corresponding increase in weight.



Panasonic Corporation, Motor Company

7-1-1, Morofuku, Daito, Osaka, 574-0044, Japan
Tel +81-778-22-8709 Fax +81-778-23-8709
URL <http://panasonic.net/csr/>

Available in: Japan

EC-2-007

Electrical and electronic
electric contacts

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.

Product performance

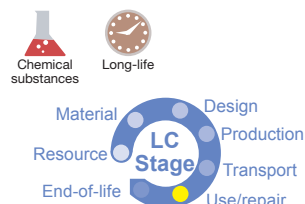
(Uses)

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>

Available in: Japan, Asia, Europe, North America



Cadmium-free electric contacts

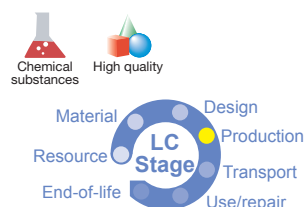
EC-2-008

Electrical and electronic
audio cables

High-end audio cable, HDMI cable, interconnect cable

Environmental performance

For long time usage, with high quality and fantastic design to decorate your home entertainment equipment.



Varo Technology Co., Ltd.

11F-4, No. 27, Sec. 3, Chung Shan N. Road, Taipei, Taiwan, R.O.C.



EC-2-009

Electrical and electronic

X-ray tube assemblies

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.

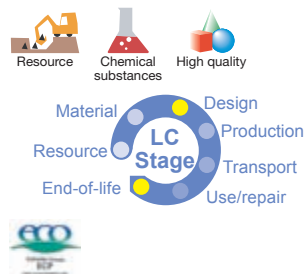
Product performance

- 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>

Available in: Worldwide



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

EC-2-010

Electrical and electronic

CCD cameras

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.

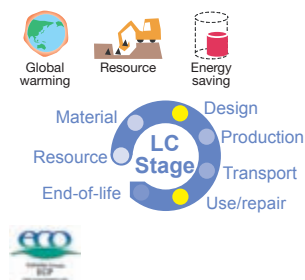
Product performance

- 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>

Available in: Worldwide



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

EC-2-011

Electrical and electronic
rechargeable 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 20%.
- 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.toshiba.co.jp/env/en/report/index.htm>


SCiB, New Rechargeable Battery TBP series (battery module)

EC-2-012

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/en/index-e.html>

URL <http://www.tepco.co.jp/en/challenge/enviro/report-e.html>


Available in: Japan

EC-2-013

Electrical and electronic
alkaline dry batteries

Alkaline dry battery EVOLTA/EVOIA

Environmental performance

- Alkaline dry batteries are disposable, but are products of canned electricity for everyone to safely use without emitting CO₂.
- Their special features which can be obtained anywhere and stored for a long time results in a consumption of 1.4 billion cells a year in Japan.
- Its industry minimum mass per battery's capacity also achieves resource-saving.
- Due to the extended preservation by achieving a 10-year recommended shelf-life, the number of discarded dry batteries is expected to be reduced.

Product performance

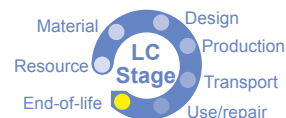
- This product succeeded in a performance gain of 16% vs. our previous one and was validated by Guinness as the World No.1 long-lasting ^(*).
- A 10-year recommended shelf-life achieved twice the duration of our previous and is the industry's longest ^(**).

As of Jan.15 '08: *1) Mean value of all electrical discharge modes for AA global standard & *2) Preservation Temp. 20±2°C, Relative Humidity 60±15%.

Panasonic Corporation, Energy Company

1-1 Matsushita-cho, Moriguchi City, Osaka, 570-8511, Japan
Tel +81-6-6991-1141
URL <http://panasonic.net/ec/>
URL <http://panasonic.net/ec/products/evolta/>
URL <http://panasonic.net/csr/>

Available in: Globally



EVOLTA-LR6EG, LR03EG EVOIA-LR6EE, LR03EE
EVOLTA-LR20EJ, LR14EJ, LR6EJ, LR03RJ (JAPAN MODEL)

EC-2-014

Electrical and electronic
nickel metal hydride batteries

Rechargeable battery (nickel-metal-hydride battery) Rechargeable up to 1,000 times; top-up recharging possible

Environmental performance

Unlike traditional disposable batteries, these can be used repeatedly, reducing waste.

Product performance

Reusable for up to 1,000 times. Top-up recharging possible. Long-life low self-discharge rate.



Kanematsu corporation

N TOWER, 1-2-1, SHIBAURA, MINATO-KU, TOKYO, 105-0023, Japan

EC-2-015

Electrical and electronic

nickel metal hydride batteries

Advanced Nickel-Metal Hydride Battery "GIGACELL"

Environmental performance

- (1) High Charge/Discharge Efficiency (Low internal resistance)
- (2) Environmental Friendliness (No use of hazardous materials)
- (3) Easy Decomposition for Material Recycling (Structure without welding)
- (4) Maintenance-Free Sealed Structure

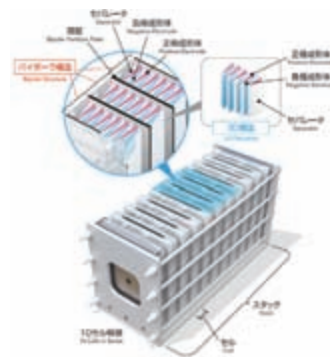
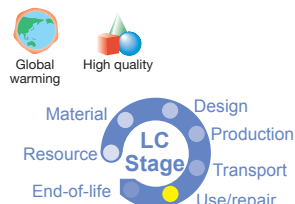
Product performance

The Advanced Nickel-Metal Hydride Battery "GIGACELL" can be charged/discharged rapidly with its low internal resistance brought by the specific Bipolar-3D structure. Wind and photovoltaic power outputs fluctuate with weather at every moment. "GIGACELL" makes such renewable energies more useful by stabilizing their output fluctuations.

KAWASAKI HEAVY INDUSTRIES, LTD.

1-1, Kawasaki-cho, Akashi, 673-8666, Japan
 Tel +81-78-921-1972 Fax +81-78-921-1973
 E-mail gigacell@khi.co.jp
 URL www.khi.co.jp
 URL www.khi.co.jp/gigacell/

Available in: Japan



Nickel-Metal Hydride Battery

EC-2-016

Electrical and electronic

button 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.

Furthermore, lower materials consumption and higher productivity reduced CO₂ emissions by 23%.

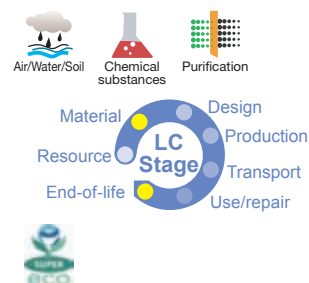
Product performance

Indemnified against leakage due to its Excellent Leakage Resistance.
 Twice as Long Lasting as LR Button Battery.

Hitachi Maxell, Ltd.

5, Takumidai, Ono-shi, Hyogo, 675-1322, Japan
 Tel +81-794-63-8054 Fax +81-794-63-8445
 E-mail akira-asada@maxell.co.jp
 URL <http://www.maxell.co.jp>

Available in: Worldwide



EC-2-017

Electrical and electronic
solar charging controllers

Solar charging controllers

Environmental performance

Phocos is one of the largest suppliers of off-grid power supply system components in the world. Headquartered in Ulm, Germany, Phocos develops, designs, and manufactures products to suit the needs of all stake-holders in the global solar power market.

Phocos is strongly committed to developing and producing products that meet the company's strict specifications in terms of quality, innovation, and technology.

Product performance

We manufacture a wide range of core system components for energy conversion, energy management, and energy utilization in photovoltaic and other renewable energy sources.

We offer a comprehensive range of solar charge controllers between 4A to 300A with charging currents of 12, 24, and 48V. Flexible programmable hybrid system controllers are available as well.

Phocos SEA Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0598 Fax +65-6579-0599
E-mail info-sea@phocos.com
URL www.phocos.com

Available in: Global



Phocos Charge Controllers

EC-2-018

Electrical and electronic
lighting

Energy efficient DC lamps

Environmental performance

Phocos is one of the largest suppliers of off-grid power supply system components in the world. Headquartered in Ulm, Germany, Phocos develops, designs, and manufactures products to suit the needs of all stake-holders in the global solar power market.

Phocos is strongly committed to developing and producing products that meet the company's strict specifications in terms of quality, innovation, and technology.

Product performance

Besides the comprehensive range of solar charge controllers, Phocos is offering quality 12/24 V DC lamps that have very high illumination efficiency at low power consumption. Our DC lamps have a life span of over 8,000 hours at 25 degrees C ambient temperature, with more than 500,000 switching cycles (IEC925).

For Phocos 11W DC Lamps, an average luminous efficacy is 63lm/W for Warm Light and 61lm/W for Cool Light. The equivalent brightness compared to a standard incandescent lamp is 65W.

Phocos SEA Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0598 Fax +65-6579-0599
E-mail info-sea@phocos.com
URL www.phocos.com

Available in: Global



Phocos DC Lamps

EC-3-001

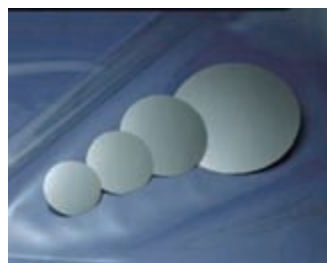
Semiconductor-related

parts of semiconductor manufacturing equipment

Dummy Wafer

Environmental performance

A high-purity silicon carbide sintered product of the highest quality; created through the combination of high-level polymer technology. With Bridgestone's recently developed nano-technologies, Purebeta is manufactured on a very clean production line that integrates the synthesis of SiC powder, by sintering, processing and cleaning. PureBeta provides high performance and cost efficiency compared to Si. In the semiconductor manufacturing process, Si wafers are typically used as dummy wafers, however, they are scrapped after several usage. On the other hand, because of its excellent resistance against wet cleaning, SiC wafers can be used almost permanently which is also good for the environment. This is an ultra high purity dummy wafer suitable for various applications. Also applicable to the 300mm wafer processes.



Dummy Wafer

Bridgestone Corporation

3-1-1, Ogawahigashi-Cho, Kodaira-Shi, Tokyo, 187-8531, Japan
 Tel +81-42-342-6486 Fax +81-42-342-6428
 E-mail pbinfo@group.bridgestone.co.jp
 URL <http://www.bridgestone.co.jp/english/index.html>
 URL <http://www.purebeta.com/global/>

EC-3-002

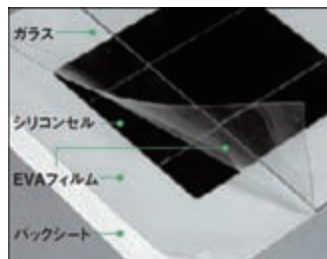
Semiconductor-related

films for solar cells

EVA film for solar cells

Environmental performance

The photovoltaic system represents a clean system on zero emission basis and produces no harmful by-products. Hence, it becomes more important from the viewpoint of global environment preservation. Bridgestone product "EVA-film (brand name: EVASKY)" is a vital component for the photovoltaic (solar) modules using silicon or other media. Bridgestone EVASKY offers special advantages in a form of high efficiency, high productivity and excellent durability.



EVA film for solar cells

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>

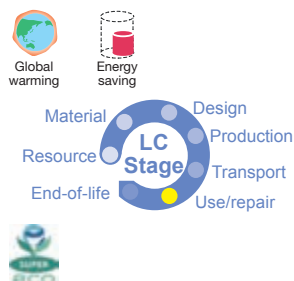
EC-3-003

Semiconductor-related
permanent magnets

Neodymium-Iron-Boron Permanent Magnets "NEOMAX®"

Environmental performance

High-energy 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 situations as alternators and drive motors of hybrid/electric vehicles (HEVs), which contribute to reduced automobile fuel consumption. "NEOMAX®" products are also used in household 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/>
URL http://www.hitachi-metals.co.jp/e/prod/prod03/p03_21.html
URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html



NEOMAX®

EC-3-004

Semiconductor-related
permanent magnets

Ferrite Magnet "NMF-12 Series"

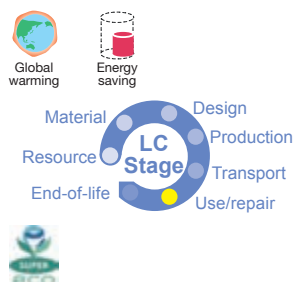
Environmental performance

Hitachi Metals' new ferrite magnet "NMF-12 series" is greatly superior to its previous product. Among ferrite magnets, it provides the world's best magnetic characteristics.

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

Product performance

Temperature coefficient of intrinsic coercive force has been lowered to 2/3 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/>
URL http://www.hitachi-metals.co.jp/e/prod/prod03/p03_10.html
URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html



Ferrite Magnet "NMF-12 Series"

EC-3-005

Semiconductor-related
power modules

Intelligent Power Module

Environmental performance

-----<< M : Material >>-----

Use of a high heat dissipation insulation structure achieved a reduced junction temperature rise in power chips. This allowed for a smaller package and led to a significant reduction (about 40%) of the mounting area on the PCB compared to our current products.

-----<< E : Energy >>-----

By integrating a full-gate CSTBTTM*, which is one of Mitsubishi Electric's advanced IGBTs, electric power consumption in the system was reduced.

* CSTBTTM (Carrier Stored Trench Gate Bipolar Transistor): Mitsubishi's original IGBT Utilizing the novel carrier storage effect.

-----<< T : Toxicity >>-----

Introduction of lead-free process for soldering power chips and plating outer terminals realized all lead-free products (RoHS compliant).

☆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

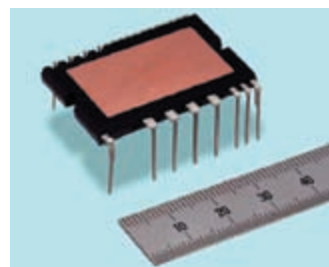
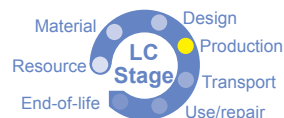
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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



DIP-IPM(Dual-in-line Package Intelligent Power Module)

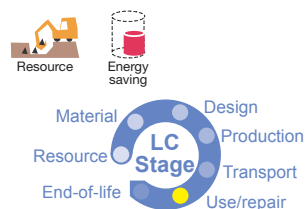
EC-3-006

Semiconductor-related
single chip inverter

Single Chip Inverter IC

Environmental performance

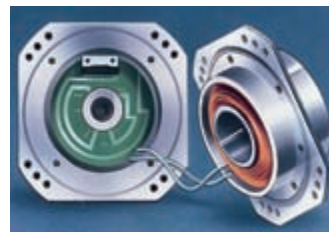
The Single-chip inverter IC integrates various devices and circuits that are necessary for inverter control onto a single die. The inverter IC controls a motor at various speeds. The variable speed control improves the efficiency of motors. The inverter IC downsizes the control board of motors utilizing single chip structure, which allows the control board mounting the inverter IC to be embedded into a motor. The inverter IC, which is a lead-free (Pb-free) product conforming to JEITA Phase 3A, is environmentally friendly.



Hitachi, Ltd.

Akihabara Daibiru Building, 18-13 Soto-Kanda 1-chome, Chiyoda-ku, Tokyo, 101-8608, Japan

Available in: Japan



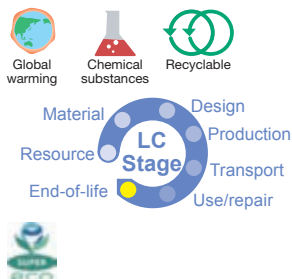
EC-3-007

Semiconductor-related
wiring devices

Modified II Tin Plating FFC (Flexible Flat Cable)

Environmental performance

- Lead-free and complies with RoHS directive.
- Mitigate Whisker (Crystallization of thin needles) from tin plated conductor surface without gold plating, which prevents resource depletion.



Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 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/ICSFiles/cable/ewc/07/cuj/all.pdf>
 URL <http://www.hitachi-cable.co.jp/en/about/publish/csr/index.html>



Modified II tin plating FFC (Flexible Flat Cable)

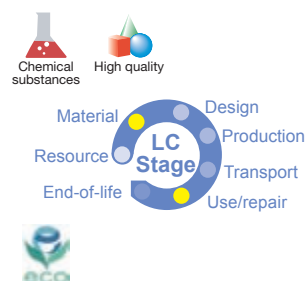
EC-3-008

Semiconductor-related
soft 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.



Hitachi Metals Singapore Pte. Ltd.

12 Gul Avenue, 629656, Japan
 Tel +65-6861-7711
 E-mail hmcc@hitachi-metals.co.jp
 URL <http://www.hitachi-metals.co.jp/e/>
 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



EMC Noise Reduction Products

EC-3-009

Semiconductor-related
wireless modules

Small and low-power, Bi-directional Wireless Module: GB-M1CSB21

Environmental performance

- This bi-directional wireless module achieves small size and low-power.
- Low transmitting and receiving current and hi-speed carrier sense makes low time and power consumption.
- Small size with 1-chip LSI (wireless circuit + microcomputer) leads resource saving. About 57% reduction in power consumption and about 98% reduction in volume compared with FY 2000 model (GB-E01).

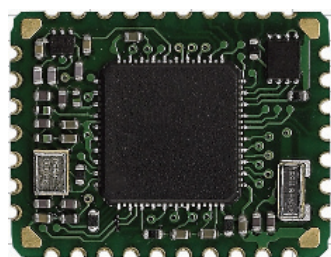
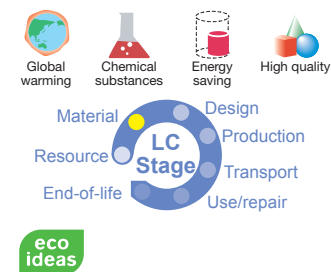
Product performance

- Radio Frequency 426MHz/429MHz
- Transmission Speed 2400bps/4800bps
- Radiation Power 1mW/10mW
- Sensitivity -118dBm

Panasonic Corporation, Home Appliances Company

800 Tsutsui-cho, Yamato-Koriyama, Nara, 639-1188, Japan
Tel +81-743-56-9176 Fax +81-743-56-0154
URL <http://panasonic.co.jp/csr/>

Available in: Japan



Small and low-power, Bi-directional Wireless Module: GB-M1CSB21

EC-3-010

Semiconductor-related
detector switches

Detector switch, featuring the industry's smallest mounting area

Environmental performance

This detector switch not only features the industry's smallest mounting area but also contributes to resource saving and reduction of waste. Achieved a miniaturized implementation space (57%) compared with our previous model (ESE21series).

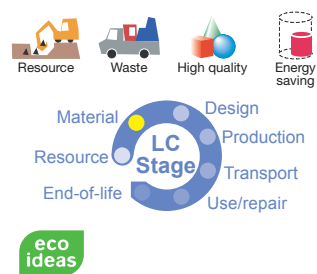
Product performance

As devices have become more compact, lighter and thinner in the fast-growing mobile phone industry and DSC industry, detector switches to be mounted also have been required to be smaller, especially for the mounting area. This developed product makes the industry's smallest mounting area possible and contributes to downsizing the set devices.

Panasonic Electronic Devices Co.,Ltd.

1006 Oaza Kadoma, Kadoma, Osaka, 571-8506, Japan
Tel +81-6-6907-4781 Fax +81-6-6907-4799
URL <http://panasonic.net/csr/>

Available in: Japan, North America, Europe



Detector switch of ESE 16 series

EC-3-011

Semiconductor-related

circuit substrate for motor-drives

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 ($-40\sim 125^{\circ}\text{C}$, more than 3000 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>

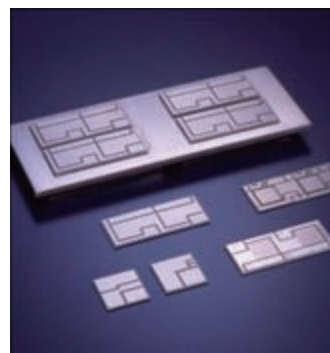
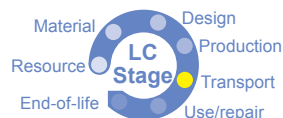
Available in: Japan, USA, and Europe



Global warming



Energy saving



DBA (Direct Brazed Aluminum) Substrates

EC-3-012

Semiconductor-related

solid state relays

The smallest Solid State Relay / SON package

Environmental performance

The smallest solid state relay with 50% of the volume of a conventional SSOP (Small Shrink Outline Package) type with a lead-frame structure, has been achieved by a cavity-shaped substrate. Additionally, micro-miniature lead-less structure made it possible to reduce the mounting space, which realized further downsizing and high density mounting of measuring device.

Product performance

- Significant downsizing and remarkable electrical characteristics with low $C \times R^*$
- High speed performance with 0.02ms of operate time and release time

* C: Capacity between outputs R: ON Resistance

Panasonic Electric Works Co., Ltd.

1048, Kadoma, Kadoma-shi, Osaka, 571-8686, Japan

Tel +81-6-6908-1073 Fax +81-6-6909-2415

URL <http://panasonic-electric-works.net/>

URL <http://panasonic-denko.co.jp/acj/index.jsp>

URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan, Europe, North America, Asia Pacific Region



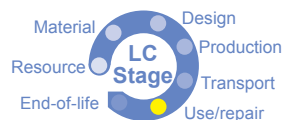
Resource



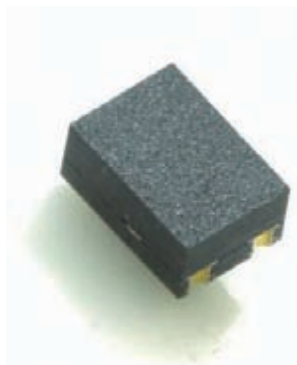
Chemical substances



Energy saving



eco ideas



The smallest Solid State Relay / SON package: AQY221N3M

EC-3-013

Semiconductor-related

LCD modules for mobile phones

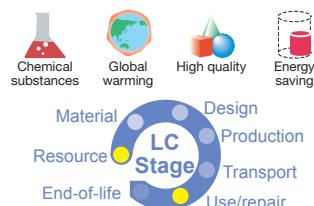
Reduced Power Consumption by Controlling Backlight According to Screen Brightness

Environmental performance

- Mitigation of climate change: Max. 50% reduction in power consumption because of the adjustment of the backlight according to the screen brightness.
- Management of chemicals: Elimination of the use of mercury because of the adoption of an LED backlight.

Product performance

- Ease of viewing: Natural reproduction as a result of backlight adjustment according to the screen brightness.



Reduction of Backlight Consumption for Mobile Applications LTM033D J 20

Toshiba Matsushita Display Technology Co.,Ltd.

Rivage Shinagawa 4-1-8, Konan, Minatoku, Tokyo, 108-0075, Japan
 Tel +81-3-5462-7331 Fax +81-3-3458-0075
 E-mail greenproc@tmdisplay.com
 URL <http://www.toshiba.co.jp/index.htm>
 URL http://www.tmdisplay.com/tm_dsp/en/profile/csr.html

EC-3-014

Semiconductor-related

flash memory

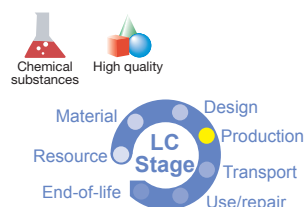
Reliable Memory — Suitable for Mass-storage Devices and Numerous Applications

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: 1,000 times greater capacity than a memory of the same size introduced in 2000



SD-C32GT4

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

EC-4-001

Machine parts

parabolic mirrors

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

Environmental performance

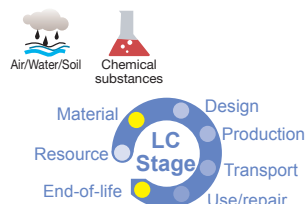
Off-axis parabolic mirrors turn plane waves into spherical waves, and vice versa, at high precision. These aspherical mirrors are essential for spectrometers and interferometers that require high resolution.

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

- Surface accuracy of $\lambda/6$ has been achieved through the application of a newly-developed precision replicating technology (conventional Shimadzu product: $\lambda/2$)*1.
- Stable quality due to the production of a replica mirror using a high-precision master mirror.
- Proven mass-production technology ensures a stable supply of large quantities.
- Non-Use of specific chemical substances*2.

*1. $\lambda = 632.8 \text{ nm}$

*2. RoHS Directive: Directive on the restriction of the use of certain hazardous substances (mercury, cadmium, lead, hexavalent chromium, PBB and PBDE) in the EU. (EU Directive 2002/95/EC)



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>

Available in: Worldwide

Off-Axis Parabolic Mirror SPA Series

EC-4-002

Machine parts

stabilizers

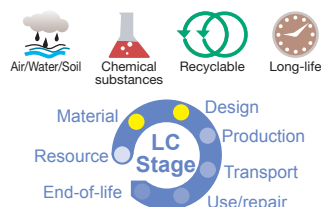
Calcium Zinc one pack stabilisers

Environmental performance

Calcium Zinc one pack stabilisers are free from heavy metal ingredients and offer efficient stabilisation and processability during the manufacturing of PVC products.

Product performance

The one pack stabiliser complies with RoHS requirements for electrical application. This ensures ease of recycling of the finished product whilst minimising impact on the environment during use and life cycle of the product. This is possible with suitable selection of other additives needed in the total formulation of the PVC compound used in conversion to the finished product form.



Sun Ace Kakoh (Pte.) Ltd

34 Tanjong Penjuru, Jurong Town, 609030, Singapore

Tel +65-6264-0255 Fax +65-6265-7038

E-mail sales@sunace.com.sg

URL www.sunace.com.sg

Available in: Singapore

Calcium Zinc one pack stabiliser for cable

EC-4-003

Machine parts

heat transfer tubes

High Performance Heat Transfer Tube

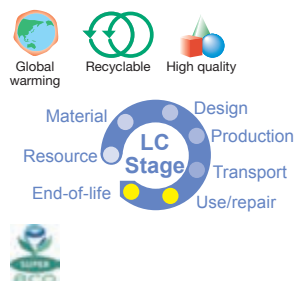
Environmental performance

Features of high performance heat transfer tube for ECO CUTE;

- 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 ECO CUTE (as of July 2006).
- The copper material can be recycled by 100%.

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 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>



Thermo-fin tube

EC-4-004

Machine parts

magnet rolls for feeding toner

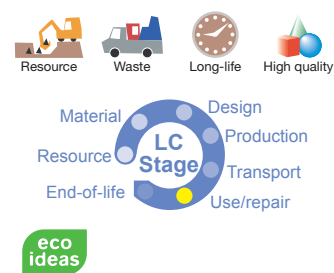
Long-lived Magnet Roll for feeding toner of PPC copy machine with low material costs

Environmental performance

This long-lived product is able to reduce the consumption of natural resources and the amount of waste. The product lifetime has 3 times greater longevity compared with our previous SUS model (ETM17K223AC).

Product performance

While the industry's standard specification is to process sandblasting on the surface with SUS as a base material, this product is processed with high-precision fine surface etching using inexpensive and soft aluminum to achieve excellent toner feeding function and the long product lifetime.



Panasonic Electronic Devices Co.,Ltd.

1006 Oaza Kadoma, Kadoma, Osaka, 571-8506, Japan
 Tel +81-6-6907-4781 Fax +81-6-6907-4799
 URL <http://panasonic.net/csr/>

Available in: Japan North America Europe China

Etching sleeve magnet roll : ETM21K584AB and other series

EC-5-001

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.



Global warming



Long-life



Power Cable Harness for Hybrid Vehicles

Hitachi Cable, Ltd.

Hitaka Works, 5-1-1 Hitaka-cho, Hitachi-shi, Ibaraki-ken, 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>

EC-5-002

Automobile parts

parts for motor vehicles/motorcycles

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.



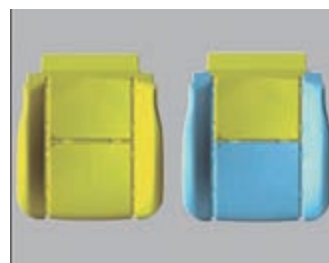
Resource



Global warming



Energy saving



The same hardness and different density 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>

EC-5-003

Automobile parts

tires for passenger cars

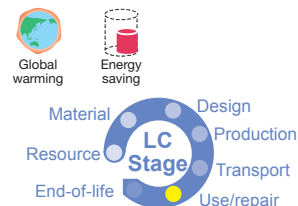
Eco-friendly tire "ECOPIA EP100"

Environmental performance

The ECOPIA EP100 employs a new top rubber which applies Bridgestone's unique materials technology NanoPro-Tech to reduce rolling resistance. Comparing the ECOPIA EP100 with the general commodity tire, rolling resistance is cut down 30%, so it contributes to save energy and reduce CO₂ emissions when running. Also ECOPIA EP100 has outstanding braking performance in wet conditions in order to maintain safety.

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>



ECOPIA EP100

EC-5-004

Automobile parts

tires for passenger cars

Eco-friendly tire "REGNO"

Environmental performance

REGNO provides you first class ride comfort & super-excellent silence in your car.

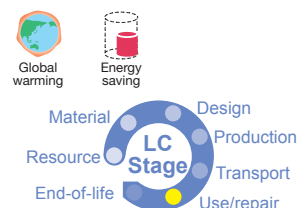
REGNO focuses on high frequency tire noise reduction by applying Bridgestone's latest silence technology.

Also REGNO reduces rolling resistance about 16%* compared with the previous model, so it contributes to save energy and reduce CO₂ emissions when running.

* REGNO GR-9000

Bridgestone Corporation

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Tel +81-3-3563-6972 Fax +81-3-3563-1165
URL <http://www.bridgestone.co.jp/english/index.html>



①REGNO GRV ②REGNO GR-9000

Eco-materials

Eco-components // Automobile parts

Eco-products

Eco-services

EC-5-005

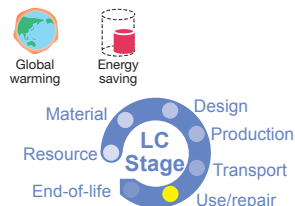
Automobile parts

tires for passenger cars

Eco-friendly tire "Playz"

Environmental performance

Playz provides you a smooth ride by controlling car trembling.
In environmental side, Playz reduces rolling resistance about 3% compared with the previous model, so it contributes to save energy and reduce CO₂ emissions when running.



Playz PZ-X

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-5-006

Automobile parts

tires for passenger cars

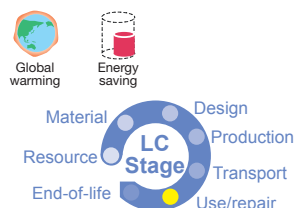
Eco-friendly tire "B'STYLE EX"

Environmental performance

B'STYLE EX is a well balanced tire that combines safety with ECO friendly performance.

B'STYLE EX possesses outstanding braking performance in wet conditions, and reduces rolling resistance about 10%.

So B'STYLE EX gives you safe driving and contributes to save energy and reduce CO₂ emissions when running.



B'STYLE EX

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-5-007

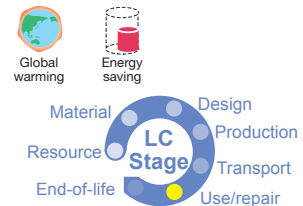
Automobile parts

tires for passenger cars

Eco-friendly tire "SNEAKER"

Environmental performance

SNEAKER gives you basic and economic performance as a standard tire. On the environmental side, SNEAKER reduces rolling resistance about 10% compared with the previous model, so it contributes to save energy and reduce CO₂ emissions when running.



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>



SNEAKER SNK2

EC-5-008

Automobile parts

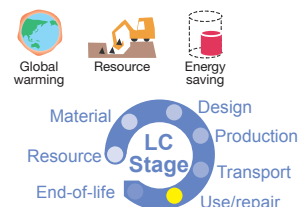
tires for trucks and buses

Fuel economy Truck and Bus Tires "ECOPIA M891 II"

Environmental performance

It is necessary to develop a new generation tire for fuel savings and to preserve the earth's environment. Especially, it is useful for trucks and buses, as fuel-guzzling vehicles, to reduce the rolling resistance of tires. Bridgestone corporation has developed low rolling resistance truck and bus tires, and has already launched them into the market as the "ECOPIA" line. ECOPIA has superior low rolling resistance for long haul users, while maintaining basic tire performance.

Newly introduced ECOPIA M891 II is the successor to ECOPIA M881.



Bridgestone Corporation

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Tel +81-3-3563-6972 Fax +81-3-3563-1165
URL <http://www.bridgestone.co.jp/english/index.html>



ECOPIA M891 II

EC-5-009

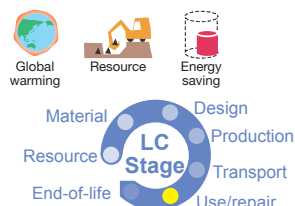
Automobile parts

tires for trucks and buses

Fuel economy Truck and Bus Tires "ECOPIA R221 II"

Environmental performance

It is necessary to develop a new generation tire for fuel savings and to preserve the earth's environment. Especially, it is useful for trucks and buses, as fuel-guzzling vehicles, to reduce the rolling resistance of tires. Bridgestone corporation has developed low rolling resistance truck and bus tires, and has already launched them into the market as the "ECOPIA" line. ECOPIA has superior low rolling resistance for long haul users, while maintaining basic tire performance. Newly introduced ECOPIA R221 II is the successor to R221, maintaining basic tire performance and improved fuel economy.



ECOPIA R221 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>

EC-5-010

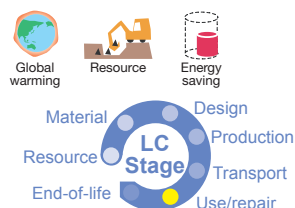
Automobile parts

tires for trucks and buses

Fuel economy Truck and Bus Tires "ECOPIA W911"

Environmental performance

It is necessary to develop a new generation tire for fuel savings and to preserve the earth's environment. Especially, it is useful for trucks and buses, as fuel-guzzling vehicles, to reduce the rolling resistance of tires. Bridgestone corporation has developed low rolling resistance truck and bus tires, and has already launched them into the market as the "ECOPIA" line. ECOPIA has superior low rolling resistance for long haul users, while maintaining basic tire performance. ECOPIA W911 has been introduced as an all-round studless tire for snow/ice performance and improved fuel economy.



ECOPIA W911

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-5-011

Automobile parts

tires for trucks and buses

Tire for Super Single Drive Axle "GREATEC"

Environmental performance

Bridgestone launched the GREATEC line in 2000 as ultralow aspect ratio tires to replace dual drive tires on trucks and buses with single tires. GREATEC tires improve fuel economy because a GREATEC tire and rim weighs less than two conventional tires and rims. In addition, this concept contributes to waste saving.



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>

EC-5-012

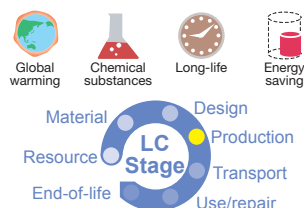
Automobile parts

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-ken, 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-5-013

Automobile parts

parts for driving, transmission, and operating components

Variable Displacement Pump for Automobile Power Steering

Environmental performance

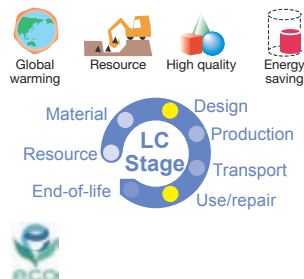
Fuel consumption is reduced by about 1.5% by reducing driving torque of pump.

Pump displacement is controlled appropriately according to engine revolution speed.

Cooling piping is simplified with increased reliability by decreasing the oil temperature in the system.

Product performance

This hydraulic power steering pump driven by engine power is a Variable Displacement Pump, of which flow rate can be controlled according to the engine speed.



Hitachi, Ltd., Automotive Systems

1-18-13, Sotokanda, Chiyoda-ku, Tokyo, 101-8608, Japan
Tel +81-3-3258-1111

Available in: Japan, North America



EC-5-014

Automobile parts

parts for driving, transmission, and operating components

Energy Saving Electrical Power Steering (Motor and Controller)

Environmental performance

-----<< Material >>-----

Compact size and High power Motor/Controller contributes to the design of light weight vehicles.

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

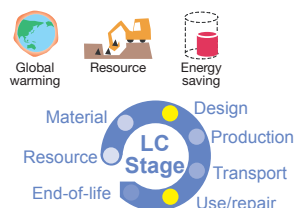
Consumes energy only when the steering wheel is operated and this improves a vehicle's fuel consumption efficiency.

-----<< Toxicity >>-----

Maintenance free

Product performance

The electric power steering system assists the driver in steering only when he or she turns the steering wheel; hence it serves to improve fuel economy by 3 to 5% compared with the conventional hydraulic system. It is also easy to install because of its modular design. 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

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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



Motor for Electrical Power Steering

EC-5-015

Automobile parts

parts for internal combustion engines

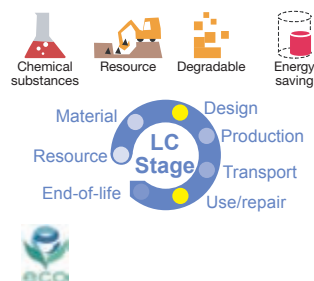
Pulley Assy-VTC for Automobile Engines

Environmental performance

VTC designed for continuously controlling the phase of the valve timing in automobile engines depending on the load conditions, improving the torque/fuel efficiency and reducing the volume of discharged gas. Lightweight, compact VTC that reduces the impact on the environment by restricting the use of hazardous substances.

Product performance

VTC shifts and controls the valve opening/closing timing of the automobile engine, utilizing the oil pressure.



Hitachi, Ltd., Automotive Systems

1-18-13, Sotokanda, Chiyoda-ku, Tokyo, 101-8608, Japan
Tel +81-3-3258-1111



Available in: Japan. North America

Vane type VTC

EC-5-016

Automobile parts

parts for internal combustion engines

Automobile Electronic Controller

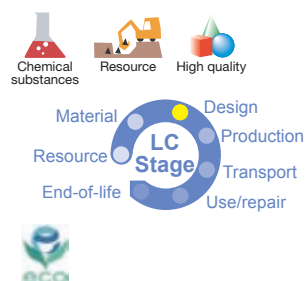
Environmental performance

Compactness and lightweight have been achieved by applying high-density packaging.

Hazardous substances have been reduced by using lead-free soldering.

Product performance

High-reliability electronic control unit for high reliable uses such as automobile engine control.



Hitachi, Ltd., Automotive Systems

1-18-13, Sotokanda, Chiyoda-ku, Tokyo, 101-8608, Japan
Tel +81-3-3258-1111
URL <http://www.hitachi.co.jp/Div/apd/>



Available in: Europe, North America, Asia, Japan

Water-proof type Engine Control Unit

EC-5-017

Automobile parts

parts for internal combustion engines

Diesel Particulate Filter

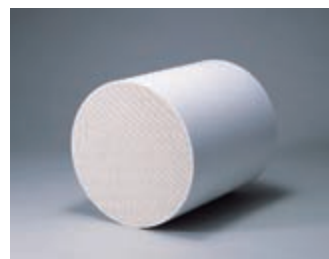
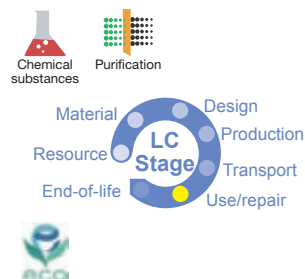
Environmental performance

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.

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/>
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-5-018

Automobile parts

parts for chassis and bodies

Plastic Back Door Module for Automotive

Environmental performance

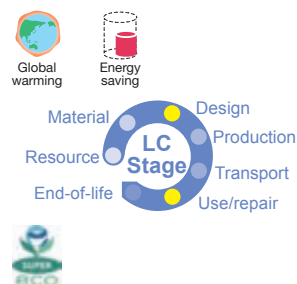
Plastic back door modules for automotive have two benefits compared to conventional steel ones: the first is around 30% of weight reduction by integrating components, and the other is much better for design flexibilities for their styling or form.

Product performance

Our plastic back door modules have been supplying to OEM since 2001 as a pioneering product in Japan. Our products have realized a lighter door module by adopting the structure of joining with adhesives the inner panel made of glass fiber reinforced thermoplastic having high strength and rigidity and the outer one made of thermoplastic having excellent appearance.

Hitachi Chemical Co., Ltd.

Shibaura Square Building, 4-9-25 Shibaura, Minato-ku, Tokyo, 108-0023, Japan
Tel +81-3-5446-9006 Fax +81-3-5446-9469
URL <http://www.hitachi-chem.co.jp/english/index.html>
URL <http://www.hitachi-chem.co.jp/japanese/products/arp/016.html>
URL <http://www.hitachi-chem.co.jp/english/csr/index.html>



Plastic Back Door Module for Automotive

Available in: Japan

EC-5-019

Automobile parts
alternators

Water Cooled Alternator

Environmental performance

Higher power generation efficiency (Approximately 7% higher than the conventional unit)

Product performance

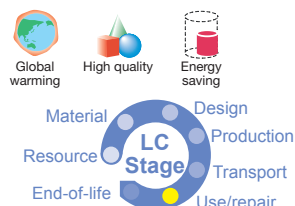
This product can contribute to less emission and improvement in fuel consumption of the vehicle having features as follows:

- A compact size alternator with high output (44% higher than conventional (air cooled) unit at engine idling speed)
- Higher power generation efficiency (Approximately 7% higher than the conventional unit)
- Low acoustic noise (20 dB at 10,000 r/min(alternator speed) lower than air cooled unit)
- Potential for applying to a variety of systems (Ex. Motorized 4WD system; one of Hitachi's other contributions for ecology)

Hitachi, Ltd., Automotive Systems

1-18-13, Sotokanda, Chiyoda-ku, Tokyo, 101-8608, Japan
Tel +81-3-3258-1111

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



LR945-901B

EC-5-020

Automobile parts
titanium mufflers

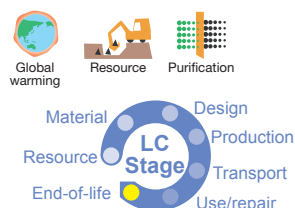
Titanium muffler

Product performance

Nippon Steel's titanium materials have high corrosion resistance and are used in a lot of applications: industrial use in the field of electricity and chemicals, marine structures, civil applications including sports goods and office appliances, and the field of construction materials such as roofing and exterior walls which include those used in historical buildings, temples, and shrines. The titanium materials contribute to the extended service life of the finished products. For the purpose of reducing the weight of automobiles and motorcycles, mufflers made of Nippon Steel's titanium were employed in commercialized products for the first time in the industry in FY 2002. Titanium is not only light in weight but also suitable for the thermal resistance required for the application temperature range of mufflers (approx. 600°C). Nippon Steel is going to further expand the application range of titanium by improving the spring characteristics and engine-sound muffling performance in addition to lightness.

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, 100-8071, Japan
Tel +81-3-3275-5144 Fax +81-3-3275-5979
E-mail kankyo@nsc.co.jp
URL <http://www.nsc.co.jp/en/eco/index.html>



EC-6-001

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 (consisting of roasted barley tea, ion drink aqualyte apple flavor, apple & vegetables, fruit & vegetables, and the popular yogurt-flavored drink "Yokkuru"), the caffeine-free blended tea "Juroku-Cha," and an organic drink (fruit & vegetables plus carrot).

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(7 items)

EC-6-002

Packaging

paper beverage containers

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. Using domestic lumber advances domestic forest development and contributes to achieving Japan's target of reducing CO₂ emissions by 6% as stipulated in the Kyoto Protocol.

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.



0.0455kg-CO ₂	Resource/Materials/Production/
Inspection	Transfer/Use/End-of-Life



Cartocan paper beverage container with special Toyako Summit design

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-6-003

Packaging
beverage

PET bottle based on universal design for environment load reduction

Environmental performance

① 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.

② PET bottle with an eco-grip cap

The eco-grip cap has the shape of a wave which makes it easy to add finger force. Its feature is that children, aged persons and women can open it easily. In addition, it can reduce the used amount of resin by about 10%, and it is therefore an environment-friendly cap.

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



①Juroku-Cha PET ②Collagen Water PET

EC-6-004

Packaging
beverage

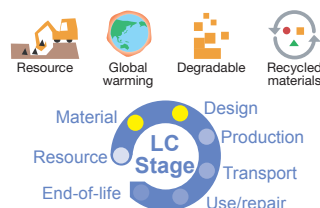
PET bottle using biomass plastic label

Environmental performance

Asahi Soft Drinks Co., Ltd. introduced the eco-friendly "biomass label" on 490ml Juroku-cha PET bottles (released in February 2008). Using 25% 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 340 tons of CO₂ per year will be reduced (estimated on assumption that 120 tons of labels are used for 2.5 million cases of 490ml Juroku-cha PET bottles sold in 2007). 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-6-005

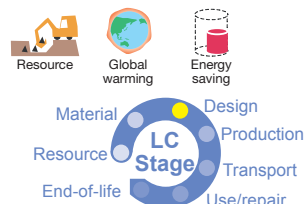
Packaging

beer

Can beer using a light can

Environmental performance

With the Asahi Breweries, Ltd., we are working on the lightweighting of the can to be used with beer. In 2006, we reduced the weight of aluminum to be used per 1 liter of beer, by 10.6% at the ratio of 1990. 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 350ml, 500ml

EC-6-006

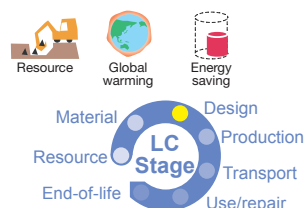
Packaging

beer

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 Super Dry

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-6-007

Packaging

beer

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 Super Dry

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-6-008

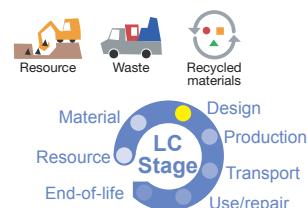
Packaging

wine

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-6-009

Packaging

whisky

Whisky bottle with cap made from end-of-use barrel

Environmental performance

At Nikka Whisky Distilling Co., Ltd., the barrel material of whisky barrels that have finished their use period is recycled as the caps of whisky bottles; it is used in "NIKKA Taketsuru 12 Years Old Pure Malt." In addition, the company addresses in various ways the establishment of a recycling society and the prevention of the global warming.



NIKKA Taketsuru 12 Years Old Pure Malt

The Nikka Whisky Distilling Co., Ltd.

5-4-31, Minami-Aoyama, Minato-ku, Tokyo, 107-8616, Japan
 Tel +81-3-3498-0331 Fax +81-3-3498-1783
 URL <http://www.nikka.com/eng/index.html>

EC-6-010

Packaging

films

Clear high barrier film — GL and GX Film

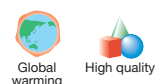
Environmental performance

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, and industrial materials. (As of the end of FY2008)



0.0656kg-CO ₂	Resource/Materials/Production/ Transfer/Use/End-of-Life
Inspection	



GL and GX clear high barrier films

TOPPAN PRINTING CO., LTD.

1-5-1 Taito, 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/>

EC-6-011

Packaging
films

Lighter gauged EC laminates

Environmental performance

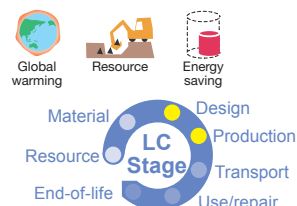
The adoption of a special resin enables a reduction in the weight of laminate film that needs to be used while maintaining its functions. Since the thickness of extruded laminated resin can be reduced to 5 μm , the weight of packing materials used can be minimized, thus mitigating environmental burdens. Non-anchor coated laminates are also applicable depending on material composition.

<Major applications>

Outer packing of snacks, candy and chewing gum, chazuke toppings

Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan



EC-6-012

Packaging
films

IB-Film®

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. With IB-film, inspection with metal detectors (which is not possible with packaging materials that have metal layers) can be conducted, helping to promote food safety. It can be used for heating in microwaves, thus enhancing convenience. In addition, it is suitable for use in various fields since it has the high barrier performance required in non-food fields.

<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



EC-6-013

Packaging
films

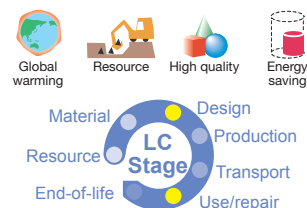
Refill pouch (ELBOW®)

Environmental performance

The use of a flexible pouch for refills allows the volume of such containers to be reduced by folding after consumption of the contents, and also promotes the reuse of the original bottle. To make refilling easier, changes have also been made to the shape of the pouch mouth and the rib design for pouring stability.

<Major applications>

Liquid detergent, shampoo, conditioner, cosmetics, spray deodorant



Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan



EC-6-014

Packaging
beverage filling systems

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.
- Scope of reduction
Installation space: Reduced by 50%
Utility used: Reduced by 50%

<Major applications>

Beverages



Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan



EC-6-015

Packaging

biodegradable containers

Environment-friendly biodegradable containers

Environmental performance

- Prevention against environmental pollution: As it is a nature-friendly circulation approach that uses a material obtained from nature and which returns to nature upon disposal, it helps prevent global warming with very little environmental load.
- Safety: Since a non-toxic natural material (corn starch) is used, it does not release harmful hormones or other substances into the environment.
- Economic efficiency: Saves expense compared to wood pulp products, and contributes to reduced use of petroleum resources.
- Environmental preservation: Does not discharge hazardous gases upon incineration, and can extend the life span of the incinerator since no clinker slag occurs.

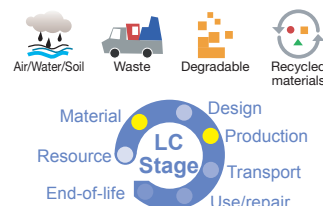
Product performance

Fast food packaging containers like hamburger packaging, etc.
Disposable cups, case for packaging, ice cake containers, lunch boxes, fruit containers, etc.

Korea UB Clean Co, Ltd.

459-11, Gilseong-ri, Hyangnam-myeon, Hwaseong-si, Gyeonggi-do, 445-921,
Republic of Korea
Tel +82-1600-1649 Fax +82-359-9177
E-mail ub@kubc.co.kr
URL www.kubc.co.kr

Available in: Korea, Japan, Hong Kong, China, United Kingdom, America, Australia, etc.



Food, fruit tray and lunch box. etc

EC-6-016

Packaging

biodegradable foam

Environment-friendly biodegradable foam (regreen-foam)

Environmental performance

It not only can substitute completely for existing styrofoam buffering material used for packaging but also can be used widely compared to styrofoam since it is produced by corn starch that is naturally obtained and does not generate static electricity. Furthermore it is a good choice for export goods packaging as it meets environmental rules and regulations that many countries follow.

Product performance

- Packaging for high-end electronic parts that are sensitive to a static electricity, ceramic ware, glass products, etc.
- Packaging for airmail, parcel post, personal belongings to be moved, mail-ordered products, and export goods packaging that requires biodegradability
- Breakage prevention against various chemicals and pharmaceuticals and dangerous articles, learning material for infants

Korea UB Clean Co, Ltd.

459-11, Gilseong-ri, Hyangnam-myeon, Hwaseong-si, Gyeonggi-do, 445-921,
Republic of Korea
Tel +82-1600-1649 Fax +82-359-9177
E-mail ub@kubc.co.kr
URL www.kubc.co.kr

Available in: Korea, Japan, Hong Kong, China, Australia, United Kingdom, America, Kuwait, etc.



EC-6-017

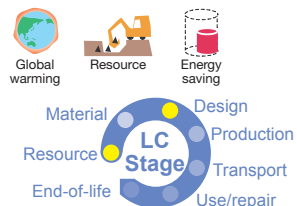
Packaging
plastic cups

Beabelcup®- Light

Environmental performance

Beabelcup®- Light is an environmentally friendly container made with in-mold labels. The amount of resin used is reduced by approx. 18% compared with the previous model. A redesigned bottom shape gives it a similar or higher shatter strength to that of the previous model, despite its reduced thickness.

<Major applications>
Beverages, desserts



Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan

EC-6-018

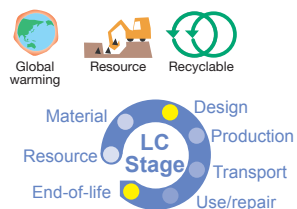
Packaging
paper trays

「ECOCAL®」 tray

Environmental performance

The use of specially laminated release base paper enables the easy removal of the carton's inner film after use, making it easy to separate for disposal. The contents do not touch the carton directly, thus keeping it clean and making recycling of the paper possible.

<Major applications>
Prepared daily dishes, boxed meals



Dai Nippon Printing Co., Ltd.

1-1-1, Ichigaya-Kagacho, Shinjuku-ku, Tokyo, 162-8001, Japan

EC-6-019

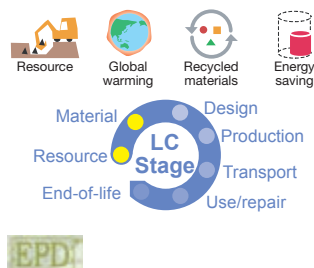
Packaging

aluminum beverage cans

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. Universal Can Corporation (hereinafter called "UNICAN") has been in the aluminum can business for over 35 years. Our aluminum beverage cans include UBCs (used beverage cans), which account for over 50% of the total weight of aluminum can bodies. (Certified according to the Environmental Product Declaration "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.



Universal Can Corporation

Sumitomofudosan-Korakuen Bldg., Koishikawa1-4-1, Bunkyo-ku, Tokyo,
112-8525, Japan
Tel +81-3-3868-7471 Fax +81-3-3868-7467
URL <http://www.unican.co.jp/>

EC-6-020

Packaging

food boxes

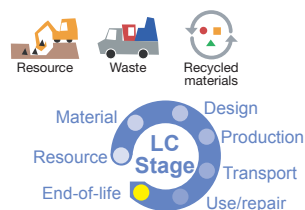
One Dish Aid confectionery container (circulation system of returnable ceramic confectionery containers)

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 CO₂ 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>

EC-6-021

Packaging
polylactic acid

PLA paper cup

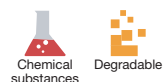
Environmental performance

- 100% biodegradable & compostable and environmentally friendly
- Harmless to the human body

Product performance

High-quality virgin pulp products
Various colors, sizes, and designs, superior printing quality

- Coffee & fast food stores -Take out stores (Beverages, ice cream, etc)



Pla Paper Cup

HANCHANG PAPER CO., LTD.

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

EC-6-022

Packaging
polylactic acid

PLA-coated cupboard

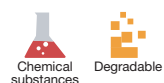
Environmental performance

- 100% biodegradable & compostable and environmentally friendly
- Harmless to the human body, instead of PE coating

Product performance

High-quality virgin pulp products
Various colors, sizes, and designs, superior printing quality

Paper cup manufacturer



HANCHANG PAPER CO., LTD.

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

EC-6-023

Packaging

plastic products

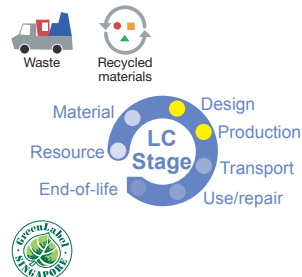
R3plas Eco-label Recycled Plastics Products (Turn-Key Projects)

Environmental performance

R3plas Recycled resin closed loop system, R3plas Oxo-Biodegradable Packaging, R3plas Spectacle box and R3plas Eye-wear made from post closed loop recycling system from post industrial waste and consumer waste.

Product performance

International Design awards
Green Label awards
Meet ASTM standards
Support ISO14000 and Green purchasing requirement



WINRIGO (S) PTE LTD

No.21 Toh Guan Road East #04-09 Toh Guan Centre Singapore, 608609,
Singapore
Tel +65-98715058 Fax +65-65154557
E-mail winrigo@singnet.com.sg
URL www.winrigo.com.sg
URL http://www.nanyang.com.sg/products.html

Available in: All countries

EC-6-024

Packaging

paper food packaging containers

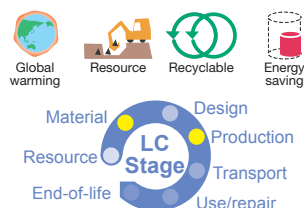
TicTob HealthyPack

Environmental performance

Made from long term sustainable renewable fibre obtained from trees that are from reforestation plantations, minimizing cutting of virgin forest and sustaining natural habitat of animals, insects, water and land. Reforestation plantations are earth's long-term sustainable, natural, oxygen factories converting carbon dioxide into oxygen. Post consumer recyclable and degradable. No emission of ODS during incineration.

Product performance

Design advantages include keep warm efficiency, safety interlocking efficiency and super compression strength for mass catering deliveries. Technological advantages include high speed cooking during microwave cooking reducing energy usage as well as maintaining maximum succulence of food textures. Award winner of AsiaStar: Beijing / Tokyo and WorldStar USA.



Microwave Packaging Singapore Pte Ltd

196 Pandan Loop, #07-24 Pantech Industrial Complex, 128384, Singapore
Tel +65-93841829 Fax +65-6775 2719
E-mail leonard@microwave-packaging.com
URL www.microwave-packaging.com

Available in: Singapore only

EC-7-001

Others

color filters

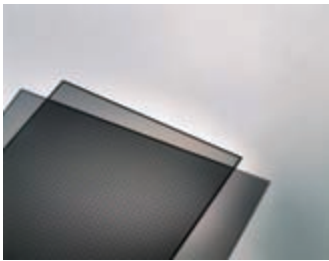
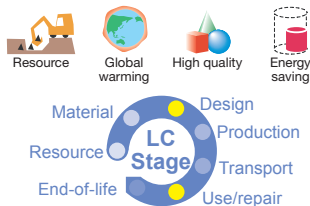
Color filter (BM made of organic resin)

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-materials

1 Eco-components // Others
2
3
4
5
6
7

Eco-products

Eco-services

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
cooking heaters

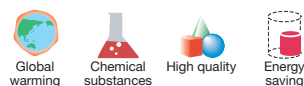
Induction heating cooker

Environmental performance

Stand-by power zero and automatic power off

Product performance

Induction heating power 3.0kW (left & right heater), 1.6kW (center heater)



Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>



Available in: Japan

Induction heating cooker HT-C20TWFS

EP-1-002

Home electric appliances/lighting
cooking heaters

Induction Heating Cooking Heater: KZ-VSW33E

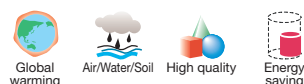
Environmental performance

- High thermal efficiency: enamel-coated pans approx. 90%, aluminum pans approx. 76% in water-heating mode. Minimal stand-by power consumption.
- Non-use of lead, mercury, cadmium, hexavalent chromium, and specific bromine fire retardant (Except the lead of sealing agent of sheathed heater)

Product performance

All metallic pots can be used at both sides of the IH heater, and the heating power is highly enhanced.

And, a more-advanced optical sensor allows customers to deep-fry with less amount of oil, and not to preheat too much. This is eco-friendly by energy resource saving. In addition to the standard wide-grill, the "light-up operation panel" enables users to cook more easily.



eco ideas

Panasonic Corporation, Home Appliances Company

1-5-1 Takatsukada, Nishi-ku, Kobe, Hyogo, 651-2271, Japan
Tel +81-78-992-9468 Fax +81-78-992-9494
URL <http://panasonic.net/csr/>



Available in: Japan

Induction Heating Cooking Heater: KZ-VSW33E

EP-1-003

Home electric appliances/lighting

cooking heaters

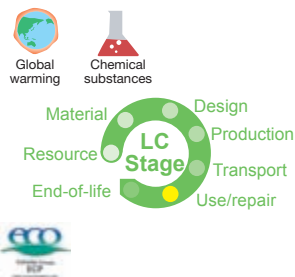
Counter-top IH Heater for Safety, Cleanliness and Comfort

Environmental performance

- Mitigation of climate change: Heat efficiency of 90% 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.



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

IH Cooking Heater UHP-V331S

EP-1-004

Home electric appliances/lighting

rice cooker & warmer

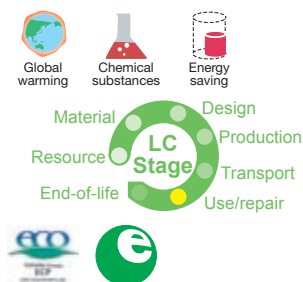
Thanks to the World's First Double Vacuum & Engine, Rice is Tastier Than Ever

Environmental performance

- Mitigation of climate change: Energy-saving-standard achievement rate of 100%. Annual power consumption of 91.9 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.
- Forged inner pot with powerful heat generation: 38% increase in heat generation thanks to boron alloy



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

Vacuum Pressure IH Rice Cooker RC-10VGB

EP-1-005

Home electric appliances/lighting

rice cooker & warmer

Steam IH Rice Cooker & Warmer — High-quality taste due to steam function**Environmental performance**

The achievement of energy saving standard rate based on the energy saving law: 101% (SR-SW183).

Standby energy: 0.1W (95% reduction compared with SR-HG18A of FY 2000 model) Average power consumption for keeping warm: 23.6Wh/h Standby energy using timer function: 0.13W These values mark industry leader level.

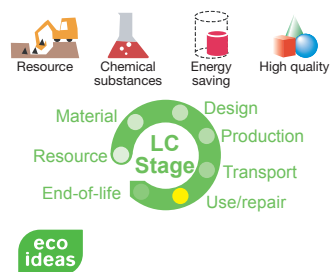
Product performance

Panasonic made it possible to heat rice at higher temperature avoiding drying-out of cooked rice by superheated steam. Fine particles of steam fully diffused into an inner pan bring rice original taste, wrapping every grain without any damage to it.

Panasonic Corporation, Home Appliances Company

5, Saho Kato City, Hyogo, 673-1447, Japan
Tel +81-795-42-7000 Fax +81-795-42-7015
URL <http://panasonic.co.jp/index3.html>
URL <http://panasonic.net/csr/>

Available in: Japan



SR-SW3 series—Steam IH Rice Cooker & Warmer

EP-1-006

Home electric appliances/lighting

rice cooker & warmer

IH Pressure & Steam Rice Cooker/Warmer**Environmental performance**

Energy saving by rapid water absorption time using pressure and temperature control system. Economical heat retention function has decreased 20% of power consumption (in comparison to the Hitachi conventional model). 102% achievement rate for the energy saving target designated by Ministry of Economy, Trade and Industry (Y 2008).

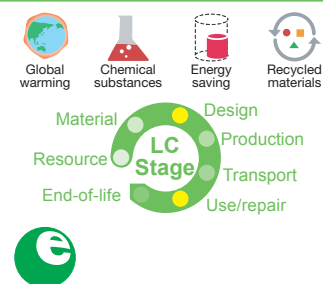
Product performance

Delicious rice cooking by specially made iron inner pot and auto steamer

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>

Available in: Japan, Taiwan



RZ-HV180K

EP-1-007

Home electric appliances/lighting

microwave ovens

Equipped with a Newly Developed Ishigama Tornado Engine, This Oven Starts Up Faster than Any Other Comparable Oven

Environmental performance

- Mitigation of climate change: Quick startup and great reduction in cooking time thanks to a 36% increase in Hot Air Cooking Energy. Enhanced efficiency thanks to the adoption of a high-efficiency magnetron and half-bridge inverter.

Product performance

- Quick heating: 36% increase in the calorific value results in a great reduction in start-up time and cooking time. Food is cooked quickly and the flavor of foods is retained.
- Steam function: A variety of cooking using steam at temperatures ranging from 400°C to 35°C.
- Spacious far-infrared oven: Spacious far-infrared Ishigama oven suitable for cooking a feast.

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



Microwave Oven with Steam Function ER-F400

EP-1-008

Home electric appliances/lighting

microwave ovens

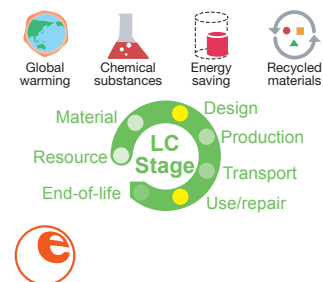
Superheated Steam / Microwave Oven

Environmental performance

PAM power controller has improved efficiency of magnetron and reduced energy consumption. Automatic power-off function has realized zero standby power consumption.

Product performance

Healthy cooking by 400°C superheated steam. Right, left, and back sides space free installation.



Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel +81-3-3502-2111

URL <http://www.hitachi-ap.co.jp/>

Available in: Japan, Taiwan



MRO-DV200

EP-1-009

Home electric appliances/lighting

steam microwave ovens

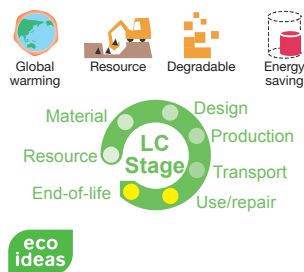
Energy saving Highly efficient Steam microwave oven: NE-R3000

Environmental performance

- About 20% in energy saving is realized. "83.7kWh/y to 66.5kWh/y" compared with FY 2000 model (NE-J30).
- By "quick-high power light type heater" loading, a maximum of about 40% of time shortening can be performed in baking, such as chicken and pork, dropping fat effectively.

Product performance

Incorporates quick-high power light type heater and double antenna which controls microwave energy. Provides delicious and fast "healthy cooking" that reduces fat.



Panasonic Corporation, Home Appliances Company

800, Tsutsui-cho, Yamato-Koriyama-shi, Nara-ken, 639-1188, Japan
Tel +81-50-3689-0860 Fax +81-743-56-4040
URL <http://panasonic.net/csr/>

Available in: Japan

Steam microwave oven: NE-R3000

EP-1-010

Home electric appliances/lighting

refrigerators

Energy saving and recycled plastics refrigerator

Environmental performance

-----<< M : Material >>-----

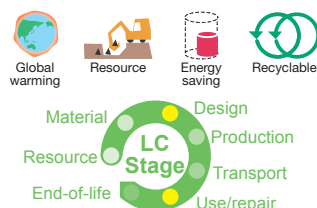
Recycled plastics (PP,PS) from our used home appliances recycling plant are adopted for several parts as part of "closed loop" recycling.
30 liter increased inner volume from our previous model realizes 545 liters within the body width of 685mm (for 'compact but large volume qualities').

-----<< E : Energy >>-----

Adopting vacuum heat insulator improves heat insulating efficiency.
Controlling amount of refrigerant due to the condition the refrigerator is used helps lighten the load of the compressor.
"Eco Mode"(which users can select and notice a symbol of leaf is shown by) encourages users to operate refrigerator with energy saving mindset.
8% reduction in power consumption from our previous model when used in general way (under JIS test conditions).

-----<< T : Toxicity >>-----

Compliant with EU RoHS directive and Japanese J-Moss.



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

MR-G57N-W

EP-1-011

Home electric appliances/lighting
refrigerators

Top Class Refrigerator in Energy Saving, Friendly to Both Family Finances and Environment

Environmental performance

- The achievement of energy saving rated of 149% (the ratio to improve energy saving by 2010).
- Recycled resin (PP,HI-PS)
- Flexible power saving mode
- Non-CFC refrigerant R-600a
- ODP (Ozone-Depleting Potential) of zero
- 1/400th of the value of conventional CFC substitutes GWP (Global Warming Potential)
- Compliant with RoHS Directive and J-Moss by utilizing lead free solder boards and abolishing bromine fire retardant

Product performance

- High density Plasmacluster Ion eliminates bacterium and controls adhesion bacterium inside
- Mist cooling system prevents dryness and reduces food loss
- High efficiency compressor, meticulous inverter and high-end vacuum insulation panel
- Moisture storage box for vegetable improves 30%* in moisture maintenance rate
- Both express freezing and low temperature freezing functions keep food delicious and nutritious.

*Compare to SJ-WA35K (2006). Moisture maintenance rate varies on vegetables.

Sharp Corporation

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

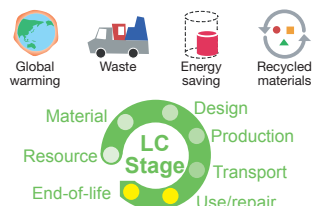
Tel +81-6-6625-0438 Fax +81-6-6625-0153

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

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

URL http://sharp-world.com/corporate/eco/csr_report/2008pdf/sharp_eall.pdf

Available in: Japan



Top Class Refrigerator in Energy Saving SJ - FS45R

EP-1-012

Home electric appliances/lighting
refrigerators

Four-door Refrigerator with 59 cm Wide French Doors

Environmental performance

- By use of high-end technology such as an inverter controlled compressor and high-performance urethane, further energy-saving has been achieved compared to the last year model. (41kg reduction of annual CO₂ emission and 18% decrease in energy consumption.)
- R-600a refrigerant whose ODP (Ozone Depletion Potential) is zero and GWP (Global Warming Potential) is 3 is employed. Furthermore, Cyclopentane whose ODP is also zero and GWP is 3 is employed as the blowing agent of the urethane in order to preserve the ozone layer and avoid global warming.
- RoHS Directive Compliant
- A door alarm system is equipped to avoid chill leak from the refrigerator and freezer compartments caused by unintentional door opening.

Product performance

- "MINUS-ZERO Panel" is equipped to cool the center of the refrigerator compartment.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel +81-3-3502-2111

URL <http://www.hitachi-ap.co.jp/>

Available in: Japan



R-X370(For Japanese Market)

EP-1-013

Home electric appliances/lighting
refrigerators

Top Unit Refrigerator: NR-F503TE

Environmental performance

Energy consumption reduced by approx. 38% that of previous model products through efficient cooling system control and positioning of freezing-temperature zones, and enhancing heat insulation property by increasing in thickness of high-performance vacuum insulation panel by approx. 1.3 times.

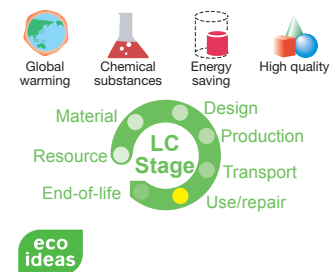
Product performance

- New thin evaporation pan developed by reducing the size of the duct and the rear cooling unit increased the total capacity by 31 liters that of previous model products.
- Faster freezing with a new fresh freezing plate and hybrid freezing technology to keep foods tasty.

Panasonic Corporation, Home Appliances Company

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan
Tel +81-77-563-3611
URL <http://panasonic.jp/reizo/>
URL <http://panasonic.net/csr/>

Available in: Japan



NR-F503TE

EP-1-014

Home electric appliances/lighting
refrigerators

Eco-friendly Refrigerator with New Layout to Suit Contemporary Lifestyles

Environmental performance

- Mitigation of climate change: Adoption of R600a refrigerant whose ozone-depleting potential and global warming potential are both low. Reduction of power consumption by 140 kWh/year and 55 kg reduction in CO₂ emissions compared with the benchmark model. 27% reduction in power consumption compared with the heater type thanks to the adoption of a refrigeration cycle.

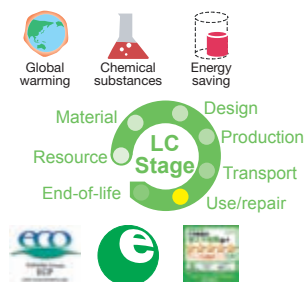
Product performance

- High humidity storage: i-Twin Cooling for high-humidity cool air to keep food fresh.
- Clean interior: Platinum Plus Unit to keep the interior of the refrigerator clean without letting cool air out.
- Ease of use: A vegetable crisper is incorporated in the refrigeration compartment at waist height. Universal design makes it easy to see what is inside and easy to access.

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



Refrigerator Freezer <Freshness Meister> GR-A51R

EP-1-015

Home electric appliances/lighting

food waste disposers

Home Garbage Disposer

Environmental performance

Compliance with the RoHS Directive by changing materials and parts with those having less environmental impact.

Product performance

This product can reduce the volume of 400g of garbage to about 1/7 in approximately 85 minutes.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>

Available in: Japan



ECO-V30 (For Japanese market)

EP-1-016

Home electric appliances/lighting

food waste dryers

Food waste dryer, free-standing type kitchen gadget

Environmental performance

Harmful germs & fungus live in food waste if it goes to decay and malodors are generated too basically due to moisture contained in the food waste.

Before food waste goes rotten, by drying it up, no germs & fungus lives and malodors are eliminated. After being dried, food waste shrinks, loses weight as much water is evaporated and this means food waste is reduced before it goes to a landfill site or is incinerated but most ideally before it goes to a recycling facility.

It not only supports people to keep household circumstances clean & hygienic but also saves cost, time, and energy by reducing volume of food waste to be transported.

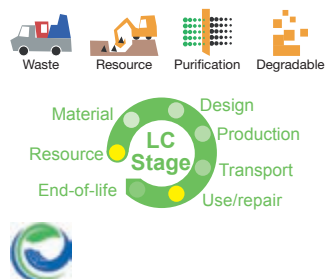
Product performance

It is very easy accessible for common householders. People can place it everywhere a plug-in is available and just put food waste in the basket of machine inside and power on and forget it. Machine automatically dries up food waste by keep circulating hot air (around 50 ~ 60 °C) inside of chamber of machine and malodors are eliminated by an activated carbon filtration system. Machine stops working automatically after the drying and deodorizing procedure is completed. Energy consumption is around 60W per hour. The machine has 4-way self-check safety system to confirm the most safe use. The machine is made in Korea.

Loofenlee Co., Ltd.

11F, Plaza Bldg., 654-3, Yoksam-dong, Gangnam-gu, Seoul, 135-080, Korea
Tel +82-2-557-4488 Fax +82-2-557-4490
E-mail smkim@loofen.com
URL www.loofen.com

Available in: Global



Food waste dryer model No. LF07

EP-1-017

Home electric appliances/lighting
food waste dryers

Commercial application food waste dryer

Environmental performance

Eco-friendly business, reduced food waste, leaves a clean environment to our children and grandchildren.

Product performance

1. Food waste volume is reduced to one-tenth
2. The first in the domestic market as a free-standing type for business users
3. Complete elimination of food odor by employing an active carbon filter exchange method
4. Free-standing design allows the product to be installed anywhere to suit your convenience
5. Mode selection options available based on the amount of food waste
6. When the operation is over, you can use the automatic discharge function to automatically discharge the contents
7. The product is made of stainless steel which is rustless over long-term use.

Ecowell Co., Ltd.

808-4, Dohwa-Dong, Namgu, Incheon, 402-060, Korea
Tel +82-32-582-6688 Fax +82-32-582-6622
E-mail xiaoyan@ecowell.net
URL www.ecowell.net

Available in: All areas



EP-1-018

Home electric appliances/lighting
food waste dryers

Food waste dryer (machine)

Environmental performance

Eco-friendly business, reduced food waste, leaves a clean environment for our children and grandchildren.

Product performance

1. Food waste volume is reduced to one-tenth
2. The first in the domestic market as a free-standing type for business users.
3. Complete elimination of food odor by employing an active carbon filter exchange method.
4. Free-standing design allows the product to be installed anywhere to suit your convenience.
5. The product is made of stainless steel which is rustless over long-term use.

Ecowell Co., Ltd.

808-4, Dohwa-Dong, Namgu, Incheon, 402-060, Korea
Tel +82-32-582-6688 Fax +82-32-582-6622
E-mail xiaoyan@ecowell.net
URL www.ecowell.net

Available in: All regions



Industrial food waste dryer machine

Eco-materials

Eco-components

Eco-products // Home electric appliances/lighting

Eco-services

EP-1-019

Home electric appliances/lighting

washing machines

BEAT WASH BW-105JV Top Loading Washing Machine (washing capacity 10.5kg)

Environmental performance

- Water reduction: With a water circulation system, this washing machine reduces water consumption up to 30% with water consumption of 123L.*
- Chemical substance reduction: Complies with RoHS. Lead-free solder is used for printed-circuit board.
- Uses recycled material: Recycled plastics are used for outer tub, etc.

*Compared to previous model BW-105H/10.5kg

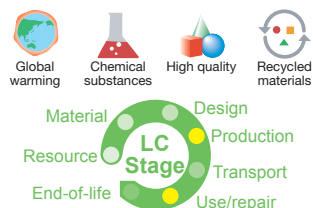
Product performance

- 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
URL <http://www.hitachi-ap.co.jp/>

Available in: Singapore, Malaysia



BW-105JV (Platinum)

EP-1-020

Home electric appliances/lighting

washing machines

BIG DRUM BD-105V2 Front Loading Automatic Washing Machine (Washing 10.5kg Drying 7.0kg)

Environmental performance

- Water reduction: 80L of water consumption that is 40% smaller compared to the previous model while realizing high detergency by adopting water circulation pump.*¹
- Energy consumption: Consumes 30% less energy (2,600kwh) to wash & dry 7kg of laundry compared to a conventional model.*²
- Chemical substance reduction: Complies with RoHS.
- Recycles material: Recycled plastics are used for outer tub, etc.

*¹ Wash/10.5kg. Compared with WD-74B ('02 model, 2 cycles)

*² Wash/Dry 7kg. Compared with WD-74B ('02 model, 2 cycles) 100V

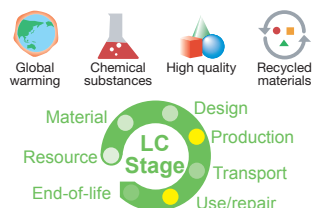
Product performance

- 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
URL <http://www.hitachi-ap.co.jp/>

Available in: Singapore, Malaysia, Thailand



BD-105V2 (Champagne)

EP-1-021

Home electric appliances/lighting

washing machines with drier

Fully Automatic Washer/Dryer Combo with Ag+ Ion Coating

Environmental performance

- Recycling: Closed-loop material recycled plastic is used. Sharp is the first company in the industry to develop the technology of assessing the degraded state of plastic in a simplified way along with characteristic improvement treatment and quality control technology. This allows collected polypropylene to be repeatedly recycled as material for new products.
- Green material: Main board uses lead-free solder.
- Energy and water saving: A hole-less stainless steel tub enables energy saving operation from washing to drying. Since water does not pour into the outside of the tub due to its hole-free design, the amount of water and detergent used is drastically reduced. The hole-less stainless steel tub keeps heat inside and the temperature of inner tub rises in a shorter time, thus it enables energy saving. Standby energy is 0W.

Sharp Corporation

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

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

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

URL http://sharp-world.com/corporate/eco/csr_report/2008pdf/sharp_eall.pdf

Available in: Japan



Fully Automatic Washer/Dryer Combo ES-TG820

EP-1-022

Home electric appliances/lighting

washing machines with drier

Compact Heat-pump Drum-type Washing Machine TW-4000VF

Environmental performance

- Mitigation of climate change: 67% reduction in power consumption with the optimized control of the compressor, PMV, and flow rate. 67% reduction in CO₂ emissions compared with the benchmark model thanks to reduced power consumption and water consumption.
- Efficient use of resources: 64% reduction in water consumption during the washing and drying of 6kg of laundry thanks to the adoption of a heat pump.

Product performance

- Quick washing and drying: 43% reduction of drying time owing to improved heat pump performance. 62% reduction in washing time for 9 kg of laundry thanks to full power cleaning.
- Ease of installation: The height of the machine is 50 mm less than a conventional model. The height of the feedwater inlet is 980 mm, which can accommodate 90% of all water taps.

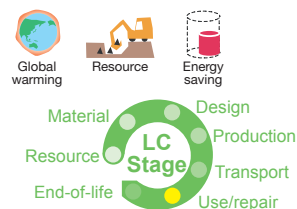
TOSHIBA HOME APPLIANCES CORPORATION

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



Heat Pump Hybrid Drum Electric Washing Machine TW-4000VF

EP-1-023

Home electric appliances/lighting

washing machines with drier

Full Auto Washer Dryer with Heat Pump System: NA-VR5500

Environmental performance

- Heat pump dry system
The new heat pump dry system replaces the traditional water-using dryer.
- It reduces the running cost by 44,100 yen per year as well as CO₂ emission reduction by 684 kilograms in comparison to the conventional washer and dryer systems which we produced seven years ago.

Product performance

- The new "Jet-Dancing" wash technology
Jet spray penetrates deep inside the fabric with its six times higher spray pressure than the previous model.
In addition to traditional tumble washing, the brand new "Dancing wash technology" gets your clothes very clean.
This new function reverses the rotation quickly to make clothes squeeze out the dirt.
- Nano tech deodorizer
It sprays "nanoe" which is an electrified ion in water into the drum to prevent both unpleasant smells and bacteria.



NA-VR5500

Panasonic Corporation, Home Appliances Company

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan
Tel +81-77-561-2062 Fax +81-77-561-6749
URL <http://panasonic.jp/wash/>
URL <http://panasonic.net/csr/>

Available in: Japan

EP-1-024

Home electric appliances/lighting

vacuum cleaners

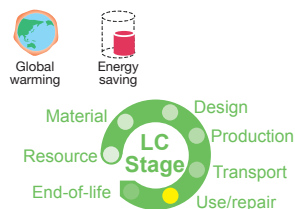
SC-XD1000 Airsis air-cleaning cyclone cleaner

Environmental performance

1. Power consumption in eco mode is approx. 50% less than that of conventional machines. Eco mode cleaning 6 minutes/day (total) 0.045 kWh - Breakdown: wooden floors: 0.026 kWh; tatami floors: 0.004 kWh; carpets: 0.015 kWh. High motor operation cleaning 6 minutes/day (total) 0.09 kWh
2. Reduction of paper consumption by employing tissue paper in front of the filter. Seven-year paper consumption reduced by 686 g, or 65% (compared with conventional paper-carton-type cleaners)
3. Reduction of water consumption due to elimination of the need for water cleaning of the filter: 420 liters/7 years

Product performance

1. Air-cleaning cyclone vacuum cleaner
2. New flexible power brush that cleans inter-spaces, walls, wall-side narrow spaces, and persistent dirt



SANYO Electric Co.,Ltd.

Keihan Hondori 2-5-5 Moriguchi-City Osaka, 570-8677, Japan

EP-1-025

Home electric appliances/lighting

vacuum cleaners

Vacuum Cleaner

Environmental performance

- Compact, light-weight and easy to use, and lead-free solder for power control board

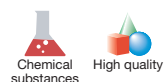
Product performance

- Easy to use and high power bagless type cleaner

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>

Available in: Asia, Middle East



CV-SJ21V

EP-1-026

Home electric appliances/lighting

vacuum cleaners

Jet Spin Cyclone Vacuum Cleaner:MC-JC10WX

Environmental performance

- * Infrared ray sensor detects minute house dust of about 20 μ m. Power is controlled in four levels depending on quantity of dust. Power is automatically changed to Energy Saving Mode where there is little dust. 45% of energy can be saved by that function as compared with models not using it.
- * Suction power of more than 99% can be maintained by "Jet Spin Cyclone System" that reduces power loss.

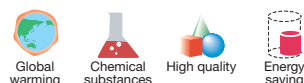
Product performance

More than 99% of power can be maintained with the industry's first "Jet Spin Cyclone", and 45% of energy can be saved with the new "House Dust Detective Sensor".

Panasonic Corporation, Home Appliances Company

1500 Hayashida-cho, Higashiomi City, Shiga, 527-8501, Japan
Tel +81-748-23-5621 Fax +81-748-24-1385
URL <http://panasonic.jp/soji/>
URL <http://panasonic.net/csr/>

Available in: Japan



eco ideas



Electric Vacuum Cleaner: MC-JC10WX

EP-1-027

Home electric appliances/lighting

vacuum cleaners

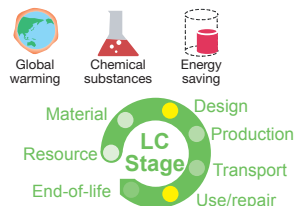
Equipped with Automatic Filter Cleaning and Air Purifying Functions. No. 1 for Low Noise

Environmental performance

- Mitigation of climate change: 28% reduction in power consumption in Eco Automatic Mode compared with a conventional model. 22 kg reduction in CO₂ emissions.
- Efficient use of resources: Recycling rate of plastic parts is 91.4%.

Product performance

- Low noise: Low noise thanks to the strengthened damping structure using a spring to support the motor.
- Self-propelled head: A new sensor and roller to fit corners for smooth movement of the head. Dust near the edge is captured at once.
- Long-lasting powerful cleaning: Automatic filter cleaning and air purification for long-lasting powerful operation.



Silent Drive Sound "Quiet SYSTEM" -mounted Vacuum Cleaner VC-2000X

TOSHIBA HOME APPLIANCES CORPORATION

43 Horiyamashita, Hadano-shi, Kanagawa-ken, 259-1393, Japan

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

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

Available in: Japan

EP-1-028

Home electric appliances/lighting

air purifiers

All Filters Last 10 years and over. "ECO-auto" Mode reduces the electricity rate

Environmental performance

----<< M : Material >>----

All filters (washable air filter and deodorant filter, and disc type vapor filter) are not required to be changed for 10 years.

----<< E : Energy >>----

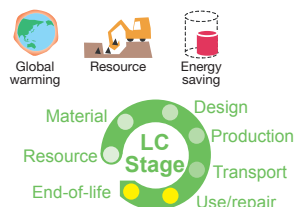
"Eco-Auto" mode activates only when dust or odor is detected and so it saves energy.

Using DC motor for wind fan mainly in most efficient rotation number area, it reduced electricity consumption from our previous model.

Product performance

It removes suspended dusts and odor in the atmosphere.

It also humidifies the room with an inner vapor filter.



MA-518DK

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-1-029

Home electric appliances/lighting

air purifiers

Air Purifier with Seven Functions for Comfortable Life in All Seasons

Environmental performance

- Adoption of Inverter Motor: This can improve the air purifier efficiency by 15% owing to low-loss design of air flow.
- Adoption of Artificial Zeolite as a deodorizing filter absorbent; this is made from limestone generated in thermal power plants.
- RoHS directive compliant.
- Realization of long life filter (deodorizing filter: approx. 10 years, air clean filter: approx. 8 years, vaporizing filter: approx. 60 months)

Product performance

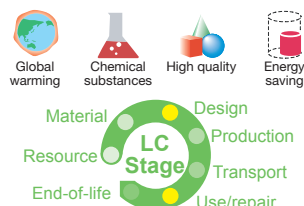
- Industry first* integration of seven functions in one set; air purifier, deodorization, humidification, skin humidification, de-moisturization, clothing drier, and dew condensation restraint.
- Top class air purifier speed; effective for floor area 15m² in about 9 minutes.
- Designed for easy operation with big lighting button and slim type remote control.
- Clean hygienic design to adopt washable water tank with "Ag" sanitizing unit.

*Launched on Sept. 12, 2008, first of new-type humidity air purifiers for family use.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>

Available in: Japan



EP-CV1000

EP-1-030

Home electric appliances/lighting

air purifiers

Air Purifier Using Plasmacluster HD

Environmental performance

DC motor and inverter control contribute to reducing energy consumption and achieving an annual electric bill of about 330 yen. (This is calculated based on power consumption during silent running and power charge per unit of 22 yen/kWh (tax included) as a rough standard.) Standby power consumption is 0.3W. The specific bromine flame retardants, which may produce poison gas, are not used, and soy ink and recycled paper are used for the instruction manual. Also, lead-free solder is applied to the basal plate and the bicapsular cabtyre cord allows to place unit on the floor.

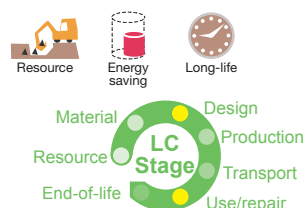
Product performance

Newly introduced high density Plasmacluster Ion enhances to inactivate airborne mold fungi and harmful bacteria and to eliminate airborne house dust in interior spaces.

Sharp Corporation

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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/csr_report/2008pdf/sharp_eall.pdf

Available in: Japan, ASEAN, Middle East



Air Purifier FU-W53CX-W

EP-1-031

Home electric appliances/lighting

air conditioners

Air Conditioner with High-Density "Plasmacluster" Technology

Environmental performance

This model received the "Fluid mechanics technological prize" of the Japanese Society of Fluid Mechanics in 2008, and became one of the most excellent energy saving performance products by adopting the airflow control technology of "Long panel, up-or downward opening system".

We have successfully accomplished COP 4.50 with the energy saving standards accomplishment 141%, the amount of power consumption 1758 kWh, and standby power only 0.5kW.

This has a new driving mode "Osusume -Eco" (Recommendation Eco mode) to realize energy saving and comfort at the same time with one button, and saves up to 20% in energy.

Product performance

The airflow control technology protects the human body from being directly exposed to cool air.

Sharp Corporation

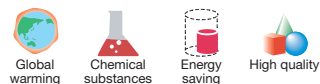
22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

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/csr_report/2008pdf/sharp_eall.pdf



Available in: Japan

Air Conditioner AY-Y50SX

EP-1-032

Home electric appliances/lighting

air conditioners

High performance, energy-saving air conditioner

Environmental performance

Daikin has further improved the energy efficiency and realized substantial energy savings compared to conventional models by achieving an industrial top-class COP of over 4 for both cooling and heating operations.



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>



FTXG-E Series

EP-1-033

Home electric appliances/lighting

air conditioners

High performance, energy-saving air conditioner

Environmental performance

Daikin's "Ururu Sarara R series" of air conditioners offers "Ururu Humidifying" function for air conditioning as well as humidifying without adding water (extracting moisture from outside air). It is also incorporates a new function "Comfort Eco Operation" which automatically controls temperature, humidity, and airflow that affects feeling temperature.

"Ururu Sarara R series" can realize both comfort and energy saving. By utilizing "Comfort Eco Operation," you can reduce energy consumption by approximately 20% a year



Global warming



Energy saving



DAIKIN INDUSTRIES, LTD.

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E-mail kankyo@daikin.co.jp
URL <http://www.daikin.com>
URL <http://www.daikin.com/csr>



Available in: Japan

FTK(X)S-D Series

EP-1-034

Home electric appliances/lighting

air conditioners

Air Conditioner: energy-saving, air-cleaning: CS/CU-S12JKT

Environmental performance

Energy saving is achieved through high COP advanced inverter technology, a high efficiency air-flow circuit, and improved efficiency of outdoor unit by heat exchanger improvement.

Product performance

This air conditioner has many functions such as clean room air by advanced e-ion air purifying (AP) system, mild dry cooling function (Panasonic unique function). This improves the comfort level of the user.



Global warming



Chemical substances



Recyclable



Energy saving



Panasonic Corporation, Home Appliances Company

Lot 2, Persiaran Tengku Ampuan, Section 21, Shah Alam Industrial Site, 40300
Shah Alam, Selangor, Malaysia., 40300, Malaysia
Tel +603-58914000 Fax +603-58914001
URL <http://phaam.panasonic.com.my/>
URL <http://panasonic.net/csr/>



Available in: Thailand

CS/CU-S12JKT

EP-1-035

Home electric appliances/lighting

air conditioners

Room Air Conditioner

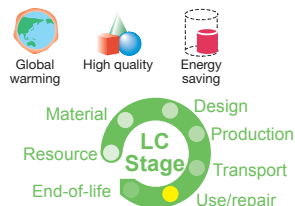
Environmental performance

A Compact-size Room Air Conditioner with Reduced Electricity Consumption

- Energy Saving Standard Achievement Rate: 122%

With the combination of ECO Scroll compressor and IQ-PAM Engine, RAS-S40Y2 is operated by switching between powerful high voltage and energy saving low voltage.

"High power & energy saving" is achieved by a high efficiency heat exchanger which enables smooth air conditioning.



Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>



Available in: Japan

RAS-S40Y2

EP-1-036

Home electric appliances/lighting

air conditioners

Comfort, Energy Saving, and Compactness Equipped with the Industry's First Energy Monitor

Environmental performance

- Mitigation of climate change: Equipped with a dual compressor, cooling and heating is done with only 45W power consumption (equivalent to a fan). 22% reduction in annual power consumption.
- Efficient use of resources: Maintenance-free air purifying method has eliminated the need for disposable replacement parts.

Product performance

- Energy monitor: Display of power consumption during operation and electricity charge on the main unit to guide energy-saving operation.
- Comfortable heating: Comfortable air conditioning of the entire room or the targeted area by the touch of a button.
- Fully automatic cleaning: Fully automatic cleaning maintains excellent energy-saving performance.



Toshiba Carrier Corporation

Shinagawa Center Building, 23-17, Takanawa 3-chome, Minato-ku, Tokyo,
108-0074, Japan
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>



Room Air-Conditioner "DAISEIKAI PDR Series" RAS-402PDR

EP-1-037

Home electric appliances/lighting

air conditioners

Intelligent Energy Saving Air Conditioner "Kirigamine" with "Move-eye Fit" Sensor

Environmental performance

Eco mode encourages the user to save energy positively and also CO₂ emission amount or electricity cost can be seen on the front panel.

-----< M : Material >-----

Adopting closed-loop-recycled plastics from used home appliances to line flow fan and polystyrene foam for package of new product.

Already installed tubing can be used to reduce a large amount of waste.

-----< E : Energy >-----

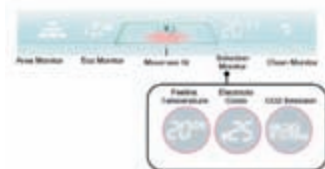
With compact body width of 798mm, the 2009 model has already achieved the energy saving target standard for 2010 of the Japan Rationalization in Energy Use Law.

Infrared radiation sensor called "Move-Eye Fit" measures floor temperature, position and human activity, and temperature alteration of the room to control wind flow angle to fit each user's life style.

At most 65% (average 40% per year) energy saving.

-----< T : Toxicity >-----

Compliant with EU RoHS directive and Japanese J-Moss.



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

MSZ-ZW408S

EP-1-038

Home electric appliances/lighting

air conditioners

Energy and Resource Saving Packaged Air Conditioner

Environmental performance

-----< M : Material >-----

Following technologies are developed to dispense with tube washing or replace of tubing.

(1) High quality active carbon filter "replace filter" removes chlorinations remained in tubing.

(2) Alkylbenzene refrigerant oil, which is originally developed and is stable and hard to decay, gives refrigerant circuit longer life.

(3) The wide strainer catches 30% more iron powder and enables replacement caused by compressor destruction accident.

Compact design in outdoor unit contributes also to resource saving (11kg weight reduction, 407mm height shortening in type 140)

-----< E : Energy >-----

The scroll compressor in outdoor unit with the originally developed "frame compliant mechanism", which greatly reduces friction loss.

"Move Eye 360 degrees" detects floor temperature of the room all around and controls temperature for users to feel with their body in order to prevent uneven temperature distribution and needless cooling or warming operation.



Mitsubishi Electric Corporation

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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

MPUZ-WRP140HA6, MPLZ-WRP140BEL

EP-1-039

Home electric appliances/lighting
air conditioners

Compact Design "City Multi" Air Conditioner

Environmental performance

----<< M : Material >>----

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. Approx. 33kg reduction in weight from the previous model.

----<< E : Energy >>----

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.

----<< T : Toxicity >>----

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.

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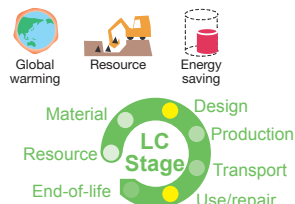
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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, Oceania, Europe, Americas



PUHY-P250YHM-A

EP-1-040

Home electric appliances/lighting
air conditioners

Replacement Multi Air Conditioner Reusing Existing Refrigerant Tubing

Environmental performance

----<< M : Material >>----

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.

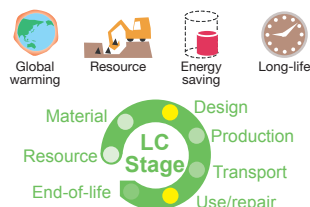
It collects oil through general air conditioning operation.

----<< T : Toxicity >>----

R410 refrigerant marks COP 4.01.

Product performance

"Replace Multi" is an air conditioning system for building using existing refrigerant tubing, which basically contributes to resource saving.



Replace Multi E ECO

Mitsubishi Electric Corporation

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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

EP-1-041

Home electric appliances/lighting

dishwashers

Dishwasher: NP-TS1**Environmental performance**

This dishwasher's washing capabilities have been further increased thanks to the "Power sterilizing mist" function, which is an enhanced version of our unique "Sterilizing mist" technology. The development of the "Power sterilizing mist" technology has achieved satisfactory washing power at low temperatures and enabled a reduction in power consumption. This dishwasher's power saving performance tops the rankings in the countertop dish washer/dryer industry.

Product performance

(1) The amount of mist containing detergents has been increased. (2) Noise generated from the pump, ducts, and tank has been reduced. Therefore, the total operating noise has been reduced. (3) The double front doors with a large opening area have improved the usability when adding or removing dishes.

Panasonic Corporation, Home Appliances Company

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan
Tel +81-77-561-2060 Fax +81-77-561-6749
URL <http://panasonic.jp/dish/>
URL <http://panasonic.net/csr/>

Available in: Japan



eco ideas



NP-TS1

EP-1-042

Home electric appliances/lighting

dishwashers

Washing and dish-drying machine, saving water**Environmental performance**

This washing and dish-drying machine is equipped with a bowl which makes the spout narrow in the nozzle, and it realize high-pressure washing. Consequently, the quantity of water used for washing and rinsing is 10 liters, accomplishing significant saving water compared with 70 liters of hand washing.

**TOTO LTD.**

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

Available in: Japan



Eco-materials

Eco-components

Eco-products // Home electric appliances/lighting

Eco-services

EP-1-043

Home electric appliances/lighting

hair dryers

A hair drier to create straight, glossy hair

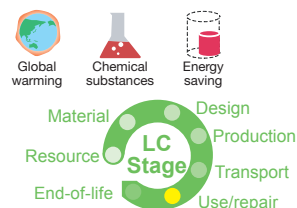
Environmental performance

- Reduction of power consumption by approx. 28%* due to shorter drying times

*Power consumption: 26 kWh/year compared with the EH5403

Product performance

- A newly developed method for the emission of nanoe ions makes the user's hair straight, smooth and silky.
- Keeps the skin healthy by removing excess sebum and maintaining correct levels of skin moisture
- A unique quick-dry nozzle increases drying speed by approx. 30%.



eco ideas



Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan

Tel +81-6-6908-1131

URL <http://panasonic-electric-works.net/>

URL <http://panasonic.jp/hair/index.html>

URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

EP-1-044

Home electric appliances/lighting

shavers

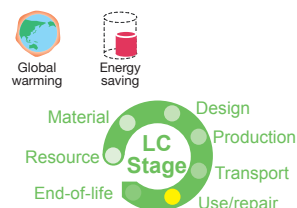
Shaver with Automatic Cleaning System

Environmental performance

1. 20% reduction of annual power consumption comparing to SV-QX1
2. Non-detergent cleaning system implemented by utilizing electrolyzed water technology and environmentally friendly design with repeatedly usable water tank

Product performance

Wide Pull-Shaving Head implemented (industry first)



SANYO Electric Co.,Ltd.

Keihan Hondori 2-5-5 Moriguchi-City Osaka, 570-8677, Japan

Available in: JAPAN

Shaver with Automatic Cleaning System SV-WX1

EP-1-045

Home electric appliances/lighting
televisions

Energy Saving No. 1 Digital LCD Television: <BRAVIA> KDL-32JE1

Environmental performance

Sony launched the most energy efficient 32" LCD TV in the industry, the KDL-32JE1, in Japan on July 30, 2008. By enhancing the efficiency of backlight tube light emission and the light transmission of optical film, Sony has achieved industry-leading performance (*) in energy efficiency (232% of Japanese energy conservation standards), annual power consumption (86kWh/year) and momentary power consumption (89W).

Product performance

The most energy efficient, brilliant picture quality and premium design: <BRAVIA> JE1 series.

*: As of June 17 2008, comparison with digital LCD televisions sold in Japan

Sony Corporation

1-7-1 Konan, Minato-ku, Tokyo, 108-0075, Japan

URL <http://www.sony.net/eco/>

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

URL <http://www.sony.net/SonyInfo/Environment/csr/>



<BRAVIA> KDL-32JE1

EP-1-046

Home electric appliances/lighting
televisions

The Viera PX80-series hi-vision plasma TV (37/42/50-inch models)

Environmental performance

Energy & resource saving:

- Annual power consumption (kWh/year) reduced by approx. 54% due to higher luminance efficiency of panels and energy-saving design (compared with the TH-42PX300).

Chemical substances & recycling:

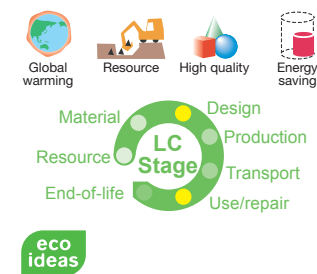
- Non-use of lead for plasma panels (a world first)
- Non-use of specific chemical substances (compliant with the EU RoHS directive)
- Non-use of lead-solder circuit boards
- Non-use of vinyl chloride (PVC) resin for internal wires
- Recovery of CRT-based televisions and recycling of some plastic parts.

Long-life design:

- Approx. 100,000 hours of life for plasma panels

Product performance

- Large screen, enabling space saving and high-quality images
- Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables
- Under-speaker type
- SD card slot
- Environmentally friendly bamboo-fiber diaphragm speaker



Plasma-TV VIERA: TH-42PX80

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.jp/tv/>

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

Available in: Japan

EP-1-047

Home electric appliances/lighting

televisions

The Viera PZ800-series full hi-vision plasma TV (42/46/50/58-inch models)

Environmental performance

Energy & resource saving:

- Annual power consumption (kWh/year) reduced by approx. 15% due to higher luminance efficiency of panels and energy-saving design (compared with the TH-50PZ700).

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
- Recovery of CRT-based televisions and recycling of some plastic parts.

Long-life design:

- Approx. 100,000 hours of life for plasma panels

Product performance

- Large screen, enabling space saving and high-quality images
- Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables
- Under-speaker type
- SD card slot
- Environmentally friendly bamboo-fiber diaphragm speaker



eco ideas



Plasma-TV VIERA: TH-50PZ800

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

Available in: Japan

EP-1-048

Home electric appliances/lighting

televisions

Plasma Display Television

Environmental performance

- RoHS directive compliant.
- Non-halogen plastic materials used for the cabinet part.
- "Low power consumption mode" can adjust screen brightness to various uses in domestic situations.
- "Automatic power off" function automatically turns off the power after a certain period of no operation or no signals.
- Uses eco paint to reduce VOC materials.
- Promote alternating VOC (xylene and toluene) with ester alcohol in painting materials.

Product performance

You can experience what is all about the resolution of HD; extremity of dense lines and pixels on the screen. Hitachi's revolutionary ALIS Panel serves as the canvas on which the colors and shapes of the visual art is performed.

- High resolution full HD panel for digital HD broadcast.
- Simple insertion of removable HDD [iVDR-S] into [iV pocket] increases capacity.
- Reproduces 24-exposure films to smooth motion pictures.



P50-XR02

Hitachi, Ltd.

292 Yoshida-cho, Totsuka-ku, Yokohama, 244-0817, Japan

Tel +81-45-866-6152 (General affairs department)

Fax +81-45-866-5920 (General affairs department)

EP-1-049

Home electric appliances/lighting

televisions

The Viera LX80-series hi-vision LCD-TV (20/26/32-inch models)

Environmental performance

Energy & resource saving:

- Annual power consumption (kWh/year) reduced by approx. 40% due to energy saving design (compared with the TH-32LX500).
- Product weight reduced by approx. 30% due to resource saving design (compared with the TH-32LX500)

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
- Recovery of CRT-based televisions and recycling of some parts

Product performance

- IPS α panels - a wide viewing angle with high-quality images
- Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables
- Under-speaker type
- SD card slot
- Environmentally friendly bamboo-fiber diaphragm speaker

Panasonic Corporation, AVC Networks Company

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

Available in: Japan



eco ideas



LCD-TV: TH-32LX80

EP-1-050

Home electric appliances/lighting

televisions

LCD Television

Environmental performance

- RoHS compliant
- Body design improved 20%* in transport efficiency compared to the current model and consequently reduced CO₂ emissions.

*Compared to L37-XR01

Product performance

The UT series is designed to release customers from the restrictions of installation place. The monitor of the UT series, which is 35mm thin, is more than just a TV suitable to be hung on a wall. By separating the Woo station from the monitor, the UT series provides a variety of options on where and how to install it in your home as well as easy connection compatibility with other consumer electronic equipment.

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UT37-XP770W

EP-1-051

Home electric appliances/lighting
televisions

High-definition TV with Carefully Selected Functions

Environmental performance

- Mitigation of climate change: 55% reduction in annual power consumption by optimization of image signals and backlight control.
- Efficient use of resources: 58% reduction in weight by adoption of a lightweight stand and lightweight metal parts.

Product performance

- Automatic picture adjustment: Automatic picture adjustment optimized for the viewing environment.
- Texture realizer: Reproduction of true-to-life texture by histogram analysis etc.
- Full HD LCD panel: Over 2 million pixels for high-quality reproduction of high-definition images.



TOSHIBA CORPORATION Digital Media 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>



Digital high-definition LCD TV "REGZA" 37CV500

EP-1-052

Home electric appliances/lighting
televisions

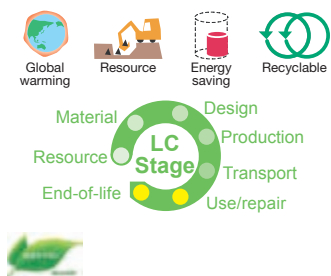
Digital High-Definition LCD TV

Environmental performance

- Optimally controlling of the backlight brightness and the aperture ratio of the LCD panel
- Slim, high-quality design, 7.9cm deep at thinnest part of the display
- Backlight longevity is about 60,000 hours
- Closed-loop material recyclable rear cabinet
- TV stand using recycled material
- Packaging buffer made of recycled polystyrene foam
- Stand using plant-based paint
 - We have developed world-first technology for painting the plastic parts of consumer electronics with plant-based paint made from starch.
- Non-halogen cabinet
- Halogen-free power cords and inner cables
- Lead-free solder circuit board

Product performance

- High definition TV, equipped with full high-definition resolution (1920×1080 pixels) liquid crystal panel and double-speed 120-Hz frame rate conversion LCD technology.



Sharp Corporation

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 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/csr_report/2008pdf/sharp_eall.pdf



Available in: JAPAN

Digital High-Definition LCD TV LC-42GX5

EP-1-053

Home electric appliances/lighting

televisions

The Viera LZ80-series full hi-vision LCD-TV (32/37-inch models)

Environmental performance

Energy & resource saving:

- Annual power consumption (kWh/year) reduced by approx. 20% due to energy saving design (compared with the TH-37LZ75).
- 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
 - Recovery of CRT-based televisions and recycling of some plastic parts

Product performance

- IPS α panels - a wide viewing angle with high-quality images
- Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables
- Under-speaker type
- SD card slot

Panasonic Corporation, AVC Networks Company

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

Available in: Japan



eco ideas



LCD-TV: TH-37LZ80

EP-1-054

Home electric appliances/lighting

televisions

Ultra-thin Digital High-definition LCD TV Equipped with RGB-LED Backlight

Environmental performance

- The RGB-LED Backlight System can control the brightness in localized areas to fine tune, which enables lower power consumption of operation.
 - Annual power consumption of 294kWh/year (for 65V-inch model), down by about 26% compared to Sharp's 2007 model^{*1}
- Ultra slim, high-quality design, only 2.28cm deep at thinnest part of the display
- Backlight longevity is about 60,000 hours
- Closed-loop material recyclable rear cabinet
- Packaging buffer made of recycled polystyrene foam
- Zero mercury LED backlight
- Non-halogen cabinet
- Halogen-free power cords and inner cables

Product performance

- Newly developed, next-generation MegaASV^{*2} LCD
 TV contrast of more than 1,000,000:1; reproducible color gamut is 150% of the NTSC color space

^{*1} These models are not covered by the Japanese Energy Conservation Law. Figures were calculated using the law standards as a reference.

^{*2} MegaASV stands for "mega-contrast Advanced Super View".

Sharp Corporation

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 E-mail eco-info@sharp.co.jp
 URL <http://sharp-world.com/>
 URL http://sharp-world.com/corporate/eco/csr_report/2008pdf/sharp_eall.pdf

Available in: Japan



Ultra-thin Digital High-definition LCD TV LC-65XS1

EP-1-055

Home electric appliances/lighting
video cameras

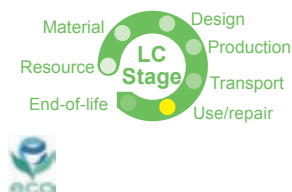
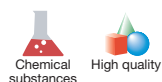
Blu-ray Disc (BD) Camera

Environmental performance

Compliant with RoHS directive

Product performance

5.3 Mega Pixel 1/2.8" CMOS image sensor used in our product captures high-definition video through a newly developed technology that can record a dynamic image (video) with 1920×1080 /60Hz and still image with 2400×1800 pixels. In addition, 8cm BD-RE/-R/DVD drive installed in the product is a compact, low power consuming, quiet and high reliable BD/DVD drive that is compatible with five types of industry standard discs: BD-RE/-R, DVD-RAM/-RW/-R.



Hitachi, Ltd.

292 Yoshida-cho, Totsuka-ku, Yokohama, 244-0817, Japan
Tel +81-45-866-6152 (General affairs department)
Fax +81-45-866-5920 (General affairs department)



DZ-BD10H

EP-1-056

Home electric appliances/lighting
video cameras

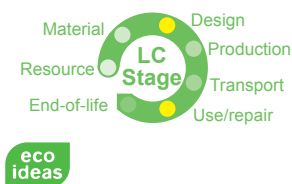
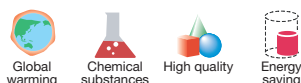
High Definition Video Camera with 60GB HDD, HDC-HS100

Environmental performance

- Achieved power consumption of 4.1W (reduced by 32% compared with our predecessor model HDC-SD3) 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

- Full HD 1920x1080
- With 60G HDD
- 3MOS System
- Advanced Optical Image Stabilizer



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: Japan

High Definition Video Camera with 60GB HDD, HDC-HS100

EP-1-057

Home electric appliances/lighting

video cameras

SD Card Video Camera: SDR-SW20

Environmental performance

- Achieved power consumption of 2.3W (reduced by 34% compared with our predecessor model SDR-S200) due to low power circuit technology.
 - Achieved Main Product weight (w/o Battery) of 224g (reduced by 9.3% compared with our predecessor model SDR-S200) .
 - 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.)

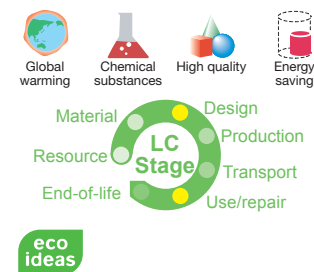
Product performance

- Waterproof up to 1.5 m (IEC60529 IPX8)
- Shockproof up to 1.2m (MIL-STD-810F METHOD 516.5 SHOCK)
- 0.6 sec Quick Start
- DVD Quality (MPEG2) recording

Panasonic Corporation, AVC Networks Company

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 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.co.jp/>
 URL <http://panasonic.net/csr/>

Available in: Japan



SD Card Video Camera: SDR-SW20

EP-1-058

Home electric appliances/lighting

blu-ray disc players

Blu-ray Disc player: DMP-BD35

Environmental performance

- Achieved power consumption of 20W (reduced by 20% compared with our current model DMP-BD30) due to low power circuit technology.
 - 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.)

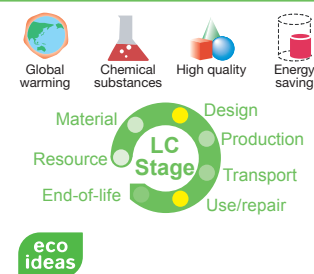
Product performance

- Blu-ray Disc recorder with SD Card Slot.
- High quality Digital Audio & Video and UniPhier™ Technology.
- BD-Live

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: Japan



Blu-ray Disc player: DMP-BD35

Eco-materials

Eco-components

Eco-products // Home electric appliances/lighting

Eco-services

EP-1-059

Home electric appliances/lighting

blu-ray disc recorders

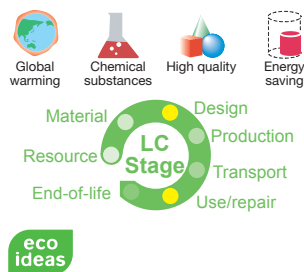
Blu-ray Disc recorder with 1TB HDD: DMR-BW930

Environmental performance

- Achieved power consumption of 29W (reduced by 48% compared with our current model DMR-BW200) 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: 0.3W
 - Non-Use of Specific Chemical Substances *
- (*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

Product performance

- Blu-ray Disc recorder with 1TB HDD
- High quality Digital Audio & Video and UniPhier™ Technology
- Digital duble Tuner
- BD-Live, Act Vila



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: Japan

Blu-ray Disc recorder: DMR-BW930

EP-1-060

Home electric appliances/lighting

projectors

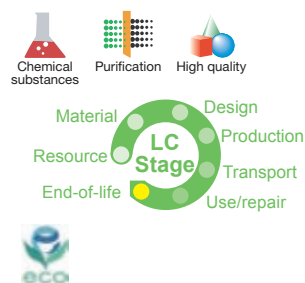
Ultra-short throw projector

Environmental performance

- RoHS Compatible model

Product performance

- High performance lens with free-shaped surface
- Ultra short throw projection with 80"@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 with power on/off
- Not annoying by shadow when making presentation
- Able to set up on a desktop and project 45" image on it



CP-A100

Hitachi, Ltd.

Shin-Otemachi Bldg2-1, Otemachi 2-chome, Chiyuoda-ku, Tokyo, 100-0004, Japan

CP-A100

EP-1-061

Home electric appliances/lighting

digital set top boxes

The TZ-DCH2000 digital set-top box

Environmental performance

Energy & resource saving:

- Rated power consumption reduced from 35 W to 33 W (compared with our previous model)
- Product weight reduced from 3.6 kg to 3.3 kg (compared with our previous model).

Chemical substances:

- 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

Product performance

- Built-in HDD for recording and playback
- Built-in cable modem
- STB can be operated with a Panasonic TV remote control (Viera Link-compatible)
- SD card slot for playback of digital photos on large TV screens
- Easy setup using information stored on SD cards

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

Available in: Japan



eco ideas



Digital set top box: TZ-DCH2000

EP-1-062

Home electric appliances/lighting

DVD recorders

DVD recorder with 250GB HDD: DMR-XW120

Environmental performance

- Achieved power consumption of 35W (reduced by 12% compared with our current model DMR-XW31) 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: 0.4W
 - Non-Use of Specific Chemical Substances *
- (*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

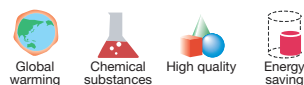
Product performance

- DVD recorder with 250GB HDD
- High quality Digital Audio & Video and UniPhier™ Technology
- Digital double Tuner

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: Japan



eco ideas



DVD recorder: DMR-XW120

EP-1-063

Home electric appliances/lighting

IC recorders

IC Recorder: RR-US950/US750

Environmental performance

- Achieved power consumption of 0.044W (reduced by 68% compared with our predecessor model RR-US900) due to low power circuit technology.
- 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.)

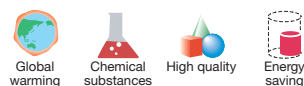
Product performance

- RR-US950: 2GB IC memory recorder with 290-hour recording
- RR-US750: 1GB IC memory recorder with 145-hour recording
- Stereo Recording and MP3 function
- 4x Zoom Microphone
- Security Function

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: Japan



eco
ideas



IC Recorder: RR-US950/US750

EP-1-064

Home electric appliances/lighting

audio players

SD Audio Player: SV-SD870N

Environmental performance

- Achieved power consumption of 0.019W (reduced by 26% compared with our predecessor model SV-SD800N) due to low power circuit technology.
- 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.)

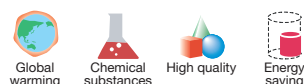
Product performance

- Approximate play time: 100 hours
- Noise cancellation function (83% noise reduction)

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

Available in: Japan



eco
ideas



SD Audio Player: SV-SD870N

EP-1-065

Home electric appliances/lighting

compact stereo systems

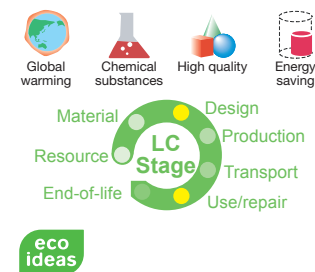
Compact Stereo System with 80GB HDD: SC-HC5/HC7

Environmental performance

- Achieved stand-by power consumption of 0.1W.
- Achieved power consumption of 32W (reduced by 30% compared with our predecessor model SC-SX400) 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

- 80GB internal hard drive.
- 3.5-inch LCD display
- SD card slot and Ethernet LAN port
- Digital power Amplifier 40W



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: Japan

Compact Stereo System: SC-HC5/HC7

EP-1-066

Home electric appliances/lighting

network disk recorders

Network Disk Recorder: WJ-ND400

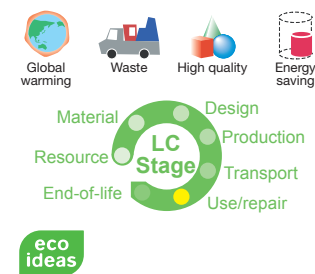
Environmental performance

The number of included HDD is increased. As a result, environmental load is reduced when the recording time is made an index.

- Power consumption: 21W → 19W
- Capacity : 3234cm³ → 2522cm³
- Weight : 2575g → 2167g

Product performance

- The WJ-ND400 can record up to 64 network cameras simultaneously with multi-format recording in MPEG-4 and JPEG. Metadata associated VMD provides fast, effective search. Up to 9 hot-plug hard disk drives can be installed for maximum on-board storage capabilities. An embedded real-time operating system offers supreme reliability, while RAID5/6 provides redundant recording for data security.



Panasonic Corporation, System Solutions Company

4-3-1 Tsunashima-higashi, Kohoku-ku, Yokohama City, Kanagawa, 223-8639, Japan
 URL <http://panasonic.net/pss/security/products/nw/nvr00.html#WJ-ND400>
 URL <http://panasonic.net/csr/>



Available in: Japan, North America, Europe, China

WJ-ND400

EP-1-067

Home electric appliances/lighting

HDD & DVD recorders

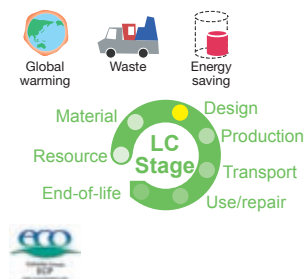
Displaying DVDs in near High Definition picture quality and recording longer time with High Definition resolution

Environmental performance

- Mitigation of climate change: Low power consumption (3.4W) in standby mode for quick start-up.
- Efficient use of resources: 37% reduction in weight and 34% reduction in volume with a slim design for resource saving (comparison with model of 2001). Enhanced recycleability because materials of plastic parts weighting 25g or more are marked.

Product performance

- XDE (eXtended Detail Enhancement) for displaying DVDs in near High Definition picture quality.
- MPEG4 AVC for recording longer time with High Definition resolution.
- DVDBB for downloading favorite video contents from the Internet.



TOSHIBA CORPORATION Digital Media 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>



Available in: Japan

Hi-Vision Recorder <VARDIA> RD-S303

EP-1-068

Home electric appliances/lighting

home IT systems

Visualization of Electricity Consumption and Charges at Home to Contribute to the Reduction of CO₂ Emissions

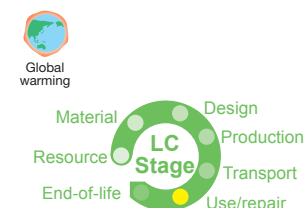
Environmental performance

- 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>



Available in: Japan

Feminiy with an IT unit for electricity measurement (timing of introduction: to be announced)

EP-1-069

Home electric appliances/lighting
memory cards

SDHC memory card

Environmental performance

This SDHC memory card uses reduced structural materials compared with other recording media at recording capacity.

This card also reduced packing materials and was designed a concern for the environment.

* Reduction of 75% packing material was achieved in comparison with our 2000 model (RP-SDO64-A).

Product performance

This card is used for a recording media of high definition movie. It is linked with BD recorder and SD card movie.

This card has a high speed class 4 adaptation.

This card can be used to record to events for fast playback.

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/pavc/>

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

Available in: Global



eco ideas



SDHC memory card: PR-SDM06GL1K

EP-1-070

Home electric appliances/lighting
hard disk drives

Halogen-free 2.5-inch HDD with 500 GB Capacity

Environmental performance

- Mitigation of climate change: Improvement of the energy consumption efficiency to 1/80 compared with the benchmark model.
- Efficient use of resources: Weight is less than 1/5 that of a 3.5-inch HDD with the same capacity.
- Management of chemicals: Halogen-free HDD eliminating the use of chlorine and bromine.

Product performance

- Large capacity: Storage capacity of 500 GB thanks to improvement of the magnetic head and disk. Plenty of capacity for the storage of video and photos on a notebook PC.
- Low noise: Reduction of acoustic noise during data seek by 2dB compared with the previous model (MK3252GSX).

TOSHIBA CORPORATION Digital Media 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>



2.5-inch Hard Disk Drive MK5055GSX

EP-1-071

Home electric appliances/lighting

pipe fan

FY-08PFE8D pipe fan with electric shutter

Environmental performance

- Significant reduction of power consumption with the development of a circuit that reduces the holding current supplied to the shutter-driven solenoid and the introduction of the circuit with no change in equipment size.
- Pipe fan with electric shutter.
- Use of PVC substitutes for lead wire coating, etc.
- Power consumption reduced by 45% compared with the previous model (FY-PFD7D).

Product performance

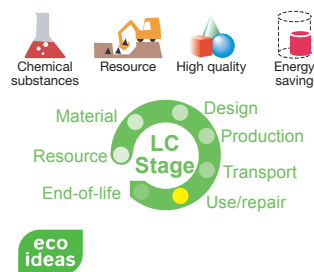
This product is a component of a pipe-fan ventilation system designed for 24-hour use in houses. The system creates airflow by discharging air from sanitary zones, for example, enabling domestic ventilation in accordance with the Building Standards Law.

In addition to the basic function of discharging indoor air, the product is equipped with an electric shutter to prevent the entry of rainwater or wind during storms.

Panasonic Ecology Systems Co., Ltd

4017 Shimo-nakata, Takaki-cho, Kasugai, Aichi, 486-8522, Japan
Tel +81-568-83-5163 Fax +81-568-84-5654
URL <http://panasonic.co.jp/pes/>
URL <http://panasonic.net/csr/>

Available in: Japan



FY-08PFE8D

EP-1-072

Home electric appliances/lighting

water pumps

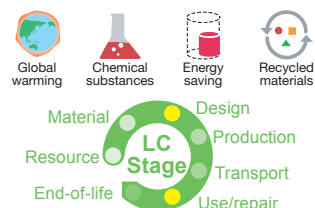
Inverter Water Pump

Environmental performance

40% energy saved by PAM inverter power control. (Compared with non-inverter pump)

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
URL <http://www.hitachi-ap.co.jp/>

Available in: Thailand

WM-P400GP

EP-1-073

Home electric appliances/lighting

alkaline ion water purifiers

Alkaline ion water purifier with low standby power consumption

Environmental performance

- Reduction of standby power consumption by 85% compared with the conventional model* (1.4 W to 0.2 W)

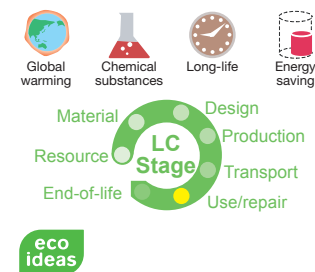
*Comparison with the PJ-A57

- Water-saving design reduces drainage by 70%* and saves 1.7 t of water annually.

*Comparison with the TK7505 (when using 12,000 L)

Product performance

1. Seven types of water are available from strong alkaline to acid — simply choose the desired type.
2. The high-efficiency purifier cartridge removes 13 substances regulated by JIS S 3201.



Alkaline Ion Water Purifier: TK7508

Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan

Tel +81-6-6908-1131

URL <http://panasonic-electric-works.net/>

URL <http://panasonic.jp/alkaline/>

URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

EP-1-074

Home electric appliances/lighting

hot-water supply systems

"Eco Cute" Water Heater Using Natural Refrigerant for Large-Capacity institutions

Environmental performance

-----<< M : Material >>-----

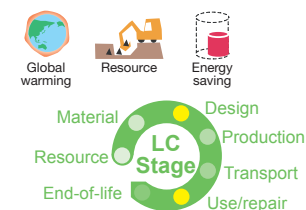
Drastically made compact from our current model (CHA-P500CQ-H), reducing approximately 55% of the installation area per unit.

-----<< E : Energy >>-----

Newly developed inverter type CO₂ refrigerant scroll compressor enables it to achieve COP 4.1, which marks industry highest at the point of May 2007, up approximately 70% from our previous model and it reduces approximately 40% of CO₂ emissions amount compared to burning type water heater (the load is estimated when it is used in a middle-sized institution for the welfare of the elderly). CO₂ natural refrigerant has zero ozone layer depleting coefficient.

Product performance

Jointly developed with Tokyo Electric Power Company, Inc. and the Kansai Electric Power Company, Inc.



ECO QAHV-N560A

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-1-075

Home electric appliances/lighting

quartz infrared heaters

Quartz infrared heater

Environmental performance

- * Heaters have a full-function electronic thermostat. This new thermostat replaces the standard mechanical thermostat used in other brands. It provides sensitive control of room temperatures to around 1-degree F.
- * The patented quartz infrared heating element never gets to a temperature to ignite anything.
- * The exterior of heaters only gets warm to the touch so that it will not burn children or pets.

Product performance

1000-watt Quartz Infrared Heater (Plastic Veneer)

Feature:

- (1) Heater will not reduce humidity or oxygen (2) Heats up to 400 square feet (3) Washable pre-filter (4) BTU: 3600 (5) Uses accurate digital thermostatic controls display (6) Temperature setting (Thermostat range 37 to 86 degrees F) (7) Quartz infrared emitters /stainless deflection coils (8) Simple operation (9) Pre-setting on/off (10) Efficient heating (11) Energy saving function (12) Low noise (dual DC fan system) (13) Remote control (14) Weight approximately 18.5 lbs (15) Plastic cabinet with caster wheels

WELL ELECTRONICS CO., LTD.

33F NO 293 WEN HUA RD. SEC. 2, PANCHIAO, TAIPEI, 220, TAIWAN

Tel +886-2-22508855 Fax +886-2-22508877

E-mail thomas@well.com.tw

URL <http://www.well.com.tw>

URL http://www.well.com.tw/web/003/products4_1.aspx?pid=P_00000017

Available in: Worldwide



1000-watt Quartz Infrared Heater (Plastic Veneer)

EP-1-076

Home electric appliances/lighting

solar charge controllers

Solar Charge Controller

Environmental performance

Solar Charge Controller for standalone off grid photovoltaic solar electricity.

Reduces need for fossile energy, nuclear energy, distribution networks.

Reduces in-house pollution.

Increases comfort.

Product performance

Outstanding cost/durability and ease of use for industrial and rural distributed power supply



Phocos

5-28-2 Sendagi, Bunkyo-ku, Tokyo, 113-0022, Japan

Tel +81-3-5814-3352

E-mail info@phocos.com

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

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

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

Available in: Worldwide

Phocos Rural Solar Electrification

EP-1-077

Home electric appliances/lighting
energy saving device

PowerSave Energy Saving Device

Environmental performance

- Reduce electricity surges
- Recycle wasted energy
- Prolong appliance operating life span
- Reduce energy consumption for domestic and SME operation

Product performance

- Reduce power surges and recycle wasted energy
- Improve Power Factor efficiency
- Reduce energy consumption
- Effective energy management



PowerSave Energy Saving Device

Energy Partnership

205 Henderson Road #02-01, 159549, Singapore
Tel +65-63777555 Fax +65-64634515
E-mail business@energy-partnership.com
URL www.energy-partnership.com
URL www.energy-partnership.com/powersave.php

EP-1-078

Home electric appliances/lighting
portable power packs

EcooPower modular power system

Environmental performance

EcooPower is a truly integrated modular power system complete with a high performance battery and controller that can be recharged by a wide range of electrical sources including photovoltaic. Designed with high safety and ruggedness to withstand harsh conditions and with a long operating life.

Product performance

This is the power source of many wireless applications including lighting, telecommunications, security, marine, transport, recreational, and emergency relief.



Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0560 Fax +65-6579-0561
E-mail info@grenzone.com
URL www.grenzone.com

Available in: Global

EcooPower Modular Power System

EP-1-079

Home electric appliances/lighting
televisions/refrigerators

DC appliances

Environmental performance

Phocos is one of the largest suppliers of off-grid power supply system components in the world. Headquartered in Ulm, Germany, Phocos develops, designs, and manufactures products to suit the needs of all stake-holders in the global solar power market.

Phocos is strongly committed to developing and producing products that meet the company's strict specifications in terms of quality, innovation, and technology in all our products.

Product performance

Phocos' TV07 is a 7" TFT-LCD color TV receiver/monitor. Because of very low power consumption, it can be used directly with a 12V automobile battery or standard 220V electricity (by use of AC adapter).

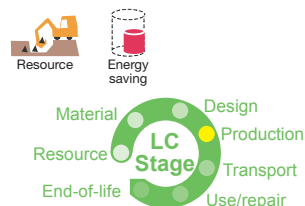
Another Phocos product is the DC Fridge/Freezer. These ultra high efficiency refrigerators and freezers have exceptionally low energy consumption requiring smaller, less expensive power systems and low operating expense.

Phocos SEA Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0598 Fax +65-6579-0599
E-mail info-sea@phocos.com
URL www.phocos.com

Available in: Global

Phocos DC Appliances



EP-1-080

Home electric appliances/lighting
fluorescent lamps

Long life fluorescent lamp "Lupica Power Platinum"

Environmental performance

Long life time

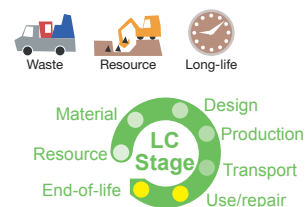
- Circular types and straight 20 W type is 13000 hours, straight 40W type is 15000 hours. Circular type lifetime is 2.2 times, Straight type 1.25 to 1.5 times longer than conventional products.

Product performance

Lupica Power Platinum is a long life circular and straight fluorescent lamp. The lifetime: Circular types and straight 20W type is 13000 hours, straight 40W type is 15000 hours. Circular type lifetime is 2.2 times, straight type 1.25 to 1.5 times longer than conventional products. They enable users to reduce maintenance cost and lead to the efficient use of resources. In addition, the lumen maintenance factor has been improved to about 80% and they keep their original brightness until the end of their lifetime. Original lighting colors are available for you to create whatever atmosphere you like at home.

MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No.3 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama,
220-0004, Japan
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URL <http://www.mol-oml.co.jp>



Lupica Power Platinum Circular type

EP-1-081

Home electric appliances/lighting

fluorescent lamps

Fluorescent lamp (OHILITE 40 W cool white, 3 band, shatterproof, designated procurement item under the Green Purchasing Law)

Environmental performance

Recycling/waste disposal

This product is free from environmental problems caused by tin, since the inside of the lamp is not tinned. Full recovery of mercury and recycling of glass from used products are also possible. Resource saving was also achieved by extending the service life of the product.

Product performance

This is a 40-W fluorescent lamp with a rapid start function. Its rated life is 24,000 hours, which is twice as long as that of conventional products (it can still be lit after the rated life is reached although the light level decreases to 70%).

Cool light: 3,200 lm 80 lm/W 3 band: 3,600 lm 90 lm/W



FLUORESCENT LAMP "OHILITE"

Ohdensha Inc. TOKYO BRANCH

3-8-9 IWAMOTOCHO CHIYODAKU TOKYO, 101-0032, Japan

Tel +81-3-5835-5371 Fax +81-3-5835-5372

E-mail ohdentok@silc.ocn.ne.jp

URL <http://www.ohdensha.jp>

Available in: Worldwide

EP-1-082

Home electric appliances/lighting

fluorescent lamps

Pa-Look Premier L :FCL30ECW/28HL

Environmental performance

- Extended Long life 13,000 hours (Approx. 2.2 times longer than conventional type)
- * Compared with conventional Pa-Look rated life 6000 hours.
- Made with lead-free glass.

Product performance

- Keep enough brightness till end of lamp life to be friendly for human eyes. Keeps 80% of rated brightness after 13,000 hours rated life.
- The first lamp featuring unique transparent plastic base "Hikaring" contributes to remove unpleasant shadow of base and provide more brightness in industry. (Circular type only) * As of Nov. 21 '08.



eco ideas



Pa-Look Premier L: FCL30ECW/28HL

Panasonic Corporation, Lighting Company

1-1 Saiwai-cho Takatsuki Osaka, 569-1193, Japan

Tel +81-72-682-7924 Fax +81-72-682-7924

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

Available in: Japan

EP-1-083

Home electric appliances/lighting
fluorescent lamps

Screw-in fluorescent lamp "spiraLUPICA mini"

Environmental performance

1. Energy saving

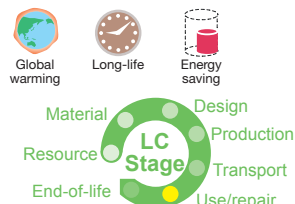
- Consumption power is from one quarter to one fifth compared to an incandescent lamp (40 W, 60 W).

2. Long life time

- The lifetime of "spiraLUPICA mini" is 6 times longer than that of an incandescent lamp.

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 from one quarter to 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 6 times longer than that of an incandescent lamp. The maintenance cost has been decreased, leading to an efficient use of resources. 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 new product is also suitable for places where you frequently repeat switching on and off.



spiraLUPICA mini

MITSUBISHI ELECTRIC OSRAM Ltd.

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220-0004, Japan
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URL <http://www.mol-oml.co.jp>

EP-1-084

Home electric appliances/lighting
fluorescent lamps

Pa-Look Ball Premier Q (Quick): EFA15EL/10HS

Environmental performance

- Energy saving and only 10W* lamp wattage contribute to reduced approx. 80% of CO₂ emission and electricity cost.*
- * Comparison of A shape 15W type or D shape 15W type and Standard Incandescent Lamp (Lamp wattage 54W) Except when quick lamp is operated. (When operating quick lamp, lamp wattage is approx. 30W, operating time is maximum 1 minute)
- Made with lead-free glass

Product performance

- Rapidly reaches enough brightness
(The fastest starting characteristics in industry *) * Reaches to 60% of full brightness within 1 second.
(At 25C room temperature)
- The Longest Lamp life up to 13,000 hours in Industry.

*As of Nov. 21 '08 in terms of self-ballasted fluorescent lamp for Japanese market
(Except electrode-less type)



eco ideas



Pa-Look Ball Premier Q (Quick): EFA15EL/10HS

Panasonic Corporation, Lighting Company

1-1 Saiwai-cho Takatsuki Osaka, 569-1193, Japan
Tel +81-72-682-7924 Fax +81-72-682-7924
URL <http://panasonic.net/csr/>

Available in: Japan

EP-1-085

Home electric appliances/lighting
fluorescent lamps

Self-ballasted Fluorescent Lamp Offering Energy-saving Performance and Long Life

Environmental performance

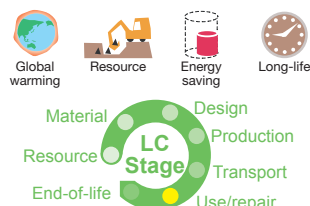
- Mitigation of climate change: 15% reduction in power consumption reduction compared with the previous year's model.
- Efficient use of resources: Rated life has been doubled to 12,000 hours, which means a reduction in waste lamps. Weight has also reduced.
- Management of chemicals: Lead-free glass 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.

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan
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URL http://www.tlt.co.jp/tlt/index_e.htm
URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Compact Self-ballasted Fluorescent Lamp "NeoBall Z Real PRIDE" EPA15EL10-PD and two other models

EP-1-086

Home electric appliances/lighting
fluorescent lamps

Separated self-ballasted type fluorescent lamp "Bunrikun"

Environmental performance

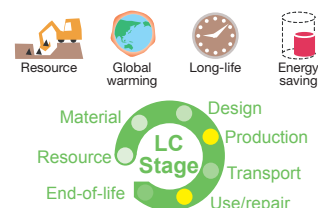
Bunrikun consumes almost as much energy as 60W type ordinary disposable type CFL. However taking into account "Bunrikun"'s life-time 30,000 hours, it enables to reduce 70% of waste generation compared to ordinary type CFL's. An ordinary CFL lamp contains 3g copper in its ballast and base. If we gather copper from these CFL in today's Japanese market, the volume will reach 115 tons of copper. We foresee if these ordinary CFL were replaced by "Bunrikun", we will be able to reduce 165 tons of CO₂ emission in the process of the virgin material production. Approximately 1,600 pcs of cedar trees are needed to absorb this amount of CO₂.

Product performance

It enables to reduce almost 80% of energy than an ordinary lamp under the same condition. (Ordinary lamp: 54W, "Bunrikun":12W). It enables to reduce 70% of waste generation compared to ordinary type CFL's under the same condition.

Hitachi Lighting, Ltd.

2-5-2 Kandasudachou, Chiyodaku, Tokyo, 101-0041, Japan



Available in: Japan

EP-1-087

Home electric appliances/lighting

mercury alternative lamps

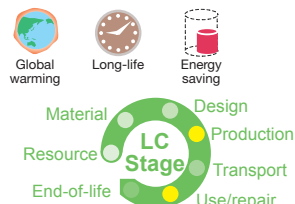
Luminaire for High-frequency Operated Lamp(s) "Hf86 HIGH POWER SERIES"

Environmental performance

A product in this series (e.g. HPK11208VH-EU24 having two lights with a shade) provides the same brightness as a 400W mercury light, which enables it to replace the mercury lights that are frequently used in factories and warehouses. This replacement reduces energy consumption and CO₂ emission by 54%. "Hf86 High-power UV" has a great potential for energy conservation in this business sector since lots of mercury lamps are still used. In addition, this product contributes to resource conservation and waste reduction due to its long life feature.

Product performance

Hf86 high-power is a fluorescent lamp fixture that increases brightness 20% compared to conventional Hf86 by combining an illuminator equipped with a special inverter and newly developed high power lamp "High-power UV". Moreover, the lamp has achieved a long life 15,000 hours that is 1.3 times longer than conventional models.



Hitachi Lighting, Ltd.

2-5-2 Kandasudachou, Chiyodaku, Tokyo, 101-0041, Japan

Available in: Japan

HPK11208VH-EU24



EP-1-088

Home electric appliances/lighting

LED arrays

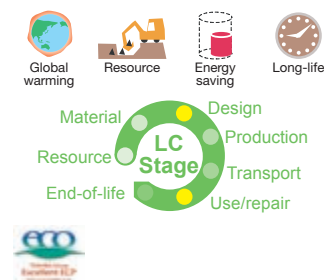
LED Bulbs that Can Replace Incandescent Lamps Directly

Environmental performance

- Mitigation of climate change: Power consumption and CO₂ emissions slashed to 1/11* of those of an incandescent lamp
- Management of chemicals: Mercury-free LED light source
- * Comparison with incandescent lamps (60 W)

Product performance

- 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.
- Long life and maintenance saving: Long life of 20,000 hours (13 times longer than an incandescent lamp) greatly reduces the need for replacement.
- Quick light-up: It turns on quickly like an incandescent lamp and withstands frequent turning on and off.



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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 URL http://www.tlt.co.jp/tlt/index_e.htm
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



High-output LED Bulb "E-CORE Series" *Midjet Reflection Lamp TypeLEL-SL5N-F12 and 3 more models *Beam Reflection Lamp TypeLEL-BR5N-F and 1 more model

EP-1-089

Home electric appliances/lighting

LED arrays

EcooLED™ LED lamp**Environmental performance**

EcooLED™ is the new extension of our DC lighting series. EcooLED™ is specially designed to provide basic lighting needs in rural areas at an affordable price.

EcooLED™ provides efficient and low power consumption LED that goes below 1 watt. It has low heat loss, and a robust, sturdy body with non-glass cover that will not be easily broken during handling and transportation. The bulb does not produce strong glare that is harmful to users' eyes. EcooLED™ has wide illumination angle compared to existing LED lamps in the market.

EcooLED™ is designed to last and easily achieves more than 30,000 operating hours. The EcooLED™ carries a 2-year warranty.

Grenzzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0560 Fax +65-6579-0561
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URL www.grenzzone.com

Available in: Global



EcooLED LED Lamp

EP-1-090

Home electric appliances/lighting

LED arrays

LED Lighting "LINESABER"**Environmental performance**

Power consumption and CO₂ emission have reduced by almost half compared to conventional 10W florescent lamps. The lifetime is 40,000 hours, which is 7 times longer than conventional fluorescent lamps.

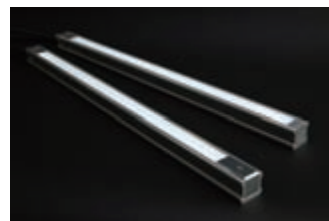
Product performance

Stylish body enables unrestricted spatial design and stylish atmosphere. The section size of the luminary (7W type) is about 17mm x 17mm and weight is only 150g. The lifetime is 40,000 hours, which is 7 times longer than conventional fluorescent lamps, which is suitable for installing at locations difficult to maintain.

Hitachi Lighting, Ltd.

2-5-2 Kandasudachou, Chiyodaku, Tokyo, 101-0041, Japan

Available in: Japan



EP-1-091

Home electric appliances/lighting

LED arrays

LED Lighting, the Next Generation Lighting — Environmental Friendly, Energy Saving and Long Life

Environmental performance

- 40,000h product life time
- Energy saving: Reduces 80% of power consumption, compared to incandescent lamp and 25% compared to fluorescent lamp.
- Free from mercury, and achieves significant waste reduction

Product performance

- 73.8lm/W, the industry No.1 efficiency among LED lighting



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/csr_report/2008pdf/sharp_eall.pdf

Available in: Japan

LED lighting

EP-1-092

Home electric appliances/lighting

LED arrays

Epoch-making LED Downlight with the Industry's Top Efficiency

Environmental performance

- Mitigation of climate change: Power consumption and CO₂ emissions slashed to 1/6.
- Management of chemicals: Mercury-free LED light source

Product performance

- Increased illuminance: Illuminance equivalent to a 100 W incandescent lamp. The industry's highest luminous efficacy (65 lm/W).
- Long life and maintenance saving: Long life of 40,000 hours greatly reduces the need for replacement.
- Dimming function: 0-100% continuous dimming function to suit user preference.



TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan

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URL http://www.tlt.co.jp/tlt/index_e.htm

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

High-efficiency LED Downlight "E-CORE Series" 100W Type LEDD-70001W-LS8
and 11 more models* Models for dimming launched in October 2008

EP-1-093

Home electric appliances/lighting

LED arrays

Erosi Wood tin LED lighting

Environmental performance

Recycling of salvaged wood and driftwood into lighting products with LED illumination

Product performance

Long lasting lamp up to 10,000 hours



0.5kg-CO₂

not Inspection

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



PT. EPOS MODERN INDONESIA

Jl.Raya Ngabul KM.8 Tahunan, Jepara, Central Java, 59428, Indonesia
Tel +62-291-596454 Fax +62-291-593104
E-mail eposjepara@yahoo.com
URL <http://www.treecycled.com>

Available in: Export only

EP-1-094

Home electric appliances/lighting

LED arrays

An efficient LED downlight (high efficiency and long life)

Environmental performance

- Reduction of power consumption by approx. 85% compared with a 40 W incandescent lamp
- Longer life by about 26 times
- Outstanding environmental performance with general efficiency enhanced approx. 6 times

Product performance

- Built-in hole size: 75 mm
- Four high-efficiency built-in LED lights
- Built-in power supply unit
- Power consumption: 5.2 W
- Luminous flux: 300 lm (high-efficiency white LED lights • Specular reflector type)



eco
ideas



Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan
Tel +81-6-6908-1131
URL <http://panasonic-electric-works.net/>
URL <http://denko.panasonic.biz/Ebox/everleds/>
URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan

Eco-materials

Eco-components

Eco-products // Home electric appliances/lighting

Eco-services

EP-1-095

Home electric appliances/lighting

LED arrays

LED Spot Light

Environmental performance

1. Its spot effect is equivalent to that of low-volt halogen lamp 35W/50W and its CO₂ reduction rate is 68-78%.
2. Its life time is from 10 times to 13 times longer than that of a low-volt halogen lamp. Approximately 40000 hours of the life time through rearranging its heat radiation structure enables maintenance-free use at retail stores where the spot is used for a long time.
3. UV and IR radiation, which causes color fading or damage, do not exist. The spot light does not harm objects because the light does not contain harmful components and heat.
4. Thin and soft innovative form utilizing LED feature.

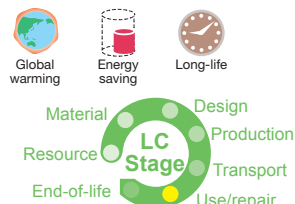
Product performance

This spotlight is the lighting fixture with 4 LEDs (11W) realizing energy saving and long life and having brightness equivalent to low-volt halogen lamp 35W/50W.

Mitsubishi Electric Lighting Corporation

2-14-40, Ofuna, Kamakura-shi, Kanagawa, 247-0056, Japan
 Tel +81-467-41-2724 Fax +81-467-41-2788
 E-mail eqd.eco@pj.MitsubishiElectric.co.jp
 URL <http://www.mitsubishielectric.co.jp/group/mlf/>
 URL <http://global.mitsubishielectric.com/company/csr/index.html>

Available in: Japan



LED spot light

EP-1-096

Home electric appliances/lighting

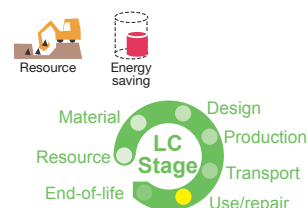
amalgam lamps

gpLiCHT 55W Amalgam Lamp

Environmental performance

gpLiCHT amalgam lamps use a low mercury content alloy. The lamp remains more stable over a wide temperature range, has higher lumen output (80lm/W) and smaller size. This lamp also achieves superior colour rendering (CRI >80) and wide range of color temperature.

This lamp can be used widely for energy saving for indoor and outdoor use. It is particularly suitable for enclosed outdoor luminaries like 3-4 M post top luminaries, 6 M streetlight, wall security light, floodlight and pendant light.



Golden Pace Enterprise

Block 2 Defu Lane 10 #03-519, 539183, Singapore
 Tel +65-6289-2787 Fax +65-6289-6529
 E-mail gpent@singnet.com.sg

Available in: Asia

Model No: gp-SFL-55W/HPF amalgam 840HT (Design Patented)

EP-1-097

Home electric appliances/lighting

ceramic metal halide lamps

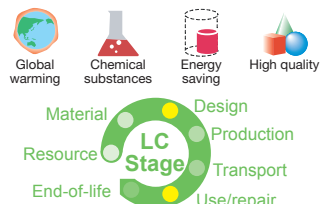
Ceramic Metal Halide Lamp, Giving an Energy-saving High-grade Illumination Space

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

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 URL http://www.tlt.co.jp/tlt/index_e.htm
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

EP-1-098

Home electric appliances/lighting

halogen lamps

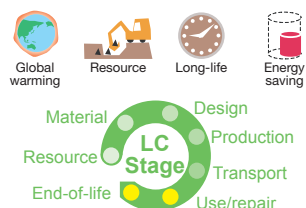
Halogen Lamp "Halogen Energy Saver"

Environmental performance

1. Energy saving
 - 25% energy saving compared with an incandescent lamp (Our white bulb lamp 60 W)
2. Long life time
 - 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.



Halogen Energy Saver

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>

EP-1-099

Home electric appliances/lighting

lamps

EcooLite™ long-life lamp

Environmental performance

A patented, superb high-quality lamp that is designed to fill the gap of low power consumption bulbs below 4 watts and yet deliver highly soothing diffused illumination.

EcooLite™ is a long-life lamp that has low heat loss resulting in energy saving and is safe to touch during operation, unlike conventional CFL and incandescent bulbs. Its external non-glass cover provides a greater safety factor during use and handling. As a result, a greater operating lifespan is achieved at more than 10,000 hours.



EcooLite™ Long-life Lamp

Grenzzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0560 Fax +65-6579-0561
E-mail info@grenzzone.com
URL www.grenzzone.com

Available in: Global

EP-1-100

Home electric appliances/lighting

lamps

Linelight

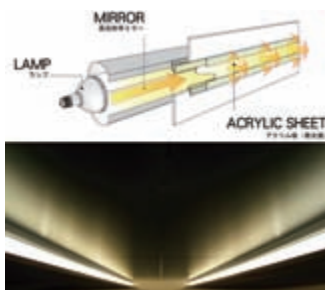
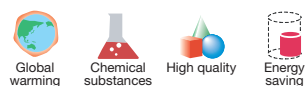
Environmental performance

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.co.jp/>

EP-1-101

Home electric appliances/lighting

fluorescent lighting

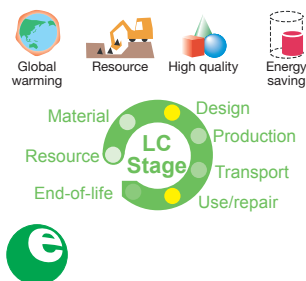
Dimming Functions to Fine-tune the Lighting According to User Preference plus Greater Energy Saving

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

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 Tel +81-46-862-2153 Fax +81-46-860-1202
 URL http://www.tlt.co.jp/tlt/index_e.htm
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Fluorescent Ceiling Light "NeoSlim V Diglix" FVH16700TRUEJEN and 1 more model

EP-1-102

Home electric appliances/lighting

fluorescent lighting

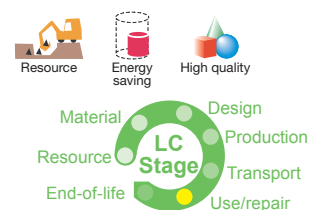
PowerTube — T5 Series Fluorescent Lighting System

Environmental performance

- Reduces energy consumption
- Eliminates wastage of material and component by removing the use of conventional ballast and starter
- Eliminates extensive use of mercury in conventional fluorescent light tubes

Product performance

- Save energy consumption of up to 50%
- Longer life span of 15,000 operational hours
- Reduce maintenance and labor cost for replacement
- Product with enhanced Power Factor of above 0.95
- Higher lumen output
- Easy retrofit solution without removing or replacing the existing light fittings
- Low investment cost with pay-back period of less than a year



Energy Partnership

205 Henderson Road #02-01, 159549, Singapore
 Tel +65-63777555 Fax +65-64364515
 E-mail business@energy-partnership.com
 URL www.energy-partnership.com
 URL www.energy-partnership.com/powertube.php



Available in: Applicable to all industrial and commercial areas where conventional fluorescent lightings are used

PowerTube - T5 Series Fluorescent Lighting

EP-1-103

Home electric appliances/lighting

fluorescent lighting

Easily introduced high frequency inverter-type lighting equipment for institutions

Environmental performance

---<< E : Energy >>---

As for the high frequency inverter-type lighting equipment, the illumination that 1.2 times as bright is provided with about 80% electricity in comparison with the conventional magnetism-type appliance.

"Easyeco" — more eco — series is high frequency inverter-type lighting equipment that enables regulating brightness to three phases by simple operation of the wall switch.

The three phases are 100%: Bright mode, 85%: eco mode, and 70%: more eco mode.

You do not need light control machinery nor wiring work for the signal line when introducing light control.

The brightness under the "eco mode", which is about 30% energy saving, is equal to that of the conventional rapid-magnetism-type appliance.

Mitsubishi Electric Corporation

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

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

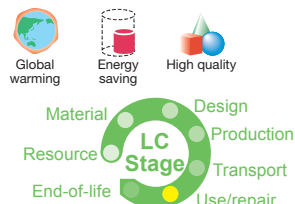
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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



三菱電機用照明器具
Easyeco
HVS32EF VPTN

FHF32W for two lighting : KV4382EF VPTN

EP-1-104

Home electric appliances/lighting

fluorescent lighting

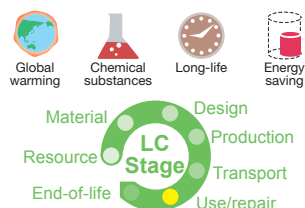
SPILE series compact and high powered down light (high efficiency and long life)

Environmental performance

This down light saves energy by 75%, lasts 7 times longer compared to the conventional model. Lowers environmental impact by developing a compact, high efficient and long life lamp together with a high efficient inverter and applying silver-deposited reflector with 98% reflectance.

Product performance

This down light can supply the same brightness of 100W type incandescent lamp (size: ϕ 125mm) by using 20W type florescent lamp (size: ϕ 100mm). It also is 36% more compact compared to the conventional model.



eco ideas



Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan

Tel +81-6-6908-1131

URL <http://panasonic-electric-works.net/>

URL <http://denko.panasonic.biz/Ebox/nashop/spile/>

URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan

NFM21700NEM Free wattage (11, 15, 20W) 100 to 242V

EP-1-105

Home electric appliances/lighting

LED solar power lighting

Eco-friendly Earthquake-resistant Lighting System of the 21st Century

Environmental performance

The solar LED lighting system directly converts solar energy to electric energy, which is stored in the batteries mounted in the system. When it gets darker outside and solar battery voltage output gets lower, electric energy stored during the daytime turns the LED lights on. It is a self-generation system without any utility power supply required.

- Solar power generation reduces CO₂ emissions by about 48 kg per year
- The LED light sources lasts about 40,000 hours and is free from mercury, resulting in significant waste reduction

Product performance

- The system achieves the industry's brightest flux for solar LED lights at 1,800lm. (Classified as Class A for the safety illuminance recommendation when set up in 13m intervals along a 5m-wide street)
- Equipped with a seismoscope, the system provides light for two night at full mode when it detects seismic intensity of level 5(130-200gal) or stronger

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/csr_report/2008pdf/sharp_eall.pdf

Available in: Japan



Solar-LED streetlight LN-LW3A1

EP-1-106

Home electric appliances/lighting

security lighting

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 40,000 hours means no need for replacement for 10 years.
- 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 +81-46-860-1202

URL http://www.tlt.co.jp/tlt/index_e.htm

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



High-efficiency LED Crime Prevention Light "E-CORE Series" LEDX-70941-LS8 and 3 more models

EP-1-107

Home electric appliances/lighting
induction lighting

PowerTube — High Bay Induction Lighting

Environmental performance

- Energy saving and efficient
- Reduces A/C load due to lower operating temperature
- Eliminates wastage of electrical components, does away with conventional ballast and starter

Product performance

- Reduces energy saving of up to 60% as compared to conventional High Bay lighting
- Long life span of 100,000 hrs
- Instant start-up
- Operates in very low temperature, reduces A/C load
- Reduces maintenance and labor cost for replacement
- Very low lumen output losses over long period
- Use of E40 fittings, able to recycle existing light fixture
- Very short pay-back period for investment
- High Power Factor of 0.99



PowerTube - High Bay Induction Lighting

Energy Partnership

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E-mail business@energy-partnership.com
URL www.energy-partnership.com
URL www.energy-partnership.com/highbay.php

EP-1-108

Home electric appliances/lighting
solar power lighting

EsoLit solar lighting system

Environmental performance

EsoLit is fully autonomous as it will automatically turn on/off the lamp according to the daylight condition. The default setting is dusk-to-dawn operation. Other operational modes such as dusk on, midnight off can be programmed as well.

Product performance

EsoLit Lighting System is the ideal solution for streetlights for parks, junctions, factories, housing estates and other common areas that require reasonable illumination. It operates at a low voltage level which is safe for public use.



EsoLit Street Light

Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0560 Fax +65-6579-0561
E-mail info@grenzone.com
URL www.grenzone.com

Available in: Global

EP-1-109

Home electric appliances/lighting
solar power lighting

Nebulae garden light

Environmental performance

Light up your garden, pathway, patio, park, or common areas with our truly solar garden light that lasts and lasts. The Nebulae lights, Grenzone's newest line of garden lights, are carefully designed and crafted with artistic workmanship for your garden, your security, and your wish to do your part for the environment.

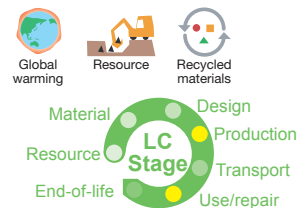
Product performance

We understood the importance of energy efficiency, reliability, and durability in a solar product. Nebulae Garden Light is specially designed to meet these criteria. Apart from the superbly designed smart electronics function, we by no means forgot about being environmental friendly. We take great care to do away with environmentally unfriendly materials. Examples include using NiMH batteries instead lead acid; recycled composite materials for the Nebulae body that are durable and cost effective; and a high-quality solar panel that will last for many years to come.

Grenzone Pte Ltd.

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E-mail info@grenzone.com
URL www.grenzone.com

Available in: Global



Nebulae Garden Light

EP-1-110

Home electric appliances/lighting
fluorescent lamp stabilizers

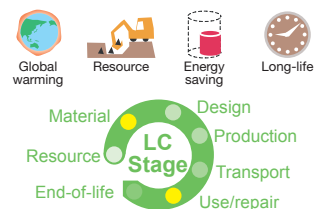
FLUORESCENT LAMP STABILIZER "SAVEe" Iron-core, power-saving stabilizer for correcting high/low harmonics disturbances

Environmental performance

This product contributes effectively to greenhouse gas reduction by achieving a 30% higher power-saving rate compared with conventional products. It also contributes to energy-saving and reductions in the use of oil and other power generation resources.

Product performance

High power-saving rate: This product can reduce harmonics disturbance by 30% (verified by a public institution). It has many advantages, including low short-circuit and fire risk, and can be used in high temperature (35°C [conventional] → 70°C) and humidity.



Ohdensha Inc. Tokyo Branch

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Tel +81-3-5835-5371 Fax +81-3-5835-5372
E-mail ohdentok@silk.ocn.ne.jp
URL <http://www.ohdensha.jp>



Available in: Worldwide

View of SAVEe

EP-1-111

Home electric appliances/lighting

starters

Longer Lamp Life & Eco Lighting: Digital Starter Pro

Environmental performance

Have you got the problem of frequent fluorescent lamp/starter replacement in your buildings?

Longer lamp life directly leads to protecting the environment by minimizing the amount of toxic mercury contained inside fluorescent lamp waste. Moreover, Digital Starter Pro facilitates the diligent turn on/off of lamps to achieve greater energy saving.

Product performance

Digital Starter Pro has a built-in microcomputer chip for minimization of emitter diffusion in starting the fluorescent lamp. It provides maintenance-free benefits by extending lamp service life up to 30 times longer than a glow starter.

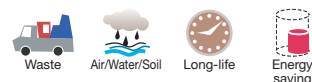
Features

1. Advanced digital ASIC assures the best optimized lamp start sequence for longer lamp life
2. Longer starter life
3. Multiple pulse lighting system for reliable lighting performance
4. Quick lamp start
5. Automatic re-start function
6. Safety protection system

DCT Co.,Ltd

3-15-6, Higashi Shibuya-ku, Tokyo, 150-0011, Japan
Tel +81-3-5468-7131 Fax +81-3-5468-7399
E-mail info@dct-web.co.jp
URL www.dct-web.co.jp

Available in: Japan, China, USA, and Europe



エコ商品
おと掲載



Digital Starter Pro series: FDS-1E, 1P and 4P/5P

EP-1-112

Home electric appliances/lighting

natural light systems

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. The superior technology was used in the Zero Emission House at the G8 Hokkaido Toyako Summit this year. The system has the following features:

1. a simple structure allowing the economical utilization of abundant light;
2. high energy efficiency due to its direct use of natural light without conversion into electricity;
3. collection and diffusion of light without the consumption of kinetic energy due to the absence of driving parts such as sun-tracking devices;
4. low maintenance due to a simple, sealed structure that protects it from failure and deterioration. The system can be used in offices (which are used intensively during daytime hours), houses, station buildings, underground spaces and dark areas near tunnel entrances.

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.co.jp/>



EP-1-113

Home electric appliances/lighting

digital cameras

Digital Single Lens Reflex Camera "α (alpha)"

Environmental performance

SONY DSLR cameras α (alpha) 900/300/350 come with body caps made of vegetable-based plastics composed of polyamide11 derived from castor oil. Castor oil is extracted from a non-edible plant called ricinus. In addition, the camera bodies of α200 (February 2008) and α900 (September 2008) were certified with the EcoLeaf environmental labels, and the detailed LCA data have been disclosed in public.

Product performance

- α900: Sony's top-of-the-line 35mm full frame size digital SLR, 24.6-megapixel resolution and body-integrated full-size "SteadyShot Inside" technology
- α350: A digital SLR model with Quick AF Live View. Incorporating class-leading 14.2-megapixel high resolution with Super SteadyShot INSIDE.
- α300: A digital SLR model with Quick AF Live View. Incorporating 10.2-megapixel high resolution with Super SteadyShot INSIDE.
- α200: A digital SLR offering 10.2-megapixel superb picture quality, highest sensitivity of ISO3200 with Super SteadyShot INSIDE.

Sony Corporation

1-7-1 Konan, Minato-ku, Tokyo, 108-0075, Japan

URL <http://www.sony.net/eco/>

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

URL <http://www.sony.net/SonyInfo/Environment/csr/>



20kg-CO₂

Inspection
Ecoleaf

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



Digital Single Lens Reflex Camera DSLR-A900

EP-1-114

Home electric appliances/lighting

digital cameras

Digital Camera: LUMIX DMC-FX150

Environmental performance

- Achieved power consumption of 1.6W (reduced by 11% compared with our current model DMC-FX55) due to low power circuit technology.
- Power saving performance realizing about 330 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

- NEW! 14.7-Megapixel Image Sensor
- Stylish Compact Digital Camera
- With 28mm Wide-Angle LEICA DC VARIO ELMARIT Lens

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/>



Digital Camera: LUMIX DMC-FX150

Available in: Japan

EP-1-115

Home electric appliances/lighting
digital cameras

Digital Interchangeable Lens Camera: LUMIX DMC-G1K

Environmental performance

- Achieved Main Product weight (w/o battery) of 385g (reduced by 19% compared with our predecessor model DMC-L10).
 - Power saving performance realizing about 330 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.)

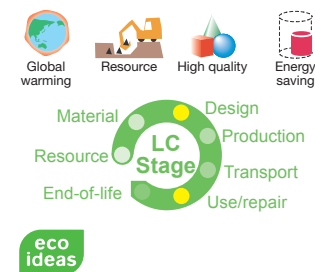
Product performance

- Micro Four Thirds Camera System
- 12-megapixel Live MOS sensor
- Dust reduction system
- Free angle Intelligent 3.0-inch LCD monitor

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

Available in: Japan



Digital Interchangeable Lens Camera: LUMIX DMC-G1K

EP-1-116

Home electric appliances/lighting
digital cameras

EOS Kiss X2

Environmental performance

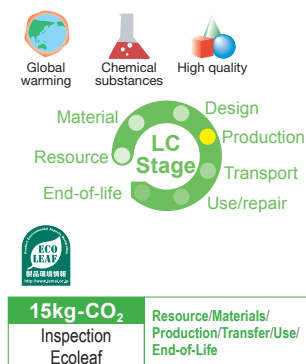
- (1) Compliance with the RoHS Directive: restriction and prohibition of the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).
- (2) Lead-free glass is utilized to produce environmentally sound lenses.

Product performance

- (1) High quality and high definition images. Approximately 12.2 megapixel CMOS (complementary metal oxide semiconductor) Sensor.
- (2) The latest-generation DIGIC III Image Processor provides a combination of speed and image quality.
- (3) Lens kit with optical image stabilizer minimizes the effect of camera shake and helps comfortable shooting.
- (4) Easy to view the subject on the large 3.0-inch LCD monitor with Live View Function that enables various shooting.
- (5) You won't miss a shutter chance. Excellent performance with 3.5 fps continuous shooting.

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>



EP-1-117

Home electric appliances/lighting
digital cameras

Nikon Digital SLR Camera D700

Environmental performance

D700 has the following characteristics, considering the environment.

- (1) Volume ratio: 68% of D3
- (2) Weight ratio: 80% of D3
- (3) Reduction of hazardous substances (comply with the EU RoHS directive)
 - Eliminate Hazardous substances (Pb, Cd, Hg, Cr6+, PBB, PBDE)
 - Use of lead-free solder: achieve for all of the electro circuit boards
 - Eco-Glass (lead and arsenic-free optical glass) usage: 100%

Product performance

D700 has been designed to offer a high quality photograph representation, realized at D3, to the more photographers. D700 has equipped, as well as D3, with many functions, namely a large 12.1 megapixel equivalent to film size 36x24mm, shooting regular photographic sensitivity ISO200-6400, AF system of 51 focusing points, shooting scene recognition system, etc., in a more compact and light weight body, and has achieved high performance, reliability, robustness and mobility.

NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan

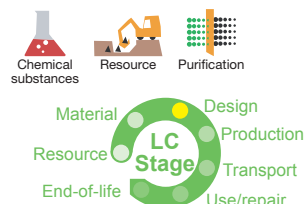
Tel +81-3-3214-5311

URL <http://nikon.com/>

URL <http://imaging.nikon.com/products/imaging/lineup/digitalcamera/slr/d700/index.htm>

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

Available in: Worldwide



Nikon Digital SLR camera D700

EP-1-118

Home electric appliances/lighting
digital cameras

Nikon Digital SLR Camera D90

Environmental performance

D90 has the following characteristics, considering the environment.

- (1) Power consumption efficiency: about 56% improved compared to D80 (4,200 frames can be taken, but 2,700(D80), under the Nikon's same test condition)
- (2) Products life: the durability of shutter release is extended remarkably, compared to D80, to more than 100,000 times
- (3) Reduction of hazardous substances (comply with the EU RoHS directive)
 - Eliminate Hazardous substances (Pb, Cd, Hg, Cr6+, PBB, PBDE)
 - Use of lead-free solder: achieve for all of the electro circuit boards
 - Eco-Glass (lead and arsenic-free) usage: 100%

Product performance

D90 is a high performance digital SLR camera which condenses high quality, sensitivity, functions, etc. comparable to D300, a superlative quality machine at DX format, into body size of intermediate machine (D80). D90 is the first digital SLR camera in the world to install an innovative movie shooting feature.

NIKON CORPORATION

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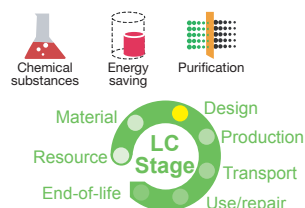
Tel +81-3-3214-5311

URL <http://nikon.com/>

URL <http://imaging.nikon.com/products/imaging/lineup/digitalcamera/slr/d90/index.htm>

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

Available in: Worldwide



Nikon Digital SLR camera D90

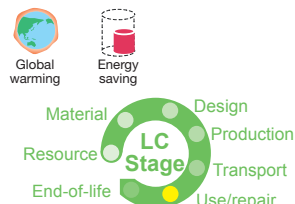
EP-2-001

Carriers/automobiles
automobiles

New eco-friendly Prius with hybrid power

Product performance

The new Prius model is equipped with THS, a new-generation Toyota Hybrid System known as Hybrid Synergy Drive, which means the simultaneous evolution of ecology and power. It achieves world-beating fuel consumption of 35.5 km/L and low 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

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



Prius

EP-2-002

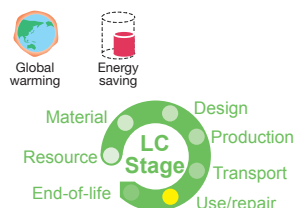
Carriers/automobiles
automobiles

TOYOTA Vitz with Idling Stop System

Product performance

The Toyota Vitz is a CVT* vehicle, featuring the Toyota Intelligent Idling Stop System which applies hybrid technology. We have achieved the lowest domestic fuel consumption value of 22.5 km/L for a light car, excluding hybrids, and improved fuel consumption by 8.5% compared with our current vehicle by using a lithium ion battery that allows automatic idling stop when the vehicle stops.

* CVT: Continuously Variable Transmission



ヴィッツ 1.0iF <エコドライブ> 燃費車 2005.2

Toyota Motor Corporation

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan
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Vitz

EP-2-003

Carriers/automobiles
automobiles

TOYOTA FCHV-adv

Environmental performance

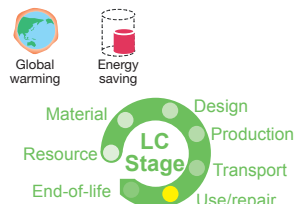
The Toyota FCHV-adv achieved a 25% better fuel economy and 60% higher pump-to-wheel efficiency in the Japanese 10-15 test cycle (Toyota test data) due to improvements made to the Toyota FC Stack and redesigned fuel cell control system.

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

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



TOYOTA FCHV-adv

EP-2-004

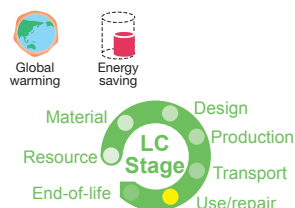
Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA COROLLA Axio"

Product performance

Toyota Corolla Axio has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 18.2 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Electric power steering system



Eco-friendly vehicle "TOYOTA COROLLA Axio"

Toyota Motor Corporation

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E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

EP-2-005

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA COROLLA FIELDER"

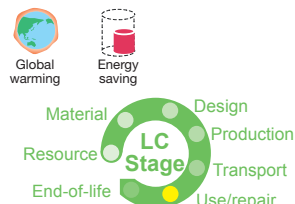
Product performance

Toyota Corolla Fielder 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): 18.0 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Electric power steering system

Toyota Motor Corporation

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



Eco-friendly vehicle "TOYOTA COROLLA FIELDER"

EP-2-006

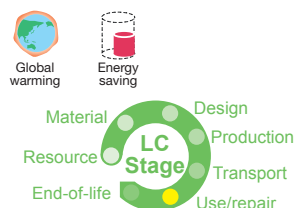
Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA AURIS"

Product performance

Toyota Auris 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): 17.2 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Electric power steering system



Eco-friendly vehicle "TOYOTA AURIS"

Toyota Motor Corporation

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EP-2-007

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA CROWN HYBRID"

Environmental performance

Automobile hybrid systems combine two motive power sources, such as an internal combustion engine and an electric motor, to take advantage of the benefits provided by 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 electric vehicles.

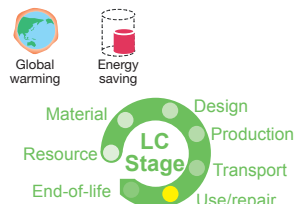
Product performance

Toyota Crown Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2010 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
 - Battery charge control system

Toyota Motor Corporation

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TOYOTA CROWN HYBRID

EP-2-008

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA MARK X"

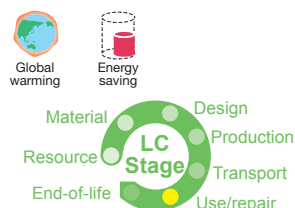
Product performance

Toyota Mark X has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 12.0 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Electric power steering system
 - Direct injection 4 stroke gasoline engine

Toyota Motor Corporation

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



Eco-friendly vehicle "TOYOTA MARK X"

Eco-materials

Eco-components

Eco-products // Carriers/automobiles

Eco-services

EP-2-009

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA IPSUM"

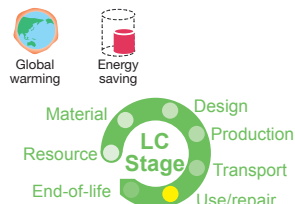
Product performance

Toyota Ipsum 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): 11.4 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Battery charge control system

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Eco-friendly vehicle "TOYOTA IPSUM"

EP-2-010

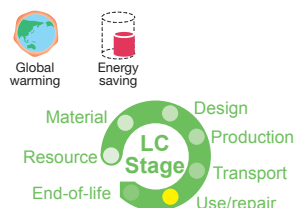
Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA WISH"

Product performance

Toyota Wish has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 14.4 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Electric power steering system



Eco-friendly vehicle "TOYOTA WISH"

Toyota Motor Corporation

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EP-2-011

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA HIACE WAGON"

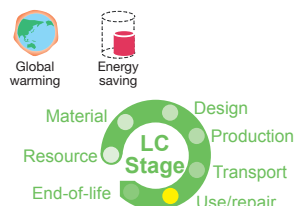
Product performance

Toyota Hiace Wagon has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 50% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 8.6 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Battery charge control system

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Eco-friendly vehicle "TOYOTA HIACE WAGON"

EP-2-012

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA ALPHARD"

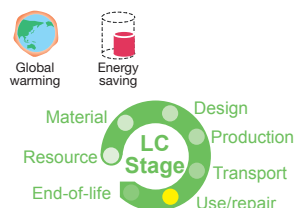
Product performance

Toyota Alphard 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): 9.7 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing

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Eco-friendly vehicle "TOYOTA ALPHARD"

EP-2-013

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA NOAH"

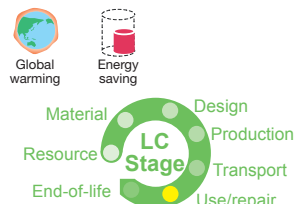
Product performance

Toyota Noah has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 50% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 14.2 km/liter
- 2) Technology to reduce fuel consumption
 - Continuously variable transmission
 - Variable valve timing
 - Battery charge control system
 - Direct injection 4 stroke gasoline engine

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Eco-friendly vehicle "TOYOTA NOAH"

EP-2-014

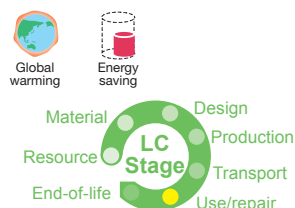
Carriers/automobiles
automobiles

Eco-friendly Hybrid vehicle "TOYOTA ALPHARD HYBRID"

Product performance

Toyota Alphard 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): 17.2 km/liter
- 2) Technology to reduce fuel consumption
 - Hybrid system
 - Continuously variable transmission
 - Variable valve timing



Eco-friendly Hybrid vehicle "TOYOTA ALPHARD HYBRID"

Toyota Motor Corporation

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EP-2-015

Carriers/automobiles
automobiles

Eco-friendly Hybrid vehicle "TOYOTA HARRIER HYBRID"

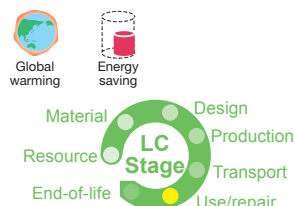
Product performance

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

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Eco-friendly Hybrid vehicle "TOYOTA HARRIER HYBRID"

EP-2-016

Carriers/automobiles
automobiles

Eco-friendly vehicle "TOYOTA HARRIER"

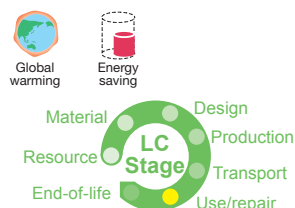
Product performance

Toyota Harrier 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): 11.0 km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Battery charge control system

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Eco-friendly vehicle "TOYOTA HARRIER"

Eco-materials

Eco-components

Eco-products // Carriers/automobiles

1
2
3
4
5
6
7
8
9

Eco-services

EP-2-017

Carriers/automobiles
automobiles

Eco-friendly Vehicle "Toyota Probox Wagon"

Product performance

Toyota Probox Wagon has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 50% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 17.2 km/liter
- 2) Technology to reduce fuel consumption
 - Variable valve timing



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Eco-friendly vehicle TOYOTA PROBOX WAGON

EP-2-018

Carriers/automobiles
automobiles

LPG (liquefied petroleum gas) vehicle "TOYOTA DYNA"

Product performance

This LPG vehicle emits little CO₂ and NO_x, particulate emissions are zero.
 (Max payload) 1.5 ton



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LPG (Liquefied petroleum gas) vehicle "TOYOTA DYNA"

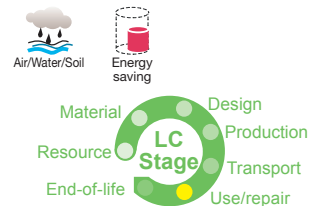
EP-2-019

Carriers/automobiles
automobiles

LPG (liquefied petroleum gas) vehicle "TOYOTA COASTER"

Product performance

The Toyota Coaster LPG vehicle emits little CO₂ and NO_x, particulate emissions are zero.



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COASTER (minibus)

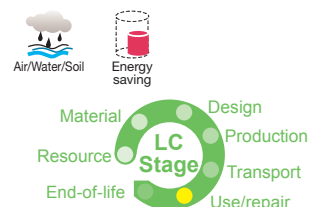
EP-2-020

Carriers/automobiles
automobiles

Clean Diesel Truck "DPNR-equipped TOYOTA DYNA & TOYOACE"

Product performance

The DPNR (Diesel Particulate NO_x Reduction) is a catalytic converter system that continuously and simultaneously removes PM (Particulate Matter)-granular material consisting mainly of fly ash and NO_x (nitrogen oxides) from diesel exhaust emissions by utilizing NO_x storage reduction three-way catalytic converter technology.
(Max payload) 2-3 ton (Fuel type) low-sulfur gas oil at 10 ppm max



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Clean diesel truck "DPNR-equipped TOYOTA DYNA&TOYOACE"

EP-2-021

Carriers/automobiles
automobiles

Clean Diesel Truck "DPR-equipped TOYOTA DYNA & TOYOACE"

Product performance

This truck equipped with a DPR (Diesel Particulate Reduction) system has achieved a low PM (particulate matter) emission level that is 10% lower than the standard levels for 2005.
(Max payload) 2-3 ton (Fuel type) low-sulfur gas oil at 50 ppm max



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Clean diesel truck "DPR-equipped TOYOTA DYNA"

EP-2-022

Carriers/automobiles
automobiles

Clean Diesel Truck "TOYOTA DYNA & TOYOACE Hybrid"

Product 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 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 ton (Fuel type) low-sulfur gas oil at 50 ppm max



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



Clean diesel truck "TOYOTA DYNA Hybrid"

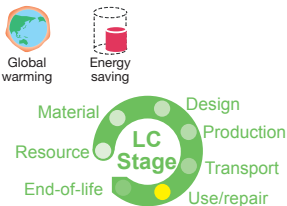
EP-2-023

Carriers/automobiles
automobiles

Eco-friendly Lexus 600h with hybrid power

Product performance

The Lexus 600h is equipped with the Toyota Hybrid System. It has achieved a fuel consumption of 12.2 km/L and low emissions.



Lexus 600h with hybrid power

Toyota Motor Corporation

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

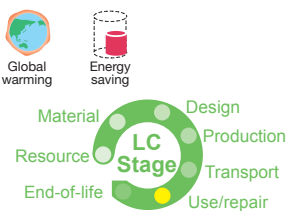
EP-2-024

Carriers/automobiles
automobiles

Eco-friendly Lexus 450h with hybrid power

Product performance

The Lexus 450h is equipped with the Toyota Hybrid System. It has achieved a fuel consumption of 14.2 km/L and low emissions.



Lexus 450h with hybrid power

Toyota Motor Corporation

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

Eco-materials

Eco-components

Eco-products // Carriers/automobiles

Eco-services

EP-2-025

Carriers/automobiles
automobiles

Clean Diesel EXTRAIL 20GT

Product performance

Newly launched Nissan Clean Diesel EXTRAIL 20GT meets most stringent emissions regulation introduced last year and also achieves excellent fuel economy such as 15.2km/l in 10/15 mode by featuring advanced technologies for emission reduction.

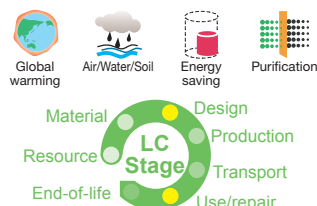
- Common rail fuel injection system
- Re-circulated exhaust gas cooler
- Diesel particulate filter
- Lean NOx trap catalyst
- Double swirl port

Nissan Clean Diesel EXTRAIL 20GT highly reduced typical diesel noise and vibrations and also provides superior quietness in the cabin.

Nissan Motor Co., Ltd.

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

Available in: Japan



EP-2-026

Carriers/automobiles
automobiles

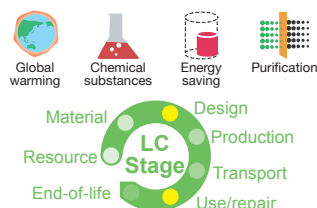
Pajero Diesel (Japan spec)

Environmental performance

Last October, Mitsubishi Motors released a Pajero SUV equipped with a new "New Long-term Regulation"-compliant diesel engine. The new 3.2-liter engine features common-rail fuel injection, a NOx trap catalyst, and a Diesel Particulate Filter (DPF), which bring emissions in line with Japan's tough standards while providing a much quieter drive experience. In addition, fuel economy is improved 15% over the gasoline variant.

All versions of the new Pajero Diesel achieve the 2005 standard for fuel-efficiency.

Same versions achieve the 2005 standard for fuel-efficiency plus 5%.



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URL <http://www.mitsubishi-motors.co.jp/pajero/index.html>
URL <http://www.mitsubishimotors.corporate/environment/report/e/index.html>

Available in: Japan



PAJERO (Diesel)

EP-2-027

Carriers/automobiles
automobiles

Honda FCX Clarity fuel cell vehicle

Environmental performance

The FCX Clarity was designed from scratch as a dedicated fuel cell 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.

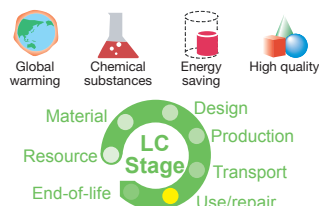
Product performance

Fuel/cruising range: 620km in 10-15 mode (Honda calculations)

Honda Motor Co., Ltd.

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Available in: Japan (lease for only government and other public offices, and some corporations), US (only lease)



FCX CLARITY (Japan Model)

2008/07/02

Honda FCX Clarity

EP-2-028

Carriers/automobiles
automobiles

Natural Gas Vehicle

Environmental performance

Because of its environmentally-friendly features, NGV plays an important role in reducing the world's dependency on oil. In cooperation with the manufacturers, Osaka Gas promotes the broader use of NGVs in its service area by means of developing bi-fuel vehicles which are utilized in areas where there is no natural gas filling station.

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.

Product performance

- (1) Mileage per filling
Compressed natural gas: 160 km
Gasoline: 665 km
Total: 825 km
- (2) Displacement: 2,000 cc
- (3) Trunk size: 3,000/1,545/1,335 mm
- (4) Maximum load: 1,200 kg

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



Bi-fuel vehicle

EP-2-029

Carriers/automobiles
automobiles

Honda Civic Hybrid

Environmental performance

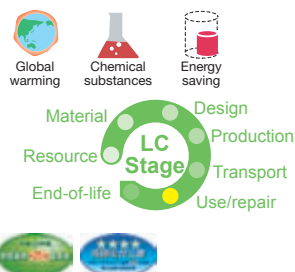
The Civic Hybrid is equipped with the new 3-Stage i-VTEC + IMA Honda Hybrid System that delivers both spirited performance and an ultra-high fuel economy of 31 km/L*. Both models achieve an outstanding combination of driving and environmental performance.

* Civic Hybrid MXB in 10-15 mode (28.5km/ℓ for MX)

Honda Motor Co., Ltd.

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Available in: Japan, North America, South America, Asia



CIVIC 1.8GL

2005.09.22

Honda Civic Hybrid

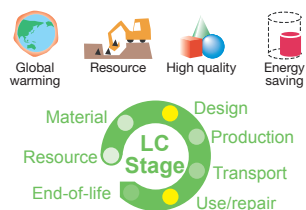
EP-2-030

Carriers/automobiles
automobiles

i MiEV: Mitsubishi innovative Electric Vehicle

Environmental performance

Mitsubishi Motors is developing the i MiEV zero-emissions electric vehicle as one answer to global warming and as a contribution toward the use of post-petroleum alternative energy sources. The i MiEV is based on the "i" minicar and is powered by large-capacity lithium-ion batteries linked to a compact, high-output motor. At present, the i MiEV is being used in fleet testing with electric power companies and local governments. The car will be launched in the summer of 2009, beginning with the Japan market.



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URL <http://www.mitsubishi-motors.com/special/ev/index.html>
URL <http://www.mitsubishi-motors.com/corporate/environment/report/e/index.html>

Available in: Japan (planned)

i MiEV: Mitsubishi innovative Electric Vehicle

EP-2-031

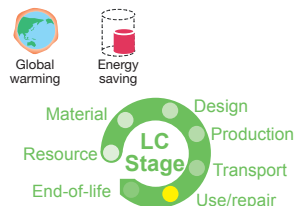
Carriers/automobiles

trucks

Light Duty Truck "Canter Eco Hybrid"

Environmental performance

Canter Eco Hybrid, a hybrid-drive light-duty truck with world class emissions performance and fuel economy. This pioneering light-duty vehicle is also being fleet-tested in Europe.



Canter Eco Hybrid

Mitsubishi Fuso Truck and Bus Corporation

890-12, Kashimada, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0058, Japan
Tel +81-44-330-7700
URL <http://www.mitsubishi-fuso.com/en/index.html>

Available in: Japan

EP-2-032

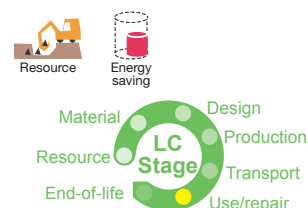
Carriers/automobiles

buses

The new-generation hybrid bus "Aero Star Eco Hybrid"

Environmental performance

Aero Star Eco Hybrid has the heavy vehicle mode fuel efficiency of 5.0 km/L largely surpassing the 2015 heavy vehicle fuel efficiency standard using a small-size and light-weight diesel engine for power generation as well as a regenerative braking system by which braking energy generated during deceleration is converted through an electronically controlled brake and stored in a battery.



Aero Star Eco Hybrid

Mitsubishi Fuso Truck and Bus Corporation

890-12, Kashimada, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0058, Japan
Tel +81-44-330-7700
URL <http://www.mitsubishi-fuso.com/en/index.html>

Available in: Japan

EP-2-033

Carriers/automobiles
motorcycles

Honda Super Cub

Environmental performance

When Super Cub was originally launched, the 2-stroke engine was the mainstream power plant for motorcycles. However, the first generation Honda Super Cub C100 was equipped with an innovative and high-performance 50cc 4-stroke engine which was highly economical and durable. Since the introduction of the first generation model, the basic design and concept have remained virtually unchanged, and the unique style has been passed on even to current models.

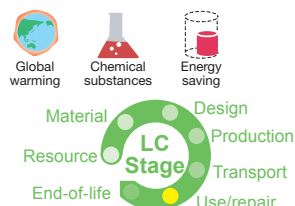
In Japan, an electronically-controlled fuel injection system, Honda's PGM-FI*, was installed on Super Cub in 2007, enhancing the environmental performance of the mode.

* PGM-FI (Programmed Fuel Injection) is a registered trade name of Honda Motor Co., Ltd.

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan
Tel +81-3-5412-1514 Fax +81-3-5412-1515
URL <http://world.honda.com/>

Available in: Japan, Asia, South America, China



Honda Super Cub

EP-2-034

Carriers/automobiles
bicycles

CY-SPA26D electric hybrid bicycle

Environmental performance

- (1) More lightweight with a mounted lithium-ion battery (approx. 30% lighter in capacity ratio than the previous model, which uses a nickel metal-hydrate battery); extended mileage (by approximately 20% compared with the previous CY-SPE26DH model)
- (2) 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. (Mileage can be extended by about 70% compared with Standard Mode without regeneration charging.)
- (3) Environmental BAA-compliant
- (4) Abolition of polystyrene foam for packaging.

Product performance

- (1) Battery light with reflector and four 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 cords and wiring

SANYO Electric Co.,Ltd.

Keihan Hondori 2-5-5 Moriguchi-city Osaka, 570-8677, Japan



EP-2-035

Carriers/automobiles

forklifts

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, the use of an electronically controlled throttle has reduced fuel consumption by nearly 15%, which greatly improves the environmental performance.

In addition, 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.

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/>



Internal combustion lift truck "GENEO (8FG/D)"

EP-2-036

Carriers/automobiles

monorails

Hitachi Monorail System friendly to the city environment

Environmental performance

Slim and light track beam guideway employed by Hitachi Monorail can contribute:

- (1) Aluminum car body is easy-recyclable, and its light weight can reduce the electricity necessary to propel the Monorail.
- (2) Less air pollution by transferring exhaust gas from the car running under the guideway through an open track beam.
- (3) Shortening of construction period and reducing traffic congestion by manufacturing track beam outside the construction site and installing during night time.

Product performance

Rubber tires mounted on Hitachi Monorail is capable of negotiating smaller curve radius and steeper gradient, and it can provide "Line Alignment Design Flexibility" when it is planned for congested areas in a big city.

Hitachi, Ltd.

Akihabara Daibiru Building, 18-13, Soto-Kanda 1-chome, Chiyoda-ku, Tokyo, 101-8608, Japan

Tel +81-3-4564-4105 Fax +81-3-4564-6252

E-mail akihiro.taruya.zc@hitachi.com



Sentosa Monorail in Singapore

Available in: Worldwide

EP-2-037

Carriers/automobiles

energy storage systems for rolling stock

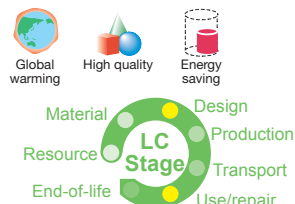
An Accumulating System for Railroad Carriages which Recycles Discharged Thermal Energy

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.



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-2-038

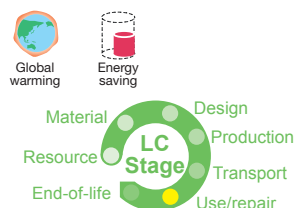
Carriers/automobiles

car navigation systems

Ecological driving support system / Nissan CARWINGS NAVIGATION SYSTEM

Product performance

Eco-driving service available on NISSAN CARWINGS navigation system has won two awards in Japan in 2007. One is the 4th Eco-Products Awards (Minister's Prize, the Ministry of Land, Infrastructure, Transport and Tourism in Eco-Services Category) hosted by Ministry of Land, Infrastructure, Transportation and Tourism, and the other is Energy Conservation Grand Prize for excellent energy conservation equipment (Director General Prize of the Agency of Natural Resources and Energy) hosted by Ministry of Economy, Trade and Industry and the Energy Conservation Center, Japan. This Nissan CARWINGS service improves road congestion and driver-behavior by its fastest route guidance system and eco-driving advice and delivers sustainable results in fuel-consumption improvement.



Nissan Motor Co., Ltd.

17-1, 6-chome, Ginza, Chuo-ku, Tokyo, 104-8023, Japan
 Tel +81-3-5565-2184 Fax +81-3-3546-3266
 E-mail s-saegusa@mail.nissan.co.jp
 URL <http://www.nissan.co.jp>

Available in: Japan



CARWINGS Navigation System

EP-3-001

OA/IT equipment

multifunctional copy machines/printers

Black and White Multifunctional Printer iR 3245/3245N

Environmental performance

- 1) Energy Saving: 1.5W sleep mode and 10 sec or less from sleep mode by use of Canon's original On-demand fixing technology
- 2) 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)
- 3) Standard automatic duplexing

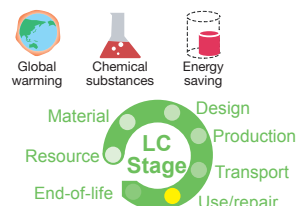
Product performance

- 1) Copy/Print speed: 45 ppm (A4)
- 2) Compact body of 565 mm (same as with optional Finisher-S1)
- 3) Scanning in color: 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>

Available in: Asia, Europe, North America, etc. (The model name is different by area.)



iR 3245 with DADF-U1, Finisher-S1, etc.

EP-3-002

OA/IT equipment

multifunctional copy machines/printers

Color Multifunctional Copier iR C3580/C3580i

Environmental performance

- 1) Energy Saving: 3W sleep mode and 30 sec (for iR C3580) /38 sec (for iR C3580i) warm-up time by use of Canon's original On-demand fixing technology
- 2) 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)
- 3) Ozone-free electrical charging for photosensitive drum

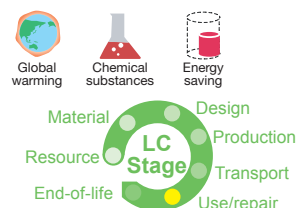
Product performance

- 1) Copy/Print speed (B&W/Full color): 35/30 ppm (A4)
- 2) Compact body of 565 mm wide (same as with optional Finisher-Z1)
- 3) QF Color Toner achieving oil-free image fixing and speedy fixing

CANON INC.

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

Available in: Asia



iR C3580i with accessories

EP-3-003

OA/IT equipment

multifunctional copy machines/printers

Color Multifunctional Copier iR C2550i

Environmental performance

- 1) Energy Saving: 3W sleep mode and 38 sec warm-up time by use of Canon's original On-demand fixing technology
- 2) 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)
- 3) Ozone-free electrical charging for photosensitive drum

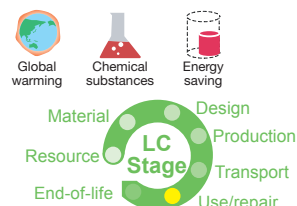
Product performance

- 1) Copy/Print speed (B&W/Full color): 25/23 ppm (A4)
- 2) Compact body of 565 mm wide (same as with optional Finisher-Z1)
- 3) QF Color Toner achieving oil-free image fixing and speedy fixing

CANON INC.

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 Tel +81-3-3758-2111 Fax +81-3-3758-8225
 URL <http://www.canon.com>

Available in: Asia



iR C2550i with Cassette Feeding Unit-Y3

EP-3-004

OA/IT equipment

multifunctional copy machines/printers

Compact Multifunction Printer with Built-In Networking Features, MF 4270

Environmental performance

- 1) Energy saving and high speed are balanced using Canon's original On-Demand fixing technology. The power consumption during sleep mode is about 3W, and the recovery time is just 10 seconds.
- 2) It is compliant with the RoHS Directive which restricts and prohibits the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).
- 3) Duplex and 2-in-1 printing functions reduce paper consumption.

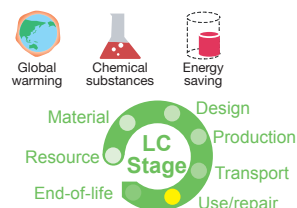
Product performance

- 1) Monochrome laser All-In-One, print speed 20 ppm (A4)
- 2) Slim body of 390 mm wide which saves space and fits neatly on a desktop

CANON INC.

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

Available in: Asia, Europe, North America, etc.



Multifunction printer, Model MF4270

EP-3-005

OA/IT equipment

multifunctional copy machines/printers

Refreshed Series, iR 6570N-R

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.

Product performance

Standard LIPS LX is incorporated which shortens data processing time and improves printing performance

CANON INC.

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

Available in: Japan



iR 6570N-R with Finisher T1

EP-3-006

OA/IT equipment

multifunctional copy machines/printers

Remanufactured Color Digital MFP, iR C3200N-R

Environmental performance

The used machines collected from the customers are disassembled and remanufactured. Only the parts complying with the remanufacturing quality standards are selected and cleaned. Canon's original recycling technology is applied to clean the exterior parts. The high rate of reused parts reduces environmental burden (converted to CO₂ emissions) up to the manufacturing stage.

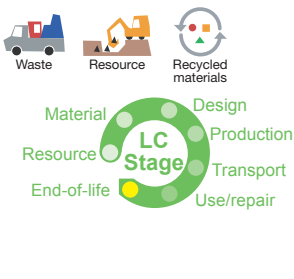
Product performance

Copy/Print speed (B&W/Full color): 32/32 ppm (A4)

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>

Available in: Korea, Japan



iR C3200N-R

EP-3-007

OA/IT equipment

multifunctional copy machines/printers

PIXUS MP630/PIXMA MP638, A4 Inkjet All-In-One Printer

Environmental performance

- (1) Energy saving: Power savings of 94% have been achieved compared to the conventional printer MP770/MP760 through energy saving technology for the power-off, standby, and operating modes.
- (2) Resource Saving: 52% reduction by volume and 29% reduction by weight have been achieved in comparison with those of the MP770/MP760. And the volume of the package has been reduced at the same time.

Product performance

- (1) The high-definition photo-printing with exceptional resolution up to 9600 dpi and ink droplets of 1 pl (pico-liter), with 43 sec. of high-speed A4 photo printing, and the 2400 dpi high-resolution scanning.
- (2) Quick Start and Easy-Scroll Wheel for user convenience.



Global warming



Energy saving

61.6kg-CO₂Inspection
EcoleafResource/Materials/Production/
Transfer/Use/End-of-Life

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
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Available in: Asia

PIXUS MP630/PIXMA MP638

EP-3-008

OA/IT equipment

multifunctional copy machines/printers

Color Multifunction Printer for small office: KX-MC6020

Environmental performance

Conforms to the international ENERGY STAR program.

Environmental consideration material

- Specific brominated flame retardants (PBB and PBDE) are not used in appearance plastic material.
- Pb-free solder is used for circuit board.
- A chrome free surface treated steel plate that doesn't contain hexavalent chromium is used for the sheet metal of the product.

Product performance

- 20 PPM (color)/20 PPM (mono) digital network copier/printer
- 1200 x 600 dpi high-quality full color printing with 8.5"x14" legal-size capability
- Optional automatic duplex print
- 50 sheet automatic document feeder
- Network scan full-color documents at up to 9600×9600 in PDF, JPEG, BMP and TIFF formats
- Maximum 770-sheet paper capacity with optional tray
- Standard 10Base-T/100 Base-TX and USB 2.0 Interface
- Scan to e-mail / Scan to PC / Scan to FTP
- Standard G3 fax capability
- TWAIN Scanning Compliant
- Standard GDI and PCL
- Easy operation by front access



Global warming



Chemical substances



Energy saving



High quality



Panasonic Communications Co., Ltd.

1471, Murata-Machi, Tosu City, Saga, 841-8501, Japan
Tel +81-942-81-2723 Fax +81-942-81-2749
URL http://www.panasonic.co.uk/html/en_GB/292729/module/general/compare/productsCategory.html
URL <http://panasonic.net/csr/>



Available in: Global, except Japan

KX-MC6020-D_Taken 28 Jan. '08
Color Multifunction Printer for small office: KX-MC6020

EP-3-009

OA/IT equipment

multifunctional copy machines/printers

Digital Full Color MFP with Low Toner Consumption: MX-2600N/3100N

Environmental performance

This MFP supports two steps of energy saving modes to reduce power consumption after a set interval. And to cut down on energy consumption further, by pressing "the manual energy save key" after a job is finished, the product immediately enters auto shut-off mode anytime. On top of that, standby power consumption in night-time Fax reception mode is less than 1W which is among the lowest in this category. The product supports the RoHS directive which restricts the use of hazardous substances. And also for exterior cabinets and interior parts (except some parts of the interior parts), non-halogen-based plastic materials are used.

The same models for Japanese market are EcoMark-certified.

Product performance

This MFP has a second generation Micro-fine toner technology, which provides more uniform image coverage and a lower toner consumption rate than that of conventional toners, resulting in sharp, high-quality output.

Sharp Corporation

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

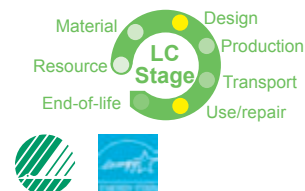
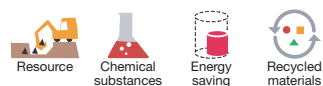
Tel +81-6-6625-0438 Fax +81-6-6625-0153

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

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

URL http://sharp-world.com/corporate/eco/csr_report/2008pdf/sharp_eall.pdf

Available in: Worldwide



Digital Full Color MFP MX-2600N/3100N (inc. options)

EP-3-010

OA/IT equipment

multifunctional copy machines/printers

Digital Full Color MFP with Low Toner Consumption MX-5000N/4100N

Environmental performance

This MFP supports two steps of energy saving modes to reduce power consumption after a set interval. And to cut down on energy consumption further, by pressing "the manual energy save key" after a job is finished, the product immediately enters auto shut-off mode anytime. On top of that, standby power consumption in night-time Fax reception mode is less than 1W which is among the lowest in this category. The product supports the RoHS directive which restricts the use of hazardous substances. And also for exterior cabinets and interior parts (except some parts of the interior parts), non-halogen-based plastic materials are used.

Product performance

This MFP has a second generation Micro-fine toner technology, which provides more uniform image coverage and a lower toner consumption rate than that of conventional toners, resulting in sharp, high-quality output.

Sharp Corporation

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

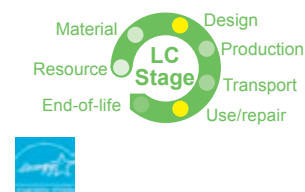
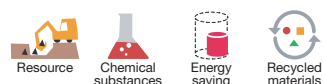
Tel +81-6-6625-0438 Fax +81-6-6625-0153

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

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

URL http://sharp-world.com/corporate/eco/csr_report/2008pdf/sharp_eall.pdf

Available in: Worldwide



Digital Full Color MFP MX-5000N/4100N (inc. options)

EP-3-011

OA/IT equipment

multifunctional copy machines/printers

Digital Full Color MFP with Low Toner Consumption: MX-6201N/7001N

Environmental performance

This MFP has a revolutionary Micro-fine toner technology reducing the toner consumption by 30%, compared to the conventional toner of previous models. This product supports two steps of energy saving modes to reduce power consumption after a set interval. And to cut down on energy consumption further, by pressing "the manual energy save key" after a job is finished, the product immediately enters auto shut-off mode anytime. On top of that, standby power consumption in night-time Fax reception mode is less than 1W which is among the lowest in the industry. The product supports the RoHS directive which restricts the use of hazardous substances. And for exterior cabinets and interior parts (except some interior parts), non-halogen-based plastic materials are used.

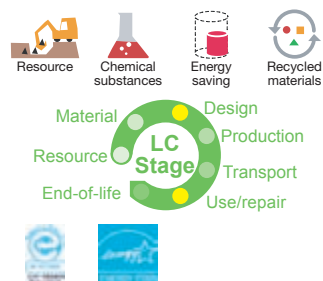
Product performance

The products support high quality color output 41/41 ppm and B/W output 62/70 ppm.

Sharp Corporation

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URL <http://sharp-world.com/>
URL http://sharp-world.com/corporate/eco/csr_report/2008pdf/sharp_eall.pdf

Available in: Worldwide



Digital Full Color MFP MX-6201N/7001N (inc. options)

EP-3-012

OA/IT equipment

multifunctional copy machines/printers

High Speed Digital MFP: MX-M1100/M950/M850

Environmental performance

The new MX-M850/M950/M1100 Series have a revolutionary Micro-fine toner technology offering a lower consumption rate than that of conventional toner with previous models. Those products support two steps of energy saving modes to reduce power consumption after a set interval. And to cut down on energy consumption further, by pressing "the manual energy save key" after a job is finished, the product immediately enters auto shut-off mode anytime. The products support the RoHS directive which restricts the use of hazardous substances. And also for exterior cabinets and interior parts (except some parts of the interior parts), non-halogen-based plastic materials are used. The same models for the Japanese market are EcoMark-certified.

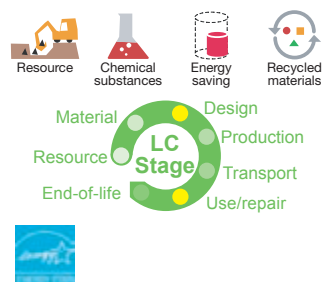
Product performance

Designed for high-volume production environments, these products' document systems deliver lightning-fast output with robust multi-tasking performance.

Sharp Corporation

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URL <http://sharp-world.com/>
URL http://sharp-world.com/corporate/eco/csr_report/2008pdf/sharp_eall.pdf

Available in: Worldwide



High Speed Digital MFP MX-M1100/M950/M850 (inc. options)

EP-3-013

OA/IT equipment

multifunctional copy machines/printers

Digital Multifunction Devices for Office

Environmental performance

ApeosPort-III C3300/C2200, DocuCentre-III C3300/C2200 are equipped with environmentally conscious technologies.

<Energy saving>

An energy-saving controller, high-efficient lamp and temperature-controlling technology reduce power consumption in sleep mode from below 10W (conventional machines) to below 2.0W (PF/PFS model). In terms of TEC, power consumption is cut to 1.78kWh a week (PF/PFS model, 25 ppm machine).

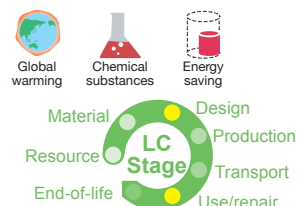
<Lead-free shafts and biomass plastic>

- (1) Shafts that do not contain lead, a designated hazardous substance, in parts for the output unit, including paper feeder.
- (2) A biomass plastic that comprises more than 30% of plant-derived constituent by weight in the moving part of the machine.

This line of devices was awarded the Minister of Economy, Trade and Industry Prize in the Eco-Products category at the 4th Eco-Products Awards in Japan.

Fuji Xerox Co., Ltd

9-7-3, Akasaka Minato-ku, Tokyo, 107-0052, Japan



ApeosPort-III C3300/C2200, DocuCentre-III, C3300/C2200

EP-3-014

OA/IT equipment

multifunctional copy machines/printers

Environmentally conscious Inkjet Printer, EP-901F/901A

Environmental performance

This is an all-in-one printer that has the functions of a copier, scanner, printer, and facsimile.

<Global warming impact>

The EP-901F has an approximately 14% lower global warming impact (CO₂ equivalent) across its life cycle than the PM-T960 from 2007.

<Resource saving and Energy saving>

The EP-901F is 35% smaller and 16% lighter, and uses 24% less energy than the PM-T960.

<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-901F/901A 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/>

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/>



84kg-CO₂
not Inspection

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



EP-901F (Epson Stylus PX800FW/TX800FW, Artisan800)

Available in: Worldwide

EP-3-015

OA/IT equipment

multifunctional copy machines/printers

Environmentally conscious Inkjet Printer, EP-801A

Environmental performance

This is an all-in-one printer that has the functions of a copier, scanner, and printer.

<Global warming impact>

The EP-801A has 17% lower global warming impact (CO₂ equivalent) across its life cycle than the PM-A850 from 2003.

<Resource saving and Energy saving>

The EP-801A is 50% smaller and 8% lighter, and uses 57% less energy than the PM-A850.

<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-801A 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/>

Seiko Epson Corporation

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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: Worldwide



66kg-CO₂
not Inspection

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



EP-801A (Epson Stylus PX700FW/TX700FW, Artisan 700)

EP-3-016

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 by high-efficient fusing engine and low-temperature fusing toner.
- Efficient use of resources: Uses recycled plastics.
- 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, North America, Europe, Asia, Oceania



Multifunctional Digital Color Systems e-STUDIO6530C

EP-3-017

OA/IT equipment

multifunctional copy machines/printers

A high-speed color copier with astonishing productivity and outstanding color quality

Environmental performance

The Ricoh Aficio MP C5000 conforms to the International ENERGY STAR Program. Color Quick Start Up (QSU) technology allows a shorter warm-up time and prompt switching to energy-saving mode. It is also compliant with the EU RoHS directive.

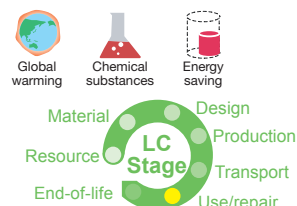
Product performance

Printing speed: full color: 50 ppm; black & white: 50 ppm

For more information, please contact your nearest Ricoh dealer or visit the Ricoh website (<http://www.ricoh.co.jp>).

RICOH COMPANY LTD.

Ricoh Building, 8-13-1 Ginza, Chuo-ku, Tokyo, 104-8222, Japan
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URL <http://www.ricoh.com/environment/>



Ricoh Aficio MP C5000

EP-3-018

OA/IT equipment

multifunctional copy machines/printers

A compact color copier featuring a host of cutting-edge functions and security measures as well as ease of use

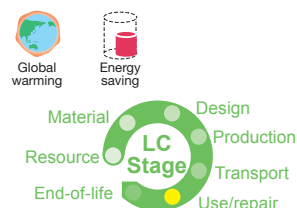
Environmental performance

The Ricoh Aficio MP C2550 conforms to the International ENERGY STAR Program. Our new color PxP toner and excellent low-temperature fixing allows a shorter warm-up time (less than 30 seconds) and prompt switching to energy-saving mode. It is also compliant with the EU RoHS directive.

Product performance

Printing speed: full color: 25 ppm; black & white: 25 ppm

For more information, please contact your nearest Ricoh dealer or visit the Ricoh website (<http://www.ricoh.co.jp>).



Ricoh Aficio MP C2550

RICOH COMPANY LTD.

Ricoh Building, 8-13-1 Ginza, Chuo-ku, Tokyo, 104-8222, Japan
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EP-3-019

OA/IT equipment

multifunctional copy machines/printers

Kyocera Mita New Full Color MFP "TASKalfa 500ci/400ci/300ci/250ci"

Environmental performance

1. This digital full color MFP is compliant with the RoHS directive which restricts the use of hazardous substances.
2. Conforms to the international ENERGY STAR program.

Product performance

Increased office productivity is your top priority. The Kyocera TASKalfa 500ci Series of color multifunctional systems transforms your office, your workflow, and your documents. Powerful, intuitive, and incredibly efficient, it makes a bold, impression both inside and out.

※Print speed (A4)

TASKalfa 500ci: 40ppm (Color)/50ppm (B/W)

TASKalfa 400ci: 40ppm (Color)/40ppm (B/W)

TASKalfa 300ci: 30ppm (Color)/30ppm (B/W)

TASKalfa 250ci: 25ppm (Color)/25ppm (B/W)

KYOCERAMITA

2-28, 1 Chome, Tamatsukuri, Chuo-ku Osaka, 540-8585, Japan

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



EP-3-020

OA/IT equipment

multifunctional copy machines/printers

Kyocera Mita Monochrome MFP "KM-3060/2560/3040/2540"

Environmental performance

1. This digital Monochrome MFP is compliant with the RoHS directive which restricts the use of hazardous substances.
2. Conforms to the international ENERGY STAR program.
3. These models have acquired environmental labels of Nordic Environment.
4. KM-3060/2560 has acquired environmental labels of Blue Angel Mark.

Product performance

Designed for the busy workgroup or business, the KM-3060 Multifunctional System offers a flexible design for today's business. Easy to use and manage, this 30 page per minute device is a tremendous value.

※Print speed (A4)

KM-3060: 30ppm

KM-2560: 25ppm

KM-3040: 30ppm

KM-2540: 25ppm

KYOCERAMITA

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EP-3-021

OA/IT equipment

multifunctional copy machines/printers

Kyocera Mita Monochrome MFP "KM-4050/5050"

Environmental performance

1. This digital Monochrome MFP is compliant with the RoHS directive which restricts the use of hazardous substances.
2. Conforms to the international ENERGY STAR program.
3. These models have acquired environmental labels of Nordic Environment.

Product performance

Designed for the busy workgroup or business, the KM-3060 Multifunctional System offers a flexible design for today's business with standard color scanning. The KM-3060 also provides exceptional document print and copy output. Easy to use and manage, this 30 page per minute device is a tremendous value.

※Print speed (A4)

KM-4050: 40ppm

KM-5050: 50ppm

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EP-3-022

OA/IT equipment

multifunctional copy machines/printers

Kyocera Mita Color Laser Printer "ECOSYS FS-C5300DN/C5200DN"

Environmental performance

This Color Laser Printer is Kyocera's leading product in environmental design. It incorporates Kyocera's proprietary long life technology to minimize the replacement of consumable parts. The "ECOSYS" concept makes it environmentally conscious and cost efficient because toner is the only consumable for this printer.

This product is compliant with the RoHS Directive that was initiated in Europe in 2006 to eliminate substances that are harmful to the environment and also with the standards of the International Energy Star Program.

Product performance

※Print speed(A4)

ECOSYS FS-C5300DN: 26ppm (Color•B/W)

ECOSYS FS-C5200DN: 21ppm (Color•B/W)

KYOCERAMITA

2-28, 1 Chome, Tamatsukuri, Chuo-ku Osaka, 540-8585, Japan

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



EP-3-023

OA/IT equipment

multifunctional copy machines/printers

Kyocera Mita Color Laser Printer "ECOSYS FS-C8100DN"

Environmental performance

This Color Laser Printer is Kyocera's leading product in environmental design. It incorporates Kyocera's proprietary long life technology to minimize the replacement of consumable parts. The "ECOSYS" concept makes it environmentally conscious and cost efficient because toner is the only consumable for this printer.

This product is compliant with the RoHS Directive that was initiated in Europe in 2006 to eliminate substances that are harmful to the environment and also with the standards of the International Energy Star Program.

Product performance

※Print speed(A4)

ECOSYS FS-C8100DN: 32ppm (Color•B/W)

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EP-3-024

OA/IT equipment

multifunctional copy machines/printers

Kyocera Mita Monochrome Laser Printer "ECOSYS FS-1300D"

Environmental performance

This Monochrome Laser Printer is Kyocera's leading product in environmental design. It incorporates Kyocera's proprietary long life technology to minimize the replacement of consumable parts. The "ECOSYS" concept makes it environmentally conscious and cost efficient because toner is the only consumable for this printer. This product is compliant with the RoHS Directive that was initiated in Europe in 2006 to eliminate substances that are harmful to the environment and also with the standards of the International Energy Star Program.

These models have acquired environmental labels of Nordic Environment and Blue Angel Mark.

Product performance

※Print speed (A4)

ECOSYS FS-1300D: 28ppm (B/W)

KYOCERAMITA

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EP-3-025

OA/IT equipment

multifunctional copy machines/printers

Kyocera Mita Re-Condition MFP "KM-5035RC/4035RC/3035RC"

Environmental performance

In order to realize a sustainable recycling-oriented society, it is necessary to promote the recycling of used products.

So we produce RC (reconditioning) models by using used parts taken from disassembled products, after cleaning and inspection.

Our rigorous selection and inspection processes guarantee high-quality and highly reliable RC machines.

Product performance

※Print speed (A4)

KM-5035RC: 50ppm (B/W)

KM-4035RC: 40ppm (B/W)

KM-3035RC: 31ppm (B/W)

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EP-3-026

OA/IT equipment

printers

A high-speed A4 color laser printer with enhanced productivity

Environmental performance

The Ricoh Aficio SP C420DN conforms to the International ENERGY STAR Program and is also compliant with the EU RoHS directive.

Product performance

Printing speed: full color: 30 ppm; black & white: 30 ppm

For more information, please contact your nearest Ricoh dealer or visit the Ricoh website (<http://www.ricoh.co.jp>).



Ricoh Aficio SP C420DN

RICOH COMPANY LTD.

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Tel +81-3-6278-2111

URL <http://www.ricoh.com/environment/>

EP-3-027

OA/IT equipment
printers

A low-priced, compact & stylish high-speed color laser printer with a small footprint

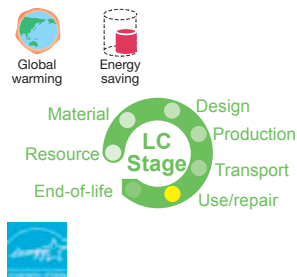
Environmental performance

The Ricoh Aficio SP C222DN conforms to the International ENERGY STAR Program. It features a toner-saving mode and is compliant with the EU RoHS directive.

Product performance

Printing speed: full color: 20 ppm; black & white: 20 ppm

For more information, please contact your nearest Ricoh dealer or visit the Ricoh website (<http://www.ricoh.co.jp>).



Ricoh Aficio SP C222DN

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EP-3-028

OA/IT equipment
printers

A high-speed color gel-jet printer ideal for business use

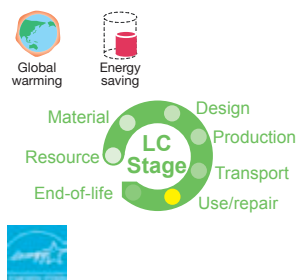
Environmental performance

The Ricoh Aficio GX3050N conforms to the International ENERGY STAR Program and features lower power consumption (10 W or below in standby mode) as well as a high-speed automatic double-sided printing function. It is also compliant with the EU RoHS directive.

Product performance

Printing speed: full color: 29 ppm; black & white: 29 ppm

For more information, please contact your nearest Ricoh dealer or visit the Ricoh website (<http://www.ricoh.co.jp>).



Ricoh Aficio GX3050N

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URL <http://www.ricoh.com/environment/>

EP-3-029

OA/IT equipment
printers

A3 Color Printer for Office

Environmental performance

DocuPrint C2250 is equipped with environmentally conscious technologies.

<Energy saving>

An energy-saving controller, high-efficient lamp and temperature-controlling technology reduce power consumption in sleep mode from below 5W (conventional machines) to below 1.5W. In terms of TEC, power consumption is cut to 1.63kWh a week.

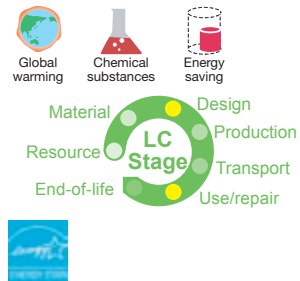
<Lead-free shafts and biomass plastic>

- (1) Shafts that do not contain lead, a designated hazardous substance, in parts for the output unit, including paper feeder.
- (2) A biomass plastic that comprises more than 30% of plant-derived constituent by weight in the moving part of the machine (drum cover).

This printer was awarded the Minister of Economy, Trade and Industry Prize in the Eco-Products category at the 4th Eco-Products Awards (an event sponsored by the Eco-Products Awards Promotion Council in Japan).

Fuji Xerox Co., Ltd

9-7-3, Akasaka Minato-ku, Tokyo, 107-0052, Japan



DocuPrint C2250

EP-3-030

OA/IT equipment
printers

A4 Color Laser Printer

Environmental performance

DocuPrint C1100 is a safely designed and eco-friendly A4 color printer, pursuing saving energy, and reduction in size and weight.

<Energy saving performance>

The power consumption per week is 1.2 kWh (International Energy Star Program), 50% reduction from the existing model. It features 5W of low power consumption in sleep mode and 20 seconds of recovery time.

<Reduction in size and weight>

By adopting the small size lightweighted marking engine, frame, cover, and motor, DocuPrint C1100 realized lightweighting of 46% compared with the existing machine (DPC525A). The base machine is easy portable weighting 13.2kg (consumables excluded).

Fuji Xerox Co., Ltd

9-7-3, Akasaka Minato-ku, Tokyo, 107-0052, Japan



DocuPrint C1100

Eco-materials

Eco-components

Eco-products // OA/IT equipment

1
2
3
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Eco-services

EP-3-031

OA/IT equipment
printers

Business Inkjet Printer, PX-B500

Environmental performance

This is a business inkjet printer with low power consumption and high-capacity ink cartridges that can print 37 pages per minute in both color and monochrome.

<Global warming impact>

The PX-B500 has approximately 75% lower global warming impact (CO₂ equivalent) across its life cycle than the laser printer (Epson's LP-V500).

<Energy saving>

The PX-B500 uses approximately 90% less energy than the laser printer (Epson's LP-V500).

<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: Auto-duplex printing feature

<Elimination of hazardous substances>

The PX-B500 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/>

Seiko Epson Corporation

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

URL <http://www.epson.co.jp/e/community/>

Available in: Worldwide



106kg-CO₂
not Inspection

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



PX-B500 (B-500DN/B-508DN)

EP-3-032

OA/IT equipment
printers

Kyocera Mita Monochrome Laser Printer "ECOSYS FS-9530DN"

Environmental performance

This Monochrome Laser Printer is Kyocera's leading product in environmental design. It incorporates Kyocera's proprietary long life technology to minimize the replacement of consumable parts. The "ECOSYS" concept makes it environmentally conscious and cost efficient because toner is the only consumable for this printer.

This product is compliant with the RoHS Directive that was initiated in Europe in 2006 to eliminate substances that are harmful to the environment and also with the standards of the International Energy Star Program.

These models have acquired environmental labels of Nordic Environment.

Product performance

※Print speed (A4)

ECOSYS FS-9530DN: 51ppm (B/W)

KYOCERAMITA

2-28, 1 Chome, Tamatsukuri, Chuo-ku Osaka, 540-8585, Japan

Tel +81-6-6764-3555

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EP-3-033

OA/IT equipment
printers

Monochrome Page Printer, LP-S300

Environmental performance

The LP-S300 cuts total weekly power consumption by 23% compared with the previous model (FY2003, LP-2500). In addition, Epson new "Return cartridge" drives the collection and recycling of used cartridges while providing customers with lower running costs.

<Energy saving>

By turning off the heater (lamp) immediately after printing, power consumption in Ready mode was cut from an average of 47W to an average of 7W.

<Resource saving>

Epson has proposed a new "Return cartridge program" in addition to conventional toner cartridges. Customers only pay for the toner, while Epson takes care of collecting and recycling used cartridges.

<Elimination of hazardous substances>

The LP-S300 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/>

Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan

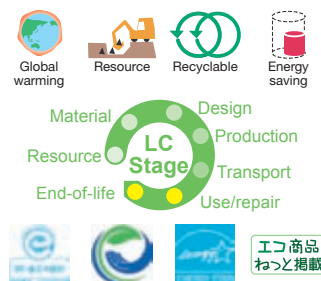
Tel +81-266-52-3131

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, Europe



LP-S300 (Epson AcuLaser M2000D/M2010D)

EP-3-034

OA/IT equipment
printers

Thermal Receipt Printer, TM-T88IV

Environmental performance

In addition to providing enhanced basic features such as 200 mm/sec printing at a maximum, the TM-T88IV consumes 28% less energy than the previous model (TM-T88III). Its energy-saving design contributes to improvements in business efficiency and service quality.

<Energy saving>

The TM-T88IV has 28% less total energy consumption per day than the previous model (TM-T88III).

<Resource saving>

The TM-T88IV has a 43% reduction of board space compared with the previous model (TM-T88III).

<Elimination of hazardous substances>

The TM-T88IV conforms to the EU RoHS directive.

Seiko Epson Corporation

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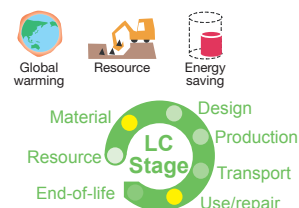
Tel +81-266-52-3131

URL <http://www.epson.co.jp/e/community/environment/>

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

URL <http://www.epson.co.jp/e/community/>

Available in: Worldwide



Thermal Receipt Printer TM-T88IV

EP-3-035

OA/IT equipment

scanners

A4 Flatbed Scanner CanoScan LiDE 200

Environmental performance

- (1) Energy saving: The power consumption of 85% has been reduced compared with the conventional scanner FB1210U by the LiDE (LED indirect exposure) technology.
- (2) Resource saving: 70% volume reduction and 58% weight reduction have been achieved in comparison with those of FB1210U.

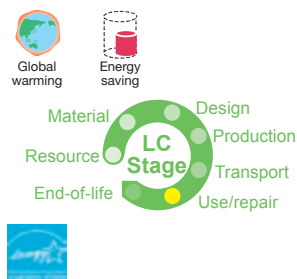
Product performance

- (1) Up to 4800dpi high-resolution scanning
- (2) 4 easy buttons for one-touch operation

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan
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 URL <http://www.canon.com>

Available in: Asia



CanoScan LiDE 200

EP-3-036

OA/IT equipment

scanners

Compact design Document scanner "imageFORMULA DR-2510C"

Environmental performance

- High energy-efficient and compact design with CMOS CIS sensor and light source of LED
- No wait-time to start scanning after pressing Power-Switch ON
- Automatic Power ON/OFF depending on the status of the connected PC
- Conforms to ENERGY STAR standards
- Sleep mode: 2.14W Standby mode: 0.14W (Official data of application for ECCJ)
- Scanning: 16W or less
- Compliant with European RoHS Directive

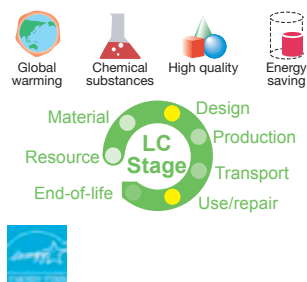
Product performance

- B&W/Color: 25ppm (A4/LTR portrait, 200dpi)
- Reliable feeding of a wide range of documents including embossed plastic cards
- Ultrasonic Double Feed Detection
- Folio function to scan larger-size documents up to A3
- Advanced image processing functions
- Auto-paper size detection, Auto-deskew, Skip blank page, Text Orientation Recognition, Auto Color Detection, etc.
- Convenient "One-touch" job buttons for advanced registration of popular scan-jobs

CANON ELECTRONICS INC.

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 URL <http://www.canon-elec.co.jp/english/aboutus/index.html>
 URL <http://www.canon-elec.co.jp/english/products/ims/dr2010c-2510c/index.html>

Available in: Worldwide



Document Scanner DR-2510C

EP-3-037

OA/IT equipment

scanners

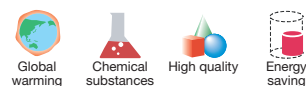
Hi-performance A4-size color Document scanner "imageFORMULA DR-4010C"

Environmental performance

- High energy-efficient and compact design with CMOS 3-line CIS sensors and light source of LED
- No wait-time to start scanning after pressing Power-Switch ON
- Conforms to ENERGY STAR standards
- Sleep mode: 2.68W Standby mode: 0W (Official data of application for ECCJ)
- Scanning: 25W or less
- Compliant with European RoHS Directive

Product performance

- A4-size color scanner featuring advanced image processing functions
- B&W/Color: 42ppm (A4/LTR portrait, 200dpi)
- Enhanced color accuracy with advanced 3-line CMOS sensor and 3D Color Correction
- Reliable and flexible feeding of a wide range of documents
- Front operation with U-Turn Path feeding
- Straight Pass feeding for plastic cards
- Ultrasonic Double Feed Detection
- Advanced image processing functions
- Auto-paper size detection, Auto-deskew, Skip blank page, Text Orientation Recognition, Auto Color Detection, etc.



CANON ELECTRONICS INC.

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 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/dr4010c/index.html>

Available in: Worldwide

Document Scanner DR-4010C

EP-3-038

OA/IT equipment

scanners

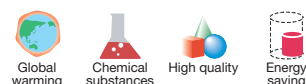
Robust, top-of-the-line model A3 Document scanner "imageFORMULA DR-X10C"

Environmental performance

- High energy-efficient and compact design in the class with CMOS 3-line CIS sensors and light source of LED
- No wait-time to start scanning after pressing Power-Switch ON
- Conforms to ENERGY STAR standards
- Sleep mode: 4.09W Standby mode: 0W (Official data of application for ECCJ)
- Scanning: 125W or less
- Compliant with European RoHS Directive

Product performance

- Robust, top-of-the-line model for high speed, high volume A3 document scanner
- B&W/Color: 42ppm (A4/LTR portrait, 200dpi)
- Reliable and flexible feeding of a wide range of documents
- Auto Retry feeding function to prevent from double feeding
- Multi-zoning Ultrasonic Double Feed Detection on 3 positions
- Dust-free scanning system with 3 steps cleaner mechanism
- Advanced image processing functions
- Auto-paper size detection, Auto-deskew, Skip blank page, Text Orientation Recognition, Auto Color Detection, etc.



CANON ELECTRONICS INC.

3-17-7, Shibaura, Minato-ku, Tokyo, 108-0023, Japan
 Tel +81-3-5419-3816 Fax +81-3-5419-3824
 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/dr-x10c/index.html>

Available in: Worldwide

Document Scanner DR-X10C

EP-3-039

OA/IT equipment

scanners

fi-5900C — A3, high-speed, energy-saving, duplex image scanner

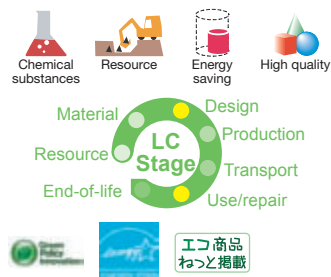
Environmental performance

- Energy saving: The fi-5900C is an international ENERGY STAR program standards meeting high output production scanner that consumes very little energy, especially when in sleep mode.
- Eco-friendly materials: Bio-based plastics were incorporated into the fi-5900C's document ejection unit.
- The addition of document placement and removal time reduction technology enhances overall performance and reduces the fi-5900C's carbon footprint by 55%, compared to the previous model.
- EU RoHS compliant (See note 1)

Note 1: RoHS is a European Union directive that restricts the use of certain hazardous substances, such as lead, mercury, cadmium, hexavalent chrome, PBB and PBDE in electrical and electronic equipment.

Product performance

- The fi-5900C is a high speed color duplex ADF scanner that is capable of scanning up to 100 pages / 200 images per minute.
- Utilization of pre- and post-scanning processing technology into the fi-5900C minimizes user intervention and improves overall digitizing efficiency.



fi-5900C

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan
 Tel +81-42-788-7746 Fax +81-42-788-7745
 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/report/>

EP-3-040

OA/IT equipment

scanners

ScanSnap S300 — The world's smallest ultra-compact A4 ADF scanner

Environmental performance

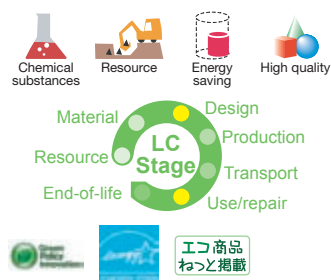
- Resource saving: A minimum amount of plastic and other materials is used to manufacture the S300, the world's smallest A4 ADF scanner.
- Energy saving: The S300 is an international ENERGY STAR program standards meeting product that consumes 3.2W or less when in sleep mode. (The S300 only requires 70% of the latest ENERGY STAR maximum requirement when in sleep mode, as demanded by the latest ENERGY STAR guidelines.)
- EU RoHS compliant (See note 1)

Note 1: RoHS is a European Union directive that restricts the use of certain hazardous substances, such as lead, mercury, cadmium, hexavalent chrome, PBB and PBDE in electrical and electronic equipment.

Product performance

- The S300 is small enough to be used just about everywhere.
- Not only is the 1.4kg S300 the world's smallest A4 ADF scanner, it also supports USB bus power for portable operation (See note 2).

Note 2: Two USB ports must be available on the computer to support USB bus operations with the S300.



ScanSnap S300

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan
 Tel +81-42-788-7746 Fax +81-42-788-7745
 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/report/>

EP-3-041

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 (See note 1)

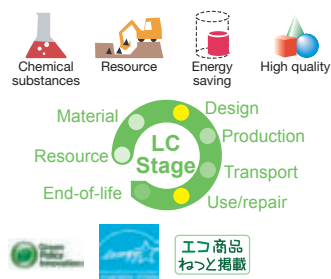
Note 1: RoHS is a European Union directive that restricts the use of certain hazardous substances, such as lead, mercury, cadmium, hexavalent chrome, PBB and PBDE in electrical and electronic equipment.

Product performance

- The fi-60F A6 flatbed color scanner offers first-rate speedy one-second scanning (200dpi, monochrome).

PFU LIMITED

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Tel +81-42-788-7746 Fax +81-42-788-7745
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/report/>



fi-60F

EP-3-042

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 1).
- Eco-efficiency factor (See note 2): Multi-feed and document jam detection enhanced performance improves scanning efficiency and reduces unnecessary energy consumption. The lengthening of the fi-6140's product life (the maximum number of documents that a scanner can scan during its 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 (See note 3)

Note 1: 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.

Note 2: Eco-efficiency factor: A method for comparing old and new products that quantitatively grasps improvements in both product environmental load and value (functionality and performance). This is an environmental index that promotes the creation of products that can provide even higher values at even lower environmental load.

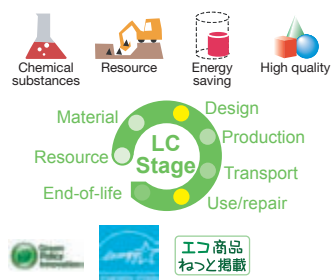
Note 3: RoHS is a European Union directive that restricts the use of certain hazardous substances, such as lead, mercury, cadmium, hexavalent chrome, PBB and PBDE in electrical and electronic equipment.

Product performance

- The compact A4 ADF color duplex high-speed fi-6140, which is capable of scanning an impressive 80 color (120 monochrome) images a minute, is ideal for decentralized scanning (A4, portrait, 200dpi).

PFU LIMITED

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Tel +81-42-788-7746 Fax +81-42-788-7745
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/report/>



fi-6140

EP-3-043

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 1).
- Eco-efficiency factor (See note 2): Multi-feed and document jam detection enhanced performance improves scanning efficiency and reduces unnecessary energy consumption.
- The lengthening of the fi-6140's product life (the maximum number of documents that a scanner can scan during its 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 (See note 3)

Note 1: Applies to A4 ADF / flatbed supporting scanners that are capable of 40ppm/80ipm speeds (A4, monochrome, 200dpi) that sell for a retail price of 300,000 yen or less.

Note 2: Eco-efficiency factor: A method for comparing old and new products that quantitatively grasps improvements in both product environmental load and value (functionality and performance). This is an environmental index that promotes the creation of products that can provide even higher values at even lower environmental load.

Note 3: RoHS is a European Union directive that restricts the use of certain hazardous substances, such as lead, mercury, cadmium, hexavalent chrome, PBB and PBDE in electrical and electronic equipment.

Product performance

- The compact A4 ADF / flatbed supporting color duplex high-speed fi-6240, which is capable of scanning an impressive 80 color (120 monochrome) images a minute, is ideal for decentralized scanning (A4, portrait, 200dpi).

PFU LIMITED

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan

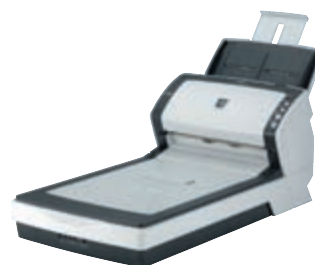
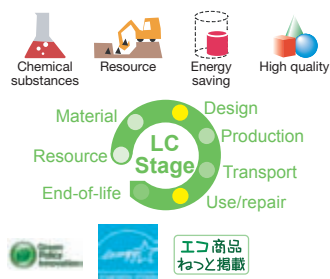
Tel +81-42-788-7746 Fax +81-42-788-7745

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/report/>



fi-6240

EP-3-044

OA/IT equipment

scanners

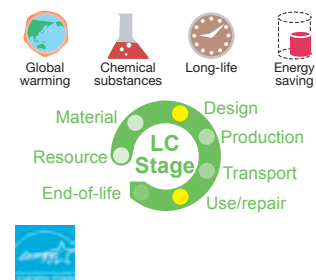
Desktop type OCR scanner S1500 for high-speed data entry from paper documents

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.



Desktop type OCR scanner S1500

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-3-045

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.

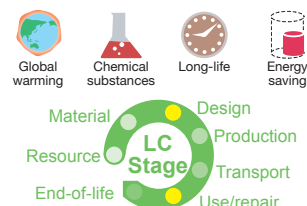
Product performance

- 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
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 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

scanners

Color Document Scanner: KV-S4085CW/S4065CW

Environmental performance

Conforms to the international ENERGY STAR program.
 Stand by power consumption reduced by 21%.
 Stand by power consumption 3.3W.
 Compared to the 2007 model KV-S3085(4.2W).

Environmental consideration material

- Specific brominated flame retardants(PBB and PBDE) are not used in appearance plastic material.
- Pb-free solder is used for circuit board.
- A chrome free surface treated steel plate that doesn't contain the hexavalent chromium is used for the sheet metal of the product.

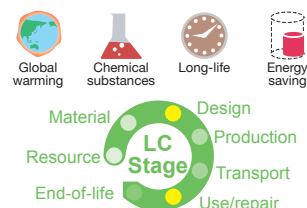
Product performance

- Scanning speed (A4 size portrait)80ppm:KV-S4085CW, 60ppm:KV-S4065CW
- Accurately Feeds Various Sizes of Documents
- Intelligent Feed Control
- Convenient Function for Long Documents(302×2540mm)
- Ultrasonic Double-Feed Detection
- Stapled Document Detection
- High-Quality Image Processing
- Automatic Binary/Colour Distinction
- Multi Colour Dropout
- Automatic Crop and De-Skew

Panasonic Communications Co., Ltd.

1471, Murata-Machi, Tosu City, Saga, 841-8501, Japan
 Tel +81-942-81-2723 Fax +81-942-81-2749
 URL <http://panasonic.biz/doc/scanner/>
 URL <http://panasonic.net/csr/>

Available in: Global



KV-S4085CW/KV-S4065CW

Eco-materials

Eco-components

Eco-products // OA/IT equipment

Eco-services

EP-3-047

OA/IT equipment

scanners

Personal Color Scanner, GT-F720

Environmental performance

This is a CCD (charge coupled device) scanner that uses a white LED (light emitting diodes) as a light source instead of the usual cold cathode fluorescent lamp (CCFL).

<Energy saving>

Because images can be exposed in an instant and the light source can be turned off immediately after scanning, power consumption in Ready mode is slashed by as much as 61%.

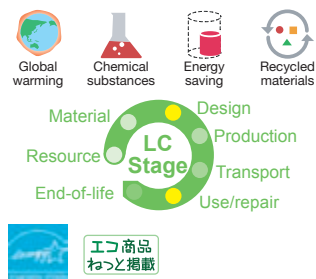
<Elimination of hazardous substances>

The GT-F720 conforms to the EU RoHS directive.
LEDs are non-mercury light sources.

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: Worldwide



GT-F720 (Epson Perfection V300 Photo)

EP-3-048

OA/IT equipment

projectors

Power Projectors SX7/X700

Environmental performance

- (1) 0.7 type LCOS (Liquid Crystal On Silicon) and Canon's proprietary AISYS (Aspectual Illumination System) and its new lamp system improve the effect of light quality control and the luminous efficiency of the lamp. 50% longer life of the lamp contributes to resource savings.
- (2) Compact body and weight of only 4.8 kg contribute to resource savings.
- (3) 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).
- (4) Lead-free glass is utilized to produce the environmentally sound lenses.

Product performance

- (1) First to achieve the brightest 4,000 lumens in Real XGA class.
- (2) LCOS panel achieves lattice-free, smooth images.
- (3) Silent design to project images at 31dB with high brightness.
- (4) The Auto Setup function allows you to install the projector easily.

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>

Available in: Japan



EP-3-049

OA/IT equipment
projectors

Power Projector X80

Environmental performance

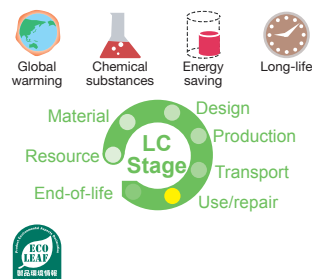
- (1) Compact body and weight of only 5.2 kg contribute to resource savings.
- (2) Compliance with the RoHS Directive: restriction and prohibition of the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls(PBB) and polybrominated diphenyl ethers (PBDE).
- (3) Lead-free glass is utilized to produce 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) Canon's LCOS (Liquid Crystal On Silicon) panel achieves lattice-free, seamless images.
- (4) 3,000 lumens for displaying images without darkening the conference room.
- (5) The Auto Setup function allows you to install the projector easily.

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>



EP-3-050

OA/IT equipment
projectors

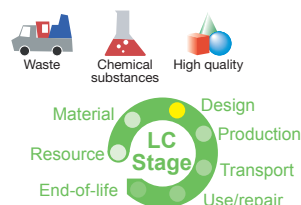
Compact and Lightweight Mobile Projector with Low Noise

Environmental performance

- Mitigation of climate change: 49% improvement in brightness/power efficiency by selection of the optimum optical unit.
- Efficient use of resources: 90% reduction in the weight of packaging materials by substituting packaging materials with a carrying case.
- Management of chemicals: Halogen-free printed circuit board

Product performance

- Low noise: 16% reduction in noise (dB) thanks to enhanced cooling performance.
- High picture quality: Vivid color rendering by Toshiba's unique color compensation technology.
- Simple setting: Equipped with fully automatic keystone correction for simple setting.



TOSHIBA CORPORATION Digital Media 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>

Projector TLP-X100

EP-3-051

OA/IT equipment
DLP™ projectors

The PT-DZ12000 three-chip DLP™ projector

Environmental performance

- Achievement of both high brightness and energy saving. Improvement of power consumption by 0.125 W per lumen
- Use of a lead-free lens and non-halogen resin
- Improved compactness and reduced weight due to the adoption of a liquid cooling method
- Power saving mode enabled by lamp switching

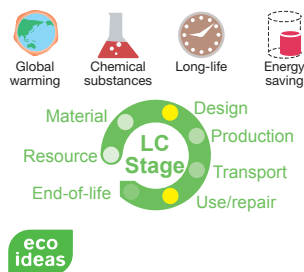
Product performance

- High brightness (12,000 lm)
- High resolution (WUXGA: 1,920 x 1,200)
- Geometric correction
- Multi-screen support system
- Detail clarity processor

Panasonic Corporation, AVC Networks Company

2-15 Matsuba-cho, Kadoma City, Osaka, 571-8503, Japan
 Tel +81-6-6905-4363 Fax +81-6-6905-4376
 URL <http://panasonic.biz/projector>
 URL <http://panasonic.net/csr/>

Available in: Global



3Chip DLP™ Projector: PT-DZ12000

EP-3-052

OA/IT equipment
LCD projectors

The F200NT LCD projector

Environmental performance

- Improvement of power consumption per lumen (0.09 W)
- 5,000-hour lamp replacement cycle
- Use of a lead-free lens and non-halogen resin
- Abolition of polystyrene foam for packaging
- Energy saving functions including a power-off timer

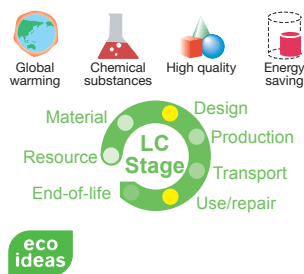
Product performance

- 5,000-hour lamp replacement cycle for extended brightness and clarity
- Maintenance reduction through the use of an ARF (auto-rolling filter)
- Enhanced visibility by Daylight View 4
- Feature-rich interface
- Double zoom and optical axis shift allow flexible set-up depending on the situation

Panasonic Corporation, AVC Networks Company

2-15 Matsuba-cho, Kadoma City, Osaka, 571-8503, Japan
 Tel +81-6-6905-4363 Fax +81-6-6905-4376
 URL <http://panasonic.biz/projector>
 URL <http://panasonic.net/csr/>

Available in: Global



LCD Projector: PT-F200NT

EP-3-053

OA/IT equipment
network cameras

VB-C300

Environmental performance

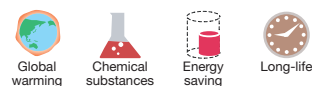
- (1) Compliance with the RoHS Directive: restriction and prohibition of the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).
- (2) Lead-free glass is utilized to produce the environmentally sound lenses.

Product performance

- (1) Auto-focus wide angle lens with a 70°, 9.6x (2.4x optical) zoom lens.
- (2) Clear, noise-free color video, even in low-light conditions.
- (3) Progressive scan video is used for smooth, high-quality video of rapidly moving subjects.
- (4) Audio can be sent and received in real time.
- (5) PoE (Power over Ethernet) switch connected to LAN cable supplies power and transmits data simultaneously.

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>



112kg-CO₂
Inspection
Ecoleaf

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



EP-3-054

OA/IT equipment
cameras

Excellent Picture Quality. Equipped with a 2.3M-pixel 1/3-inch Color CMOS Sensor

Environmental performance

- Mitigation of climate change: 13% reduction in power consumption thanks to the adoption of a CMOS sensor.
- Efficient use of resources: 35% reduction in the number of parts and 12% reduction in weight.

Product performance

- Compact Full HD: The smallest and the lightest among models capable of full HD output (as of September 2008).
- DVI-I output: Possible to output 60 frames/sec to an ordinary full HD monitor.
- High picture quality: Low-noise processing and 6-color matrix function by the novel signal processing.



TOSHIBA CORPORATION Digital Media 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>



Full HD Camera for FA IK-HR1D

EP-3-055

OA/IT equipment

facsimiles

Personal Facsimiles: KX-PW507DL

Environmental performance

The power consumption is reduced by 50% compared to the previous model (KX-PW506DL) at standby mode for a CDL handset due to the power-saving technology development. Similarly, the power consumption at standby mode for a base unit is marked 0.7W, which is lower than the previous model, KX-PW506DL's wattage, 0.8W.

Product performance

Bright and easy to see 3.2 inch LCD

A large white 3.2-inch LCD is used, which makes it bright and easy to see the display. Consequently, it is easy to recognize a name and a model name on the LCD, shown in Chinese characters.

Smart contactless charge mode for CDL handset

The slim CDL handset adopts contactless charge mode and keeps dust away. In addition, it is stain-resistant.

Foldable document tray

It is designed as an easy-to-use tray, which has a paper tray and a document feeder separately.



Panasonic Communications Co., Ltd.

4-1-62 Minoshima, Hakata-ku, Fukuoka, 812-8531, Japan

Tel +81-92-477-1821 Fax +81-92-477-1487

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

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

Available in: Japan

Digital cordless plain paper facsimile and 1 cordless handset: KX-PW507DL

EP-3-056

OA/IT equipment

facsimiles

Personal Facsimiles: KX-FT986CN

Environmental performance

Power consumption is reduced by energy efficient design
CHINA CERTIFICATE For ENERGY CONSERVATION PRODUCT:
No. CQC08701026066

Environmental consideration material

- Specific brominated flame retardants (PBB and PBDE) are not used in appearance plastic material.
- Pb-free solder is used for circuit board.
- A chrome-free surface treated steel plate that doesn't contain hexavalent chromium is used for the sheet metal of the product.

Product performance

- Easy operation with the navigator key
- 10 one-touch dial used easily
- English and Chinese display can be chosen on the LCD
- 13 models in total including paper cutter and answering machine, etc.



Panasonic Communications Co., Ltd.

1471, Murata-Machi, Tosu City, Saga, 841-8501, Japan

Tel +81-942-81-2723 Fax +81-942-81-2749

URL http://panasonic.cn/products/biz_solutions/doc_solutions/fax/

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

Available in: China

Personal Facsimiles: KX-FT986CN

EP-3-057

OA/IT equipment
handy terminals

CANON HANDY TERMINAL GT-1 SERIES

Environmental performance

Conforms to the EU RoHS Directive.

Compared with a previous product:

- (1) Down sizing improvement of 25.9%
- (2) Reuse and recyclable rate improvement of 122.6%

Product performance

The Canon Handy Terminal GT-1 series was designed to have the following features as a rugged mobile terminal

- (1) An easy input system in a stylish body (large keyboard, large display).
- (2) Environmental resistance (IP54 class for dust and water resistance).
- (3) Shock resistance (1.5m drop test).
- (4) Prolonged operational time (2 batteries can be installed for up to 16 hours of operation).
- (5) Wide connectivity (Infrared, Serial/USB, Bluetooth and WLAN are standard).
- (6) A high performance product with high specifications in term of processor speed, memory storage capacity, latest miniSD memory storage.

CANON ELECTRONICS INC.

3-16-20, SHIBAURA, MINATO-KU, TOKYO, 108-0023, Japan

Tel +81-3-5419-3816 Fax +81-3-5419-3824

E-mail kankyo@canon-elec.co.jp

URL <http://www.canon-elec.co.jp>

URL <http://www.canon-elec.co.jp/products/ht/separate.html>

Available in: Japan, Europe



EP-3-058

OA/IT equipment
handy terminals

CANON HANDY TERMINAL GT-10/11 SERIES

Environmental performance

Conforms to the EU RoHS Directive.

Compared with a previous product:

- (1) Down sizing improvement of 12.1%
- (2) Reuse and recyclable rate improvement of 68.8%

Product performance

The Canon Handy Terminal GT-10 and GT-11 series were designed to have the following features as a rugged mobile terminal:

- (1) Two thermal printers type are available depending on customer requirement.
- (2) An easy input system in a stylish body (large keyboard, large display).
- (3) Environmental resistant (IP54 class for dust and water resistance, except printer unit).
- (4) Shock resistant (1.6m drop test).
- (5) Prolonged operational time (Battery pack HB-400 for up to 12 hours of operation).
- (6) Wide connectivity (Infrared, Serial/USB are standard. GT-10BCW, GT-10BCLW and GT-11BCW have built-in Bluetooth and Wireless LAN).
- (7) A laser scanner model is available for barcode data collection (GT-10BCLW model only).

CANON ELECTRONICS INC.

3-16-20, SHIBAURA, MINATO-KU, TOKYO, 108-0023, Japan

Tel +81-3-5419-3816 Fax +81-3-5419-3824

E-mail kankyo@canon-elec.co.jp

URL <http://www.canon-elec.co.jp>

URL <http://www.canon-elec.co.jp/products/ht/index.html>

Available in: Japan, Europe



EP-3-059

OA/IT equipment

mobile information terminals

FLEPia — the world's first portable information terminal featuring color electronic paper

Environmental performance

FLEPia is the world's first portable information terminal that uses color e-paper, and is characterized by its slim lightweight design and low power consumption. The use of e-paper for the display means that no power is used in maintaining static images. A small amount of power is used only while rewriting subsequent pages, enabling a longer battery life than those of notebook PCs and PDAs. The A4 version (12 inches) weighs 560 g, and the smaller A5 version (8 inches) weighs only 350 g. Both models are 12 mm thick, and are capable of up to 50 hours of continuous operation on a single charge ^{*1}. Users can carry a variety of content, thereby contributing to the realization of a paperless society.

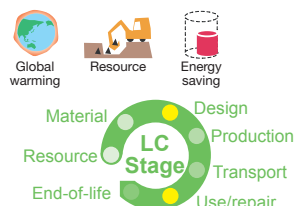
^{*1} When 3,000 pages of eight-color images are rewritten at a content display interval of one minute.

Product performance

- Content can be downloaded using the default high-speed wireless LAN.
- Color display is as easy on the eye as paper.
4,096 colors with XGA 768 x 1,024 resolution
- Touch panel and buttons enable quick operation.

Fujitsu Frontech Limited

1776 Yanokuchi, Inagi-shi, Tokyo, 206-8555, Japan
Tel +81-42-377-0445 Fax +81-42-379-6500
Contact <http://www.frontech.fujitsu.com/en/contact/>
URL <http://www.frontech.fujitsu.com/en/>
URL <http://www.frontech.fujitsu.com/en/release/20070420.html>
URL <http://www.fujitsu.com/global/about/environment/report/>



FLEPia

EP-3-060

OA/IT equipment

cellular/PHS telephone sets

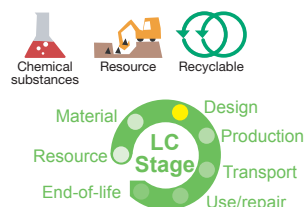
Compact Mobile Phone with Simple Operation for Sports Lovers

Environmental performance

- Efficient use of resources: Efficient resource utilization through the miniaturization of parts, reduction of the number of parts, and high-density packaging.
- Management of chemicals: Elimination of the use of 15 specified substances. Reduced use and substitution of polyvinyl chloride (PVC) and brominated flame retardant (BFR) in principal parts.

Product performance

- Compact body: Palm-held, straight type for easy access and quick operation.
- Compatible with Run & Walk application: Automatic management of running and walking data is available on the phone.



Sportio

TOSHIBA CORPORATION Mobile Communications 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

EP-3-061

OA/IT equipment

cellular/PHS telephone sets

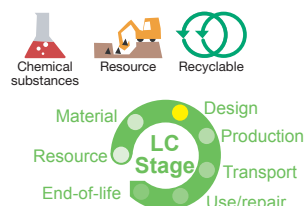
One-segment Mobile Phone with Excellent Texture

Environmental performance

- Efficient use of resources: Efficient resource utilization through the miniaturization of parts, reduction of the number of parts, and high-density packaging.
- Management of chemicals: Elimination of the use of 15 specified substances. Reduced use and substitution of polyvinyl chloride (PVC) and brominated flame retardant (BFR) in principal parts.

Product performance

- Chic design: Totally coordinated chic design using materials offering excellent texture.
- Ease of viewing: Clear-screen LCD for enhanced visibility in sunlight.



823T

TOSHIBA CORPORATION Mobile Communications 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

EP-3-062

OA/IT equipment

personal computers

Endeavor ST120 — a new ultra-compact PC of environment-conscious type

Environmental performance

Endeavor ST120 has achieved a drastic savings of electric power and resources by MoDT. MoDT means Mobile on Desk-Top, which is the ultra-compact desktop personal computer composed of notebook PC devices.

Endeavor ST120, a desktop PC designed not only for maximum energy efficiency but also with the utmost attention to everything from materials selection to parts shipping method, succeeds in dramatically reducing the global warming impact across its life cycle.

Endeavor ST120 is just an environment-conscious personal computer in a coming age.

Product performance

■ Small Energy

Compliant with International ENERGY STAR Program, Ver.4.0. Consumes only 25.2 Watts of power in Idle state.

■ Small Size

An ultra-compact PC that can be used flat or upright. Fits anywhere.

■ Small Sound

Engineered to run as quietly as a notebook PC. Purrs along at less than 22dB, for a pleasant work environment.



121.5kg-CO ₂	Resource/Materials/ Production/Transfer/Use/ End-of-Life
Inspection Ecoleaf	



Desktop computer "Endeavor ST120"

EPSON DIRECT CORPORATION

1059 Muraimachi Yoshikawa 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/st120>

Available in: Japan

EP-3-063

OA/IT equipment
personal computers

Endeavor NA802 —environmental performance without sacrificing functionality

Environmental performance

Endeavor NA802 with a 13.3" wide LCD display has been equipped high-performance graphics, a robust and durable design, and energy-saving features.

- Long-lasting beauty with Self-Repairing Clear coat
The Self-Repairing Clear coating on the LCD back cover protects your investment from scratches during transport.
- Magnesium body with exceptional durability
Structural portion of the body is made from a magnesium alloy to protect your PC from daily wear and tear.
- International ENERGY STAR Program-compliant
Compliant with International ENERGY STAR Program Ver.4.0.

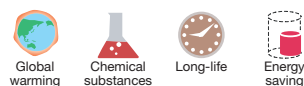
Product performance

- Strong graphics performance
This model comes standard with high-end graphics. Now you can enjoy high performance in 3D games and CAD applications.
- Equipped with new SSD
Solid-state drives provide a boost in read speeds over conventional hard drives. The lack of moving parts provides higher durability and lower power consumption.

EPSON DIRECT CORPORATION

1059 Muraimachi Yoshikawa 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/na802>

Available in: Japan



140.2kg-CO₂

Inspection
Ecoleaf

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



notebook computer "Endeavor NA802"

EP-3-064

OA/IT equipment
personal computers

Lightweight and low-environmental-impact mobile PC

Environmental performance

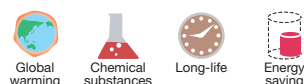
- Mitigation of climate change: Low power consumption thanks to the low-voltage unit and system power management.
- Efficient use of resources: Resource saving by the miniaturization of substrates, thin LCD/DVD, and thin casing.
- Management of chemicals: Adoption of mercury-free LED backlight LCD and halogen and antimony compound-free substrate.

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 Personal Computer & 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>



dynabook SS RX2

EP-3-065

OA/IT equipment
personal computers

The FMV-E8270 energy-saving notebook

Environmental performance

• Achieved AAA ^{*1} and AA ^{*2} ratings for category I of energy consumption efficiency in the 2007 standards of the Law Concerning the Rational Use of Energy.

• Conforms to the ENERGY STAR Program ^{*1}.

^{*1} Model with an Intel® Core™ 2 Duo processor

^{*2} Model with an Intel® Celeron® processor

Product performance

• 2.3-kg lightweight body ^{*1}. The unit's mobility, which allows it to be carried around in the office, combined with its outstanding specifications that also allow it to serve as a main machine, are expected to result in enhanced business efficiency.

• 15.4-inch wide LCD. This model can display approx. 1.3 times more information in WXGA and approx. 2.2 times more information in WSXGA+ than a XGA LCD screen.

^{*1} Without DVD-ROM drive

Fujitsu Limited

1-1 Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, Kanagawa, 211-8588,

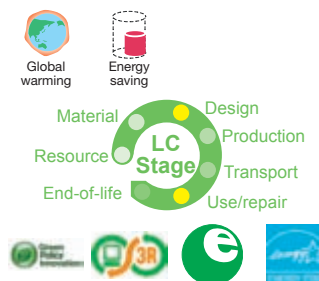
Japan

Tel +81-44-754-3413 Fax +81-44-754-3326

Contact <http://www.fujitsu.com/global/about/environment/contact.html>

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/about/environment/report/>



FMV-E8270

EP-3-066

OA/IT equipment
personal computers

The FMV-D5170 desktop PC — compliant with the ENERGY STAR Program

Environmental performance

• Conforms to the ENERGY STAR Program.

This product has a CPU with outstanding power saving functions. Compared with other desktop PCs ^{*1}, it provides outstanding energy saving performance with a power consumption of about 26 W (a reduction of 46% from the previous model). Introducing this product lowers running costs.

• Noise level of about 20 dB (A) ^{*2} in standby mode

A low noise level of about 20 dB (A) ^{*2} in standby mode was realized through the use of a notebook CPU (which has a lower heating value than those for desktop PCs) and by reducing the fan speed.

^{*1} Comparison with the FMV-D5270 Intel® Celeron® 430 (1.80 GHz)

^{*2} Value actually measured in-house using standard configuration.

Product performance

• Multiple Monitor Function

Two-port display interface by default (Mini D-SUB15-pin (analog) x 1, DVI-D 24-pin (digital) x 1). Enables simple set-up of a multiple monitor environment.

Fujitsu Limited

1-1 Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, Kanagawa, 211-8588,

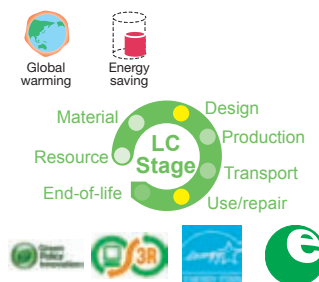
Japan

Tel +81-44-754-3413 Fax +81-44-754-3326

Contact <http://www.fujitsu.com/global/about/environment/contact.html>

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/about/environment/report/>



FMV-D5170

^{*}Displays are sold separately.

EP-3-067

OA/IT equipment

office computer systems

Secure Client Solution (SCS)

Environmental performance

Hitachi SCS realizes high security client-computing environments together with the reduction of energy consumption and CO₂ emission.

- 43% power savings compared to ordinary desktop computers.
- Up to 64% reduction of energy consumption by the use of "SAVINGDA Pro", a power-saving software for Hitachi blade PCs.
- Long life capability achieved by hard-disk-less characteristics and server-based computing.

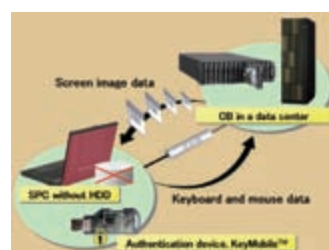
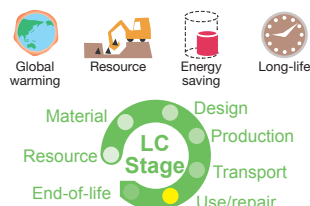
Product performance

The SCS consists of three featuring products; a Hitachi original thin client computer named "Security PC" (SPC), a special-purpose authentication device, "KeyMobile™", and a blade PC, "Client Blade" (CB). The SCS can reduce the risk of information leakage with no hard-disk-drive and no data output connectors, while the KeyMobile™ authenticates the user of the SPC and the CB to reduce the risk of unauthorized use.

Hitachi, Ltd., Platform Solutions Division

Hitachi Systemplaza Shinkawasaki, 890 Kashimada, Saiwai, Kawasaki,
212-8567, Japan
Tel +81-44-549-1317 Fax +81-44-549-1177
E-mail info-dokop@ml.itg.hitachi.co.jp
URL <http://www.hitachi.co.jp/>
URL <http://www.hitachi.co.jp/spc>

Available in: Japan



Hitachi Secure Client Solution

EP-3-068

OA/IT equipment

full-IP telephone systems

Full-IP Telephone System (PBX): KX-NCP500

Environmental performance

- Reduced System power consumption by energy-conservation design of IP-Phones.
System power consumption reduced by 54%.
System power consumption 692 kWh/year.
Compared to the 2003 model KX-TDA100(1,508kWh/year).
- Eco-leaf (Product Environmental Aspects Declaration): No.BS-08-009
- Life Cycle Impact (Global Warming: CO₂ equivalent) 2,887kg (76 ports system).
For details, please visit: http://202.214.40.151/english/ecoleaf/pub_label.cfm

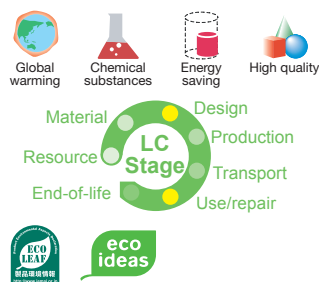
Product performance

- Small IP-Telephone System
- 19 inch rack installation
- Main unit size 430 x 340 x 88 mm
- 1. 8 IP-Trunk, 40 IP-PT(32 SIP Phone) for Small & Home office.
- 2. Provides both PBX features and applications in one package.
- 3. Easy operation by the "large and color touch-screen" of the IP-Phone.
- 4. "Network camera monitor" without using video server.

Panasonic Communications Co., Ltd.

4-1-62 Minoshima, Hakata-ku, Fukuoka, 812-8531, Japan
Tel +81-92-477-1103 Fax +81-92-477-1487
URL <http://panasonic.com.sg/web/pcatId/CatLev1/4>
URL <http://panasonic.net/csr/>

Available in: Global



Full-IP PBX: KX-NCP500

EP-3-069

OA/IT equipment

full-IP telephone systems

Full-IP Telephone System (PBX): KX-NCP1000

Environmental performance

- Reduced system power consumption by energy-conservation design of IP-Phones. System power consumption reduced by 54%. System power consumption 1,257 kWh/year. Compared to the 2003 model KX-TDA200 (2,778kWh/year).
- Eco-leaf (Product Environmental Aspects Declaration): No. BS-08-010
- Life Cycle Impact (Global Warming :CO₂ equivalent) 4,365kg (136 ports system). For details, please visit: http://202.214.40.151/english/ecoleaf/pub_label.cfm

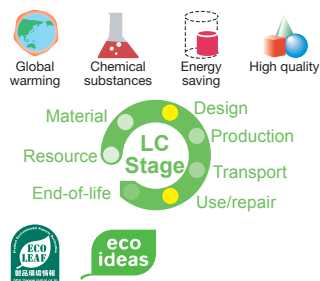
Product performance

- Small IP-Telephone System
- 19 inch rack installation
- Main unit size 430 x 340 x 130 mm
- 1. 32 IP-Trunk. 64 IP-PT(64 SIP Phone) for office.
- 2. Provides both PBX features and applications in one package.
- 3. Easy operation by the "large and color touch-screen" of the IP-Phone.
- 4. "Network camera monitor" without using video server.

Panasonic Communications Co., Ltd.

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 Tel +81-92-477-1103 Fax +81-92-477-1487
 URL <http://panasonic.com.sg/web/pcatId/CatLev1/4>
 URL <http://panasonic.net/csr/>

Available in: Global



Full-IP PBX: KX-NCP1000

EP-3-070

OA/IT equipment

hard disks

Energy Efficient Terabyte Hard Drive

Environmental performance

The Deskstar 7K1000.B (7,200 RPM, 3.5-inch drives) Series are available in a range of capacities from 160GB to 1TB. This product provides an exceptional blend of power efficiency and performance, making it an ideal solution for power-friendly consumer and commercial PCs.

- Energy efficient: New product design improves idle* power consumption up to 43% over its 1TB predecessor.
- * Standby system waiting for command processing
- Resource efficient: Improved record density, number of disks and number of heads are reduced approx 40% from its 1TB predecessor.

Product performance

- Data protective: Protection against data loss and piracy via Bulk Data Encryption (BDE) which is available as an optional feature to users.

Hitachi Global Storage Technologies

1803-05, Chinachem Exchange Square, 1 Hoi Wan Street, Quarry Bay, Hong Kong, Japan
 URL <http://www.hitachigst.com/>



Deskstar 7K1000.B Series

Eco-materials

Eco-components

Eco-products // OA/IT equipment

Eco-services

EP-3-071

OA/IT equipment

PC servers

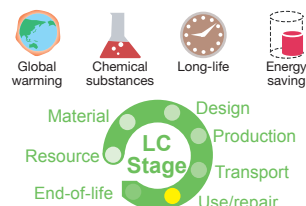
IA Server with a Built-in Intelligent Battery

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-hydrate 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 Personal Computer & 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-3-072

OA/IT equipment

PC servers

The ECONEL 100 S2 one-way entry server with outstanding cost performance

Environmental performance

The ECONEL 100 S2 is a compact tower PC server with low noise and low power consumption. It can be used in quiet places, e.g., hospitals and libraries, as well as on desks. It is ideal for small- and medium-size enterprises and SOHO environments.

• Outstanding low noise level

The unit has a low noise level of 21 dB - similar to the noise emitted from rustling leaves. This server offers a stress-free environment even when installed in offices.

• Superb installability

The depth of the unit has been reduced by about 10 cm compared with the previous model. Its reduced footprint means it can even be installed on a desk.

Product performance

• High performance

Intel® Xeon® processors and Intel® Pentium® processors have been adopted for the CPU.

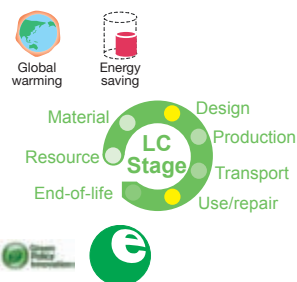
SATA hard disks, characterized by their high cost performance, are used. Expandable up to 2 TB.

• RAID-1 is possible for standard configuration.

Even in the event of problems, the system continues to operate and protect data.

• Stable operation is supported by system management and monitoring.

Early repair is enabled thanks to ServerView monitoring software that catches all hardware faults or errors and identifies parts that require repair based on the details of errors.



PRIMERGY ECONEL 100 S2

Fujitsu Limited

1-1 Kamikodanaka, 4-chome, Nakahara-ku, Kawasaki, Kanagawa, 211-8588, Japan

Tel 81-0-44-754-3413 Fax +81-0-44-754-3326

Contact <http://www.fujitsu.com/global/about/environment/contact.html>

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/services/computing/server/ia/towerserver/econel100s2/>

URL <http://www.fujitsu.com/global/about/environment/report/>

EP-3-073

OA/IT equipment
enterprise server

SPARC Enterprise M3000 Server — the ultimate entry-level server

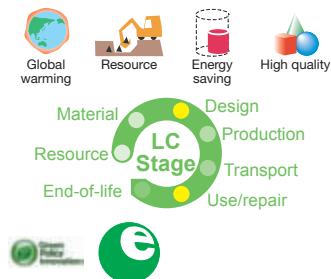
Environmental performance

A product forming part of our relentless pursuit for eco-friendliness. The SPARC Enterprise M3000 is the latest ecology server developed using the company's high-density packaging and cooling technologies. It uses power-saving components, such as the low-power-consumption SPARC64 VII processor, and highly efficient power sources. The fan speed is optimally controlled in accordance with temperature, and components that become hot easily are intensively ventilated as a result of the adoption of an air duct that quietly and efficiently cools the server. This has enabled the space the unit occupies and the amount of power consumed to be reduced by over 50% compared with the previous model in addition to the improved performance, annual CO₂ emissions are reduced by approximately 65%.

*1 Compared with the PRIMEPOWER 450 (4U) at AC 200 V

Product performance

Inheriting high performance and reliability developed for mission-critical systems. Featuring a 2.52 GHz SPARC64 VII processor (single CPU), this server packs all the functions needed for business into a 2U chassis, including a multithread environment (with a quad core and eight threads). It can cover a wide range of operations using the most advanced functions of any entry-level model. It also inherits the RAS technology of its predecessors, and features many reliability functions that enable continued system operation, such as data protection functions, dynamic degradation for each part of the CPU cache memory and core, and eXtended System Control Facility (XSCF). This product firmly supports clients' business activities as a 365-day-24-hour mission-critical system.



SPARC Enterprise M3000

Fujitsu Limited

1-1 Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, Kanagawa, 211-8588, Japan

Tel +81-44-754-3413 Fax +81-44-754-3326

Contact <http://www.fujitsu.com/global/about/environment/contact.html>

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/services/computing/server/sparcenterprise/>

URL <http://www.fujitsu.com/global/about/environment/report/>

EP-3-074

OA/IT equipment
blade servers

BladeSymphony

Environmental performance

BladeSymphony has 3 models, the high-end model "BladeSymphony1000" which is for the enterprise class systems, the medium model "BladeSymphony320" which is for data center and PC server consolidation, and the all-in-one model "BladeSymphony SP". BladeSymphony320 reduces 87% cables, 54% floor space, and 26% power consumption compared to 1U rack mount servers. In addition, BladeSymphony has achieved a much less power consumption level than the target designated by Japan Energy Saving Low; only 1/8 of the legal target. BladeSymphony also complies with the EU RoHS Directive.

Product performance

Blade Symphony SP is all-in one type blade server system. The features of BladeSymphony SP are; very easy setup which can be within 10 minutes, very silent noise level (45dB) which can be put in the library, and high reliability / availability realized by redundant configuration and N+1 auto recovery feature.



BladeSymphony SP

Hitachi, Ltd.

1, Horiyamashita, Hadano-shi, Kanagawa-ken, 259-1392, Japan

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

URL http://www.hitachi.co.jp/products/bladesymphony_global/index.html

URL <http://www.hitachi.com/csr/>

Available in: Japan, USA

EP-3-075

OA/IT equipment
adapters

HD-PLC adapter: BL-PA300KT

Environmental performance

- The power consumption at operation mode is reduced by 25% compared to the previous model (BL-PA100).
- The power consumption at stand-by mode is significantly reduced by 75% compared to the previous model (BL-PA100) by featuring an automatic power save mode that works during stand-by mode.
(prevention of global warming and energy conservation)
- The weight of the main unit is reduced by 37% compared to the previous model (BL-PA100) by adoption of a high-density mounting board and streamlined circuit design.
(resource-saving)

Product performance

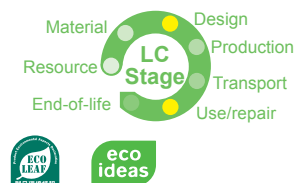
The world's smallest PLC adapter*

- * Volume comparison in terms of PLC adapters with more than 190 Mbps physical communication rate.
- Compact and simple design by plug-in function.
- Simply connecting PLC adapter to AC outlet can build home networks.
- Needs no data setting by PC.
- Easy button operation enables throughput test and installing more adapters.

Panasonic Communications Co., Ltd.

4-1-62 Minoshima, Hakata-ku, Fukuoka, 812-8531, Japan
Tel +81-92-477-1821 Fax +81-92-477-1487
URL <http://panasonic.co.jp/pcc/index.html>
URL <http://panasonic.net/csr/>

Available in: Japan



Compact type is same size as business card: BL-PA300KT

EP-3-076

OA/IT equipment
switchers

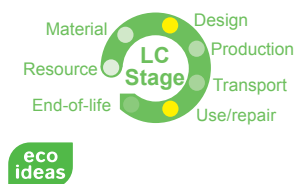
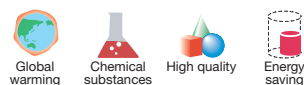
Multi-format Live Switcher: AV-HS400A

Environmental performance

Compared with our previous model, we achieved the reduction of power consumption (42%) and weight (61%) because of the improved IC and efficient energy design.

Product performance

AV-HS400A is a video switcher that allows program producers to switch video data input from a number of video sources, such as cameras and video servers or to mix more than one video source. It is equipped with 2D/3D video effects, picture-in-picture function, and multiview function.



Panasonic Corporation, System Solutions Company

4-3-1 Tsunashima-higashi, Kohoku, Yokohama City, 223-8639, Japan
URL <http://panasonic.net/pss/broad/product/switcher/av-hs400/index.html>
URL <http://panasonic.net/csr/>

Available in: Japan, North America, Europe, China

Multi-format Live Switcher: AV-HS400A

EP-3-077

OA/IT equipment

private branch exchange

IP-PBX MX900IP

Environmental performance

Using FPGA reduces the quantity of devices, and using low voltage device (3.3 V) reduces power consumptions compared to the conventional model. Our multi functional telephone terms of the backlight and lamps for function keys automatically when no operation applied for a constant period of time, which reduces the electricity consumption such as during nights or holidays.

Product performance

The demand for IP telephony rises rapidly in the small and medium sized enterprises.

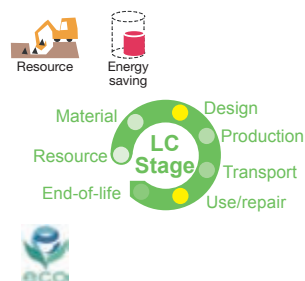
"MX900IP" strengthened a function of the IP telephony in order to meet the demand.

The business efficiency of the IP telephony is improved through IP telephone services provided by the carrier or cooperation with wireless LAN and dual mobile phone systems which eliminates extension cabling.

Hitachi Communication technologies, Ltd.

Omori Bellport D Bldg., 26-3, Minami Oi 6-chome, Shinagawa-ku, Tokyo,
140-0013, Japan
Tel +81-3-6404-1221
URL <http://www.hitachi-com.co.jp>

Available in: Japan



EP-3-078

OA/IT equipment

disk arrays

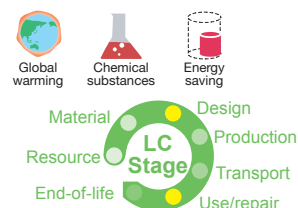
Disk Storage System Operating with Power Saving by "Storage Virtualization Technologies"

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 MKC0264A

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-3-079

OA/IT equipment
displays

ECO Plus Model — a display that enhances both energy savings and security

Environmental performance

A 17-inch display that enables power saving through a user presence/absence detection function

- An infrared sensor detects user presence or absence. In the case of user absence, the sensor automatically turns off the display.
- The display is turned on again automatically when the user returns to the area in front of the monitor.

While the user is absent, the unit consumes only one tenth of the power consumed when in full use. In terms of CO₂, introducing 500 of these units per year has the same energy saving effect as planting trees over an area equivalent to about 28 tennis courts. *1

*1 Assuming that the product is used for approx. eight hours per day with three hours of user absence.

Product performance

Peep prevention - Security enhanced with a password lock function.

A password can be set up when the user leaves (Windows lock function) *1. This prevents snooping or illegal input by third parties while the user is away. With the introduction of a user identification system based on fingerprints, for example, it can also be used as an absence detection solution. This model can be readily introduced, as it requires no special application or driver installation.

*1 When Windows is locked, USB cable connection with ESPRIMO is required.



Global warming



Energy saving



Resource



End-of-life



Design

Production

Transport

Use/repair



Fujitsu Limited

1-1 Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, Kanagawa, 211-8588, Japan

Tel +81-44-754-3413 Fax +81-44-754-3326

Contact <http://www.fujitsu.com/global/about/environment/contact.html>

URL <http://www.fujitsu.com/global/>

URL <http://www.fujitsu.com/global/about/environment/report/>



VL-176SR

EP-3-080

OA/IT equipment
external magnetic disk equipment

Hitachi Storage Solutions

Environmental performance

- Power consumption is reduced from 7 to 30% compared to the previous model.
- Lead-free solder (paste and flow) is used in circuit boards.
- Fully compliant with RoHS directive.

Product performance

- The storage solution unifies optimal consolidation of your storage infrastructure and provides best in class availability and performance to meet your business needs.



Global warming



Chemical substances



High quality



Energy saving



Resource



End-of-life

Design

Production

Transport

Use/repair



Hitachi, Ltd., Disk Array Systems Division

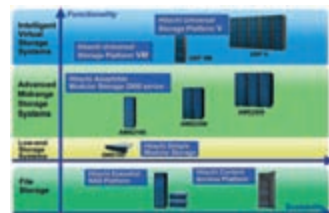
6-26-2 Minami-ooi, Shinagawa-ku, Tokyo, 140-0013, Japan

Tel +81-3-5471-2201 Fax +81-3-5471-2549

E-mail www-info-hss@ml.itg.hitachi.co.jp

Sold by Hitachi Data Systems Corporation (excluding Japan)

URL <http://www.hds.com/products/storage-systems/>



Available in: Worldwide

Storage products line-up

EP-3-081

OA/IT equipment

DVD multi drives

7mm-height DVD Super Multi Drive: UJ-844 Series

Environmental performance

UJ-844 is the world's thinnest 7 mm DVD Super Multi Drive; slimmer than the previously thinnest 9.5 mm optical disc drive.

This super multi drive, supporting seven types of recordable media including DVD-RAM, is not only thin but light with only 99 g in weight. When laptop computers face stronger demand to be slimmer, lighter, and more resource-saving, UJ-844 can significantly contribute to achieving these requirements.

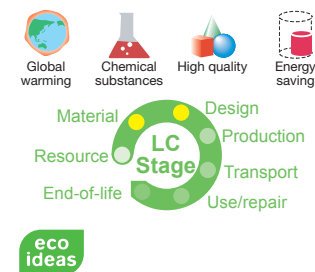
Product performance

1. World's thinnest 7 mm optical disc drive.
2. Weight reduction down to 99 g.
3. DVD super multi drive supporting seven types of recordable media (DVD+/-R, DVD+/-RW, DVD-RAM, CD-R/RW).
4. PVC-free

Panasonic Communications Co., Ltd.

1080 Takano Nagomi-Machi Tamana-Gun, Kumamoto, 865-0193, Japan
Tel +81-968-86-4838 Fax +81-968-86-4473
URL <http://panasonic.net/csr/>

Available in: Global



7mm-height DVD Super Multi Drive: UJ-844

EP-3-082

OA/IT equipment

electronic boards

Color Electronic Board: UB-2815C/2315C

Environmental performance

Reduction of paper

- The scanning data can be saved directly on the memory storage, moreover, the scanning data can be transmitted directly to PC.

Environmental consideration material

- Specific brominated flame retardants (PBB and PBDE) are not used in appearance plastic material.
- Pb-free solder is used for circuit board.
- A chrome-free surface treated steel plate that doesn't contain hexavalent chromium is used for the sheet metal of the product.

Product performance

Wide model: UB-2815C

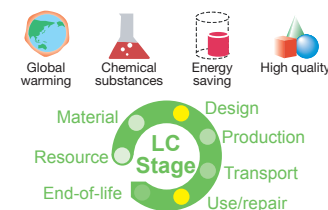
Standard model: UB-2315C

- Steel Board Type
- Color Scanning System
- SD Memory Card/USB Flash Memory Storage
- Color Output Capability
- USB PC Interface with Panasonic Document Management Software
- Automatic Date & Time Stamp
- Color LCD for Easy Operation

Panasonic Communications Co., Ltd.

1471, Murata-Machi, Tosu City, Saga, 841-8501, Japan
Tel +81-942-81-2723 Fax +81-942-81-2749
URL <http://panasonic.biz/doc/eboard/>
URL <http://panasonic.net/csr/>

Available in: Global



Wide model: UB-2815C Standard model: UB-2315C

EP-3-083

OA/IT equipment

electronic cash registers

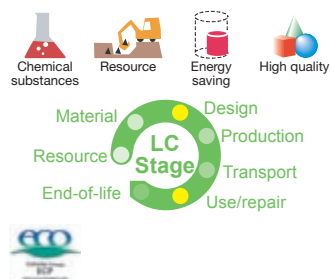
Compact Register with Large Color LCD Display and Scalability

Environmental performance

- Mitigation of climate change: 15% reduction in standby power consumption thanks to the LCD backlight off function, etc.
- Efficient use of resources: 22% reduction in the packaging size thanks to the adoption of a foldable LCD structure.
- Management of chemicals: Adoption of halogen-free material for printed circuit board.

Product performance

- Visibility: Enhanced visibility and operability thanks to the 8.5-inch color LCD display.
- Usability: Easy-to-use color-coded universal design keyboard.
- Scalability: Connectivity with LAN, automatic change calculator, checkout scanner, etc.



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

Scanning POS Register MA-2055

EP-3-084

OA/IT equipment

checkout scanners

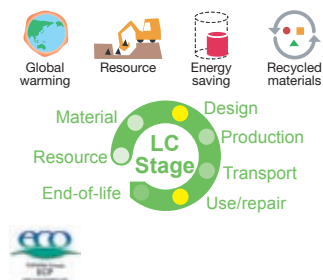
Slim New Body and the Industry's First Voice Guidance Function

Environmental performance

- Mitigation of climate change: 8% reduction in standby power consumption thanks to a lower voltage circuit element.
- 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

- Easy operation: The industry's first voice guidance function for easy operation.
- Usability: Adjustable scanner angle for improved reading performance.
- Convenience: Enhanced ease of storing with storable cable and duster tray.



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

Smart Line Scanner LS-790T

EP-3-085

OA/IT equipment
decolorable toner

Decolorable Toner for Repeated Use of OA Paper

Environmental performance

- Mitigation of climate change: Contribution to CO₂ emissions by reducing paper consumption.
- Efficient use of resources: 60% reduction in office paper purchase (results at Toshiba). Reduced cost.

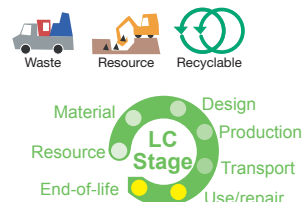
Product performance

- Use of plain paper: No need for special paper. Plain paper can be used.
- Possible to write on the paper: Possible to write on paper by using dedicated decolorable pens and markers.
- Easy of recycling: Use of a blue toner allows easy sorting of paper for reuse.
- Enhanced environmental awareness: Contribution to the enhancement of employees' environmental awareness and environmental education.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 Tel +81-3-3457-3760 Fax +81-3-5444-9188
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Decoloring unit for e-blue TMD-HE02,MFP suitable for e-blue e-STUDIO207,
 Decolorable Toner "e-blue" e-STUDIO207

EP-3-086

OA/IT equipment
automated teller machines

Automated Teller Machine "TS-E1B1"

Environmental performance

- (1) Reducing 32% of the product mass through optimal capacity design of unit mechanism (in comparison with the conventional models)
- (2) Reducing stand-by power consumption by 17% through low power design of control mechanism (in comparison with the conventional models)

Product performance

High performance Automated Teller Machine (ATM) with a compact body and large capacity for convenience store.



ATM TS-E1B1

Hitachi-Omron Terminal Solutions, Corp.

Ohsaki New City 3rd Building, 7th Floor, 1-6-3 Osaki, Shinagawa-ku, Tokyo,
 141-8576, Japan
 URL <http://www.hitachi-omron-ts.com/index.html>

EP-3-087

OA/IT equipment

cash dispense machines

Cash Dispense Machine "TS-E141"

Environmental performance

- Reducing stand-by power consumption by 40% through low power design of control mechanism and suitable capacity design of bill feeding unit (in comparison with the conventional models)

Product performance

- Large capacity and high performance with compact body



CD TS-E141

Hitachi-Omron Terminal Solutions, Corp.

Ohsaki New City 3rd Building, 7th Floor, 1-6-3 Osaki, Shinagawa-ku, Tokyo,
141-8576, Japan
URL <http://www.hitachi-omron-ts.com/index.html>

EP-4-001

Office supplies/furniture

chairs

FURSISYS multifunctional chair "REPLY"

Environmental performance

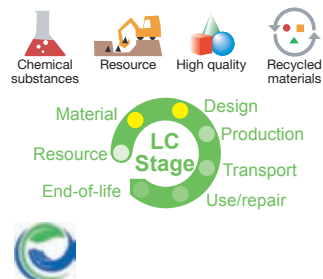
REPLY is ergonomic and eco-friendly. 1) The plastic recycling rate is more than 63%. 2) It doesn't use PVC but contains regulated chemical elements which are much less than standard quantity. 3) It is used for a long period of time because the mesh parts of the back and the seat are replaceable when 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.

FURSISYS,INC.

Fursys Bldg., 45-1, OGEum-Dong, Songpa-Gu, Seoul, 138-130, Korea
Tel +82-2-443-2818 Fax +82-2-443-3814
URL <http://www.fursys.com>



EP-4-002

Office supplies/furniture

chairs

A folding chair that can be stacked flat through a cylinder mechanism that directly connects the front and rear legs

Environmental performance

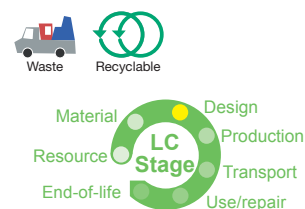
A simple differential mechanism is provided for each part to ensure easy part replacement and reliable long-term use. All parts are structured to allow classification by material using common household tools. For the difficult display of resin material names, these are shown for all parts weighing 30 g or more, ensuring easy classification. Materials that generate no hazardous substances and easily recyclable materials are used in the unit's production, and those that generate hazardous substances during treatment are eliminated. Polyolefin resin and iron are also used for easy recycling.

Product performance

W: 472 mm × D: 460 mm × H: 750 mm; SH: 430 mm; product weight: 3.4 kg

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCHO SUZUKA MIE, 510-0017, Japan



EP-4-003

Office supplies/furniture

chairs

An ultra-light folding chair

Environmental performance

This is an ultra-light folding chair weighing just 2.1 kg (MX). The life cycle assessment (LCA) method was employed from the design phase to make the unit environmentally friendly. Importance is placed on basic performance as well as on storage, outstanding comfort and ease of folding. All parts can be replaced using simple tools to extend life.

Product performance

W = 440 mm; D=438 mm; H=735 mm; SH=430 mm; stacking pitch: 26 mm; product weight: 1.9 kg (MS), 2.1 kg (MX, MY)



Global warming

13.4kg-CO₂

not Inspection

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

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCHO SUZUKA MIE, 510-0017, Japan

E-mail innfo@isu-sankei.co.jp

URL <http://www.isu-sankei.co.jp>

URL <http://www.isu-sankei.co.jp>

EP-4-004

Office supplies/furniture

chairs

A folding chair designed to reduce greenhouse gas emissions

Environmental performance

Environmentally damaging greenhouse gas emissions are reduced through this product's life cycle using parts that can be easily disassembled for separation and recycling. With its readily removable seat pad, the chair can be used for a long time as its upholstery can be easily replaced when stained or simply to change its look. The small stacking pitch allows many units to be stored together, offering excellent functionality in addition to environmental friendliness.

Product performance

W = 440 mm; D = 438 mm; H = 735 mm; SH: 430 mm; stacking pitch: 26 mm; product weight: 2.9 kg (MS), 3.2 kg (MX, MY)



Global warming



Recyclable



SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan

E-mail innfo@isu-sankei.co.jp

URL <http://www.isu-sankei.co.jp>

URL <http://www.isu-sankei.co.jp>

EP-4-005

Office supplies/furniture

chairs

A folding chair for flat storage to prevent sideslipping

Environmental performance

The use of extendable pipes in the chair's design enables direct connection of the front and rear legs to allow smooth folding. The unit also has a safety mechanism to prevent fingers from becoming trapped during folding. It can be folded flat, and stacking with alternate positioning of the front and rear legs prevents sideslipping during storage. The combined seat and seat back can be removed easily, and the resin used for the core board is recyclable.

Product performance

W: 430 mm × D: 440 mm × H: 755 mm; SH: 420 mm; stacking pitch: 34 mm; product weight: 3.3 kg

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan



EP-4-006

Office supplies/furniture

chairs

A meeting chair for compact storage by side-slide stacking

Environmental performance

The shape of this chair's integrated seat back frame and armrests, which thoroughly eliminates waste, makes it an interesting addition to any office space. It was developed based on the concept of moving the chair by pushing it, and compact storage is achieved through horizontal sliding and stacking rather than vertical piling. To make folding easy, the back of the seat includes a concave handle. In addition, the polypropylene resin used for the seat and seat back is recyclable, and recycled PET materials were used for the upholstery fabrics.

Product performance

W: 555 mm × D: 525 mm × H: 770 mm; SH: 430 mm; stacking pitch: 140 mm; product weight: 7.4 kg

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan



Eco-materials

Eco-components

Eco-products // Office supplies/furniture

Eco-services

EP-4-007

Office supplies/furniture

chairs

A chair with a sophisticated shape for stylish spaces

Environmental performance

With its sophisticated shape, this chair is as aesthetically pleasing as it is comfortable. A seat back that takes advantage of the elasticity of recycled resin gently fits the user's body according to his or her movement, helping to reduce the fatigue associated with sitting for long periods. Changing the chair's look is also simple, as the seat pad can be attached and removed easily using only the screws on the back of the seat, and its adaptability makes it suitable for a wide variety of occasions. The four-leg and looped-leg types can be stacked, and feature excellent storage performance.

Product performance

W: 468 mm × D: 520 mm × H: 770 mm; SH: 435 mm; product weight: 5.3 kg (CM510-CY, CX); great variation with four-leg chair (CM510), four-leg chair with armrests (CM511), looped-leg chair (CM520), five-leg chair on casters (CM530), five-leg chair with armrests on casters (CM531), with or without seat pad

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan



CM510-CY

EP-4-008

Office supplies/furniture

chairs

A highly variable conference chair

Environmental performance

This chair is highly adaptable, offering great color variation for the seat, seat back and seat pad in addition to usage with or without armrests and a writing board, and is suitable for use in all types of meeting rooms. The armrests and writing board can be attached and removed easily using only the screws in the back of the seat. These four-leg chairs can be stacked, and feature excellent storage performance. Large plastic forms are attached to the leg ends to ensure stability, and the polypropylene resin used for the seat, seat back and seat pad is recyclable.

Product performance

W: 580 mm × D: 665 mm × H: 762 mm; SH: 455 mm; product weight: 7.6 kg (CM710-MYMC); great variation with four-leg chair, four-leg chair with armrests, four-leg chair with writing board, chair on casters, chair with armrests on casters, chair with writing board on casters, with or without seat pad

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan



CM710-MYMC

EP-4-009

Office supplies/furniture

chairs

A stacking chair made from only recyclable materials

Environmental performance

The same material — polypropylene resin — is used for the covers of the seat and its back as well as for the cushions, upholstery and leg caps, allowing it to be easily broken down for replacement or disposal using household tools. Its steel and polypropylene resin parts can also be separated easily. The use of identical material wherever possible makes recycling easy, and the powder-coated frame does not require drainage water or organic solvents. Its dedicated carriage offers excellent stackability of up to 40 units at a time.

Product performance

W: 516 mm × D: 535 mm × H: 770 mm; SH: 430 mm; product weight: 3.4 kg

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan



EP-4-010

Office supplies/furniture

chairs

A high-elasticity, highly permeable stacking chair made using mesh material

Environmental performance

Mesh with high elasticity and flexibility helps this chair to gently fit the user's bodyline. The ability of mesh to allow humidity and heat to escape and let air through helps to keep the user feeling refreshed and comfortable. The absence of metal parts in the seat and seat back allows the chair's materials to be easily separated when it reaches the end of its service life, making recycling easy.

Product performance

W: 521 mm × D: 535 mm × H: 770 mm; SH: 435 mm; product weight: 3.2 kg

SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan



EP-4-011

Office supplies/furniture

chairs

A stacking chair with a comfortable seat and upholstery fabric

Environmental performance

Body pressure distribution data for this chair shows a lower burden on the thighs and buttocks compared with ordinary stacking chairs, helping to reduce the fatigue people feel from sitting for long periods. Heat-generating fibers featuring high exothermal performance and a heat-absorbing effect were used in the upholstery fabric to ensure comfort. Recycled materials were used for the seat, seat back and legs, including a core board containing polypropylene resin mixed with recycled resin.

Product performance

W: 505 mm × D: 535 mm × H: 750 mm; SH: 430 mm; product weight: 4.1 kg



SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan

EP-4-012

Office supplies/furniture

chairs

Christal teak root stool

Environmental performance

Turns old teak roots into luxury stool furniture.

Product performance

Luxury stool best for every room.



1kg-CO ₂	Resource/Materials/Production/Transfer/Use/End-of-Life
not Inspection	



Christal Teak Stool

PT. EPOS MODERN INDONESIA

Jl.Raya Ngabul KM.8 Tahunan, Jepara, Central Java, 59428, Indonesia
Tel +62-291-596454 Fax +62-291-593014
E-mail eposjepara@yahoo.com
URL <http://www.treecycled.com>

Available in: Export only

EP-4-013

Office supplies/furniture

chairs

Ergonomic Mesh Chair "Contessa"

Environmental performance

Contessa is a revolutionary office seating created by collaboration with the leading Italian industrial design firm Giugiaro Design. The environmental features are as follows.

◆ Saving Resource

Simulation technology such as resin flow analysis technology is used in pursuit of necessary strength and design with the aim of optimizing the use of resources.

◆ Minimizing Environmental Load

To ensure safe product end of life, Okamura is working on minimization of the use of substances with environmental load. As a result of this effort, Contessa clears standard values based on the RoHS directive although furniture is not currently included among the targets of this regime.

◆ Reducing VOCs

Okamura minimizes the use of volatile organic compounds (VOCs), which can result in sick building syndrome and allergic dermatitis. Contessa has certified GREENGUARD certification, the USA's world-class indoor air quality standard.

Product performance

As well as the comfortable seating and a synchro-reclining mechanism, "Smart Operation" enables the user to adjust the chair in a natural posture. In particular, levers at the tips of the armrests adjust the seat's height and angle of recline, achieving an unprecedented level of usability.

Okamura Corporation

Tenri Bldg., Kitasaiwai, Nishiku, Yokohama, 220-0004, Japan

Tel +81-45-319-3480 Fax +81-45-319-3482

URL <http://www.okamura.jp/>

URL <http://www.okamura.co.jp/english/product/>

URL <http://www.okamura.co.jp/company/csr/report.html>



[Contessa]

EP-4-014

Office supplies/furniture

chairs

Highly functional and eco-friendly office chair "Spina"

Environmental performance

Spina chair has the following eco-friendly features.

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 named "float bending seat" 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. Instead of the user having to adjust to the chair, the chair adjusts to the user. This human-friendly Spina chair won the Gold Prize of the Good Design Award in 2007.

ITOKI CORPORATION

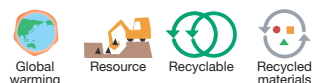
4-12, Imafukuhigashi 1-chome, Joto-ku, Osaka, 536-0002, Japan

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>



Spina Chair

EP-4-015

Office supplies/furniture

chairs

Lapis Stacking Chair

Environmental performance

To use wood without waste, wood cutting needs to be minimized as much as possible. The components of this product (i.e., the shell and legs) are made entirely of molded plywood. It is manufactured by molding stacked 1.5-mm-thick sheets of veneer and applying electric heat and pressure along with an adhesive agent. No wood is wasted because the chair is shaped by bending — a technique that takes advantage of the plasticity of wood — instead of cutting the wood to the desired shape. Since no fittings are used in the chair's assembly (only an adhesive agent is used), it requires no material separation when it is disposed of (except for the type with a seat cover).

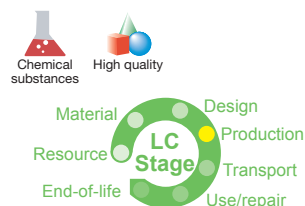
Product performance

This is a simple, 4-kg chair consisting of only three parts. Its curved back and seat perfectly fit the human body while its strong legs support the user, and all parts are made of molded materials. Its lightweight composition makes it easy to handle, and stacking is also possible. Seven colors are available, including a plain wood finish. In addition to the type with a wooden seat shown in the photo, a model with a seat cover is also available.

CONDE HOUSE co., Ltd

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Available in: Japan



エコ商品
ねと掲載



Lapis Stacking Chair

EP-4-016

Office supplies/furniture

chairs

Ratio Lobby Chair (Molded Type)

Environmental performance

Molded urethane foam is used for the seat cushion. No materials are wasted because each cushion is individually manufactured rather than being cut from a block of urethane. In addition, the surface molded skin protects the seat shape and offers durability.

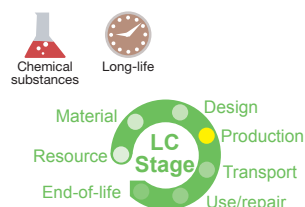
Product performance

Our lobby chairs are intended to bring the warmth of wood to public spaces such as airports, stations and hotel lobbies. Molded urethane foam is used for the seat cushion to ensure long-lasting comfort. In addition to the molded-type back shown in the photo, lattice and vertical lattice types are also available. The chair also features aluminum casting legs and an adjuster.

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Available in: Japan



エコ商品
ねと掲載



Ratio Lobby Chair (Molded Type)

EP-4-017

Office supplies/furniture

chairs

Koromo LB Armchair

Environmental performance

Molded urethane foam is used for the shell cushion. No materials are wasted because each cushion is individually manufactured rather than being cut from a block of urethane. In addition, the surface molded skin protects the seat shape and offers durability. All parts can be removed for easy separation (into metals, wood and seats) at the time of disposal.

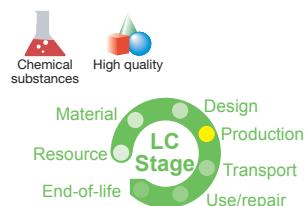
Product performance

This is a swivel chair with a seat-height adjuster. Molded urethane foam is used for the seat cushion to ensure long-lasting comfort, and oak is used for the wooden arms. A high-back type that firmly supports the human body and side chairs are also available.

CONDE HOUSE co., ltd

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

Available in: Japan



エコ商品
おとと掲載



Koromo LB Armchair

EP-4-018

Office supplies/furniture

chairs

"Runt Om" chair with upholstered seat

Environmental performance

To use wood without waste, wood cutting needs to be minimized as much as possible. The components of this product (i.e., the seat frame, rear legs and backrest) are made entirely of molded plywood. It is manufactured by molding stacked sheets of veneer and applying electric heat and pressure along with an adhesive agent. No wood is wasted because the chair is shaped by bending — a technique that takes advantage of the plasticity of wood — instead of cutting the wood to the desired shape. The seat is structured for easy removal and replacement, and three seat types (upholstered, leather and wood) are available. This enables the seat to be repaired, thus ensuring a long product life.

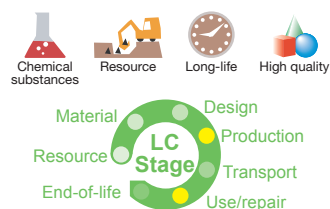
Product performance

As the name Runt (meaning round) suggests, this chair is characterized by its round seat. It has been redesigned in pursuit of perfection since its first release, and is now a long-selling product that has been on the market for over three decades. With its freedom of movement and superb stackability, it is used in many public spaces such as libraries and hotels.

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Available in: Japan



"Runt Om" chair with upholstered seat

EP-4-019

Office supplies/furniture
chairs & desks

"SCHOLAR light" classroom desk & chair

Environmental performance

"SCHOLAR light" is a new super light-weight desk and chair for classrooms in educational facilities. The environmental features of this product are as follows.

◆ Saving Resources — 23% less weight

The structure was reviewed for less use of resource which led "SCHOLAR light" to be 23% less weight comparing to conventional products. This also makes the product easier for students to lift up and move.

Product performance

◆ Movable Design

There is a handgrip on both sides of the desk so that the product can be lifted up and moved safely. The chair also has a handle for easy moving.

◆ Consideration of weight balance when lifting up

The weight balance of the desk is well-considered to prevent students losing their balance when lifting up the product. The L-shaped trapezoidal leg provides stability as well as easiness when sitting down or standing up.

Okamura Corporation

Tenri Bldg., Kitasaiwai, Nishiku, Yokohama, 220-0004, Japan
Tel +81-45-319-3480 Fax +81-45-319-3482
URL <http://www.okamura.jp/>



[SCHOLAR light]

EP-4-020

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.

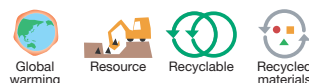
Use of recycled materials: Recycled materials are used for 43% of the resin parts (in case of pedestal desk).

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

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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/desk/cx/>
URL <http://www.itoki.jp/udeco/communication/erreports.html>



CX DESK

Available in: Japan

EP-4-021

Office supplies/furniture

desks

FURSYS multifunctional desk "USD desk series"**Environmental performance**

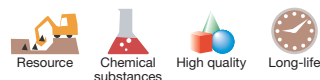
"USD desk" is made of wood, steel and plastic. 1) Less than 1.5PPM of formaldehyde and lower level of heavy-metal than environmental standard are used for this desk. 2) The coating materials and processes of "USD desk" are eco-friendly. These coating materials are also authorized by KOREA Eco-labeling 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 antiskid 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
URL <http://www.fursys.com>



EP-4-022

Office supplies/furniture

office partitions

FURSYS stand-alone panel "Spine" for working environment**Environmental performance**

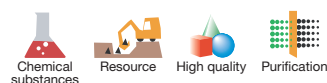
The spine panel of this product consists of steel, aluminum and plastic. It is an eco-product; it made by harmless and recycled materials. 1) Manufacturing process is eco-friendly; it keeps exactly environmental regulations of various fields. 2) It doesn't use PVC. 3) The plastic recycling rate is up 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.

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



EP-4-023

Office supplies/furniture
wiring floors

100% recycled PET panels for groove-wiring double floors

Environmental performance

This wiring floor is made of recycled PET bottle flakes to effectively use resources to preserve the global environment. CO₂ emissions can be reduced by 32kg by recycling PET bottles to make 1m² panels.

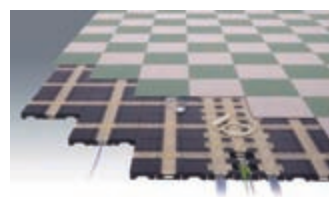
Product performance

1. The transparent cover allows wiring in grooves to be checked at a glance by just turning over the tile carpets.
2. The wire capacity of FPZ3000 is approx. three times that of our conventional wiring floor (FP). Therefore, it can also accommodate wiring in offices with many PCs.
3. The finished floor panel thickness is only 50mm. The thin panels can also be used in offices with a low ceiling.
4. The panel joint rings securely fix the panel corners. They prevent panel displacement and provide high resistance to earthquakes.

Panasonic Electric Works Co., Ltd.

Wiring Products Manufacturing Business Unit, Kasiwabara14, Iisoka City,
Ibaragi Pref, 315-0002, Japan
Tel +81-299-23-2457 Fax +81-299-23-2417
URL <http://panasonic-electric-works.net/>
URL http://denko.panasonic.biz/Ebox/oa_floor/index.html
URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan, Indonesia



Wiring Floor FPR3000 NE11820 Wiring Floor FPZ3000 NE11840

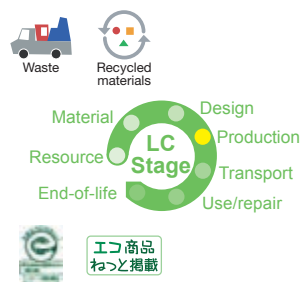
EP-4-024

Office supplies/furniture
chalks

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.

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E-mail junji@tenjin-chalk.co.jp
URL <http://www.tenjin-chalk.co.jp/>
URL <http://www.tenjin-chalk.co.jp/>

ECO Chalk 72

EP-4-025

Office supplies/furniture

paper

U-PET Paper (synthetic printing paper manufactured using recycled PET materials)

Environmental performance

Over 99% recycled PET materials

Product performance

Synthetic printing paper manufactured using recycled PET materials. Suitable for offset printing and laser printing. Matt surface with water permeability. Can be written on with pencil, oil pen, permanent marker, etc.



Active Life co.ltd.

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Tel +81-266-52-3490 Fax +81-266-58-0167
E-mail info@active-life.co.jp
URL <http://www.active-life.co.jp/>

EP-4-026

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.

In the manufacturing and printing of calendars, 250 g of CO₂ is discharged per copy. Accordingly, we try to compensate for these amounts by planting trees in Hokkaido's Bihoro town (planting one larch compensates for CO₂ emissions from the manufacture of 150 copies). In 2008, we manufactured 27,810 copies, and expect to compensate for approximately seven tons of CO₂ by planting about 185 trees.

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

Eco-materials

Eco-components

Eco-products // Office supplies/furniture

Eco-services

EP-4-027

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.

In the manufacturing and printing of calendars, 250g of CO₂ is discharged per copy. Accordingly, we try to compensate for these amounts by planting trees in Hokkaido's Bihoro town (planting one larch compensates for CO₂ emissions from the manufacture of 150 copies). In 2008, we manufactured 6,390 copies, and expected to compensate for approximately 1.6 tons of CO₂ by planting about 42 trees.

The Window Memo is a fun calendar with a colorful and stylish design.

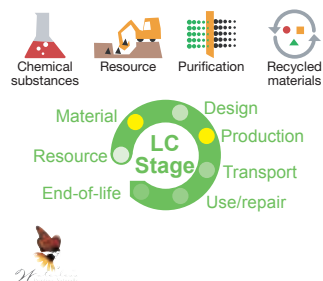
Size: 120 x 180 mm, 12 main sheets, logo (VOC free, waterless printing)

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-4-028

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.

In the manufacturing and printing of calendars, 250 g of CO₂ is discharged per copy. Accordingly, we try to compensate for these amounts by planting trees in Hokkaido's Bihoro Town (planting one larch compensates for CO₂ emissions from the manufacture of 150 copies). In 2008, we manufactured 2,915 copies, and expect to compensate for approximately 0.7 tons of CO₂ by planting about 20 trees.

The Index Calendar has outstanding functionality and features easy-to-use tabs and a large space for making notes.

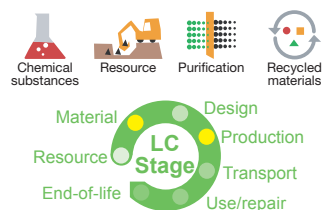
Size: 140 x 180 mm, 1 cover + 6 main sheets, logo (soy ink)

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-5-001

Apparel/textiles

baby ware

100% GOTS-certified organic cotton infant apparel**Environmental performance**

We are an ISO 9001:2000 company exporting 100%-certified organic cotton apparel from India.

Cotton and its processing are certified under global organic textile standards.

Our dyeing, printing, and production are all certified under GOTS.

We practice fair trade for the production of finished products.

Product performance

We specialize in baby apparel, baby bath items, and baby bedding. We also offer fabrics, bags, and towels.



ORGANIC COTTON KIMONO BABY BODY SUIT

NET PARADIGM INDIA PVT, LTD.

A-38K SECTOR 64, NOIDA, 201301, India
Tel +91-120-4211316 Fax +91-120-4211317
E-mail vickram@organicandmore.com
URL www.organicandmore.com

EP-5-002

Apparel/textiles

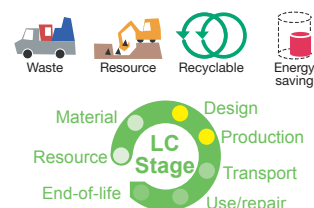
bags

Shoulder leather bags (for laptops)**Environmental performance**

We remake used overcoat leather into shoulder bags. We thus save power that is otherwise used for tanning leather and material resources. The important thing is that we save animals' lives!

Product performance

Two zippers for front and back, two pockets from original overcoat, one slot in side for paper documents and main soft case for laptop.



Shoulder laptop bag

Triple Pim Co., Ltd.

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URL <http://www.themaker.com>
URL <http://www.themaker.com/index.php?page=news>

Available in: Worldwide

EP-5-003

Apparel/textiles

bags

Shoulder bags (from recycled coat and shirt material)

Environmental performance

We remake used overcoat leather along with used checkered shirts into shoulder bags. We could save power for tanning leather and resource. The important thing is we save the animal's lives!

Product performance

One soft case for laptop, two slots for document papers, one pocket zipper, two pockets for wallet and iPod.



Shoulder laptop bag

Triple Pim Co., Ltd.

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 URL <http://www.thermaker.com>
 URL <http://www.thermaker.com/index.php?page=news>

Available in: Worldwide

EP-5-004

Apparel/textiles

bags

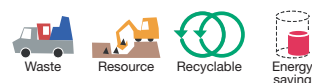
Tote bag (from recycled corduroy pants and recycled leather)

Environmental performance

We remake used corduroy pants along with used overcoat leather into tote bags. These pants come from secondhand stores. We could save power for tanning leather and resource. The important thing is we save the animal's lives!

Product performance

One pocket zipper, two pockets for wallet and iPod.



Tote Bag

Triple Pim Co., Ltd.

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 URL <http://www.thermaker.com>
 URL <http://www.thermaker.com/index.php?page=news>

Available in: Worldwide

EP-5-005

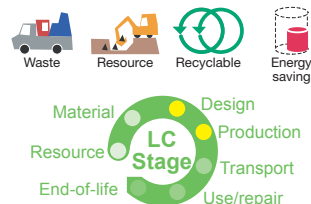
Apparel/textiles

bags

Businessman's tote bags

Environmental performance

These tote bags are remade from used business suits. The body is from used pants, the pockets from used shirts, and the magnet lock covering from used neckties.



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 URL <http://www.themaker.com>
 URL <http://www.themaker.com/index.php?page=news>

Available in: Worldwide



Businessman Tote

EP-5-006

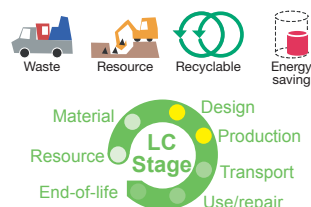
Apparel/textiles

bags

Tote bags with pocket from used shirts

Environmental performance

These tote bags are remade from used shirts into attractive and cute bags. It is adjustable in the upper bag with a small pocket for coins.



Triple Pim Co., Ltd.

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 URL <http://www.themaker.com/index.php?page=news>

Available in: Worldwide



Tote bag with Coins Pocket from used shirt

EP-5-007

Apparel/textiles

bags

Backpacks made from used army shirts

Environmental performance

These backpacks are remade from used army shirts acquired from secondhand stores.

Product performance

We reclaim for multi-purpose and multi-carry methods to save natural resources.



Triple Pim Co., Ltd.

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 URL <http://www.themaker.com>
 URL <http://www.themaker.com/index.php?page=news>

Available in: Worldwide



Backpack remade from used army shirt

EP-5-008

Apparel/textiles

bags

Army multi-use bags from used army shirts

Environmental performance

These multi-bags are remade from used army shirts acquired from secondhand stores.



Triple Pim Co., Ltd.

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 URL <http://www.triple-pim.com>
 URL <http://www.themaker.com>
 URL <http://www.themaker.com/index.php?page=news>

Available in: Worldwide



Army Multi Bag from used army shirt

EP-5-009

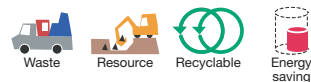
Apparel/textiles

bags

Backpacks made from used "aloha shirts"

Environmental performance

Backpack remade from 10 used "aloha shirts," requiring cutting and then patching together to make a range of colorful designs.



Triple Pim Co., Ltd.

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 URL <http://www.themaker.com>
 URL <http://www.themaker.com/index.php?page=news>

Available in: Worldwide



Backpack made from various used "aloha shirts"

EP-5-010

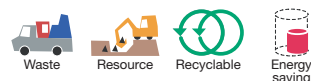
Apparel/textiles

bags

Colorful tote bags made from used winter jackets

Environmental performance

This colorful lovely tote bag is remade from five pieces cut from used winter jackets with denim.



Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand
 Tel +66-81731-5869 Fax +66-2689-9044
 E-mail info@triple-pim.com
 URL <http://www.triple-pim.com>
 URL <http://www.themaker.com>
 URL http://www.themaker.com/index.php?page=news&user_lang=en

Available in: Worldwide



Colorful Tote bag

EP-5-011

Apparel/textiles

bags

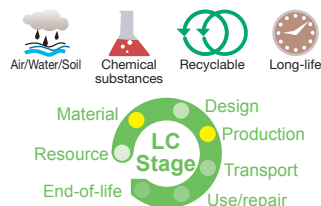
100% GOTS-certified organic cotton shopping bags

Environmental performance

The organic cotton bags are made from certified organic cotton that is audited at the farm level to the finished product level. They are definitely reusable reducing the need for harmful paper or plastic bags. Dyes used are azo-free, heavy-metal free, low impact and reactive. Printing is water based.

Product performance

Bags can be made to any style, size, and strength. We use various canvas and calico fabrics to make our certified organic cotton bags.



ORGANIC COTTON SHOPPING BAGS

NET PARADIGM INDIA PVT, LTD.

A-38K SECTOR 64, NOIDA, 201301, India
Tel +91-120-4211316 Fax +91-120-4211317
E-mail vickram@organicandmore.com
URL www.organicandmore.com

EP-5-012

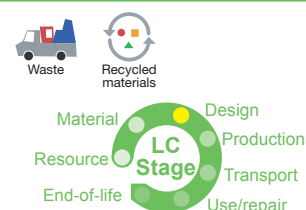
Apparel/textiles

bags

Mowow Sling Bag

Environmental performance

Mowow Sling Bag is handmade using recycled clothing & fabric scraps. 90% of items created at Doinky Doodles! is a green effort to reconsider the unwanted in creating art.



Mowow Sling Bag handmade using recycled cloth.

Doinky Doodles!

33 Bali Lane (2nd Floor), 189869, Singapore
Tel +65-6292-2248
E-mail xin@doinkydoodles.com
URL www.doinkydoodles.com

EP-5-013

Apparel/textiles

bags

Eco-friendly cotton shopping bags

Environmental performance

We are manufacturers of 100% natural cotton bags. Our bags are available in various colors and sizes as per customer requirements. The bags are called "Bags for Life," as they are well stitched and are reusable in shopping malls, grocery stores, etc.

Product performance

Excellent cotton fabric is used to manufacture these bags. Printing of logos are also possible.



Cotton Bags

Ideas & Solutions

A3/19, Sarita Vihar, 119/3 Parvati, Sinhagad Road, Pune-411030, India
Tel +91-9850008082
E-mail ecofocusin@gmail.com
URL www.ecofocusin.com

Available in: Worldwide

EP-5-014

Apparel/textiles

headwear

Skull caps made from used t-shirts

Environmental performance

Used t-shirts reclaimed as highly unique skull caps.



Skull Cap

Triple Pim Co., Ltd.

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URL <http://www.themaker.com>
URL http://www.themaker.com/index.php?page=news&user_lang=en

Available in: Worldwide

EP-5-015

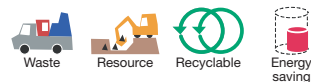
Apparel/textiles

headwear

Tracking caps with badge remade from used t-shirts

Environmental performance

This tracking cap is reclaimed from used t-shirts with part of a used t-shirt as a badge.



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 URL <http://www.thermaker.com>
 URL http://www.thermaker.com/index.php?page=news&user_lang=en

Available in: Worldwide



Tracking Cap with Badge

EP-5-016

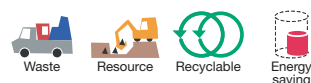
Apparel/textiles

headwear

Chic hat

Environmental performance

This hat was remade from used checkered shirts and used corduroy pants.



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 URL <http://www.triple-pim.com>
 URL <http://www.thermaker.com>
 URL <http://www.thermaker.com/index.php?page=news>

Available in: Worldwide



Chic Hat

EP-5-017

Apparel/textiles

headwear

Checked hat**Environmental performance**

Unique checked hat remade from used checked shirts.



Check Hat

Triple Pim Co., Ltd.

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 URL <http://www.triple-pim.com>
 URL <http://www.themaker.com>
 URL <http://www.themaker.com/index.php?page=news>

Available in: Worldwide.

EP-5-018

Apparel/textiles

footwear

Areca Sheath Eco-Slippers (Footwear)**Environmental performance**

- The leaf sheath of Area (Areca Catechu Linn) palm, extensively cultivated in South India as a cash crop, supplies a strong pliable material that is amenable to shaping. This product is obtained from the plant leaf part, which in the course of its biological life cycle, dries, falls and regenerates. This naturally shed leaf sheath is strong, semi-flexible yet not brittle, odorless, and water and heat resistant. This leaf sheath has its own natural grain and characteristic texture, very much similar to those seen in furniture-grade wood.

**The Little Export Company**

B- 46, Sector - 44, Noida, 201301, India
 Tel +91-9818113111
 E-mail ankur.sales@gmail.com

EP-5-019

Apparel/textiles

number cards

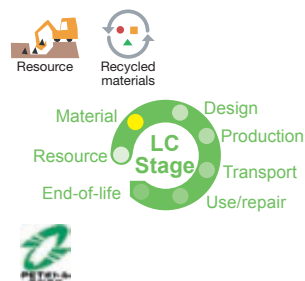
Eco Number Card (for use in track and field events, manufactured using recycled PET materials)

Environmental performance

Over 40% recycled PET materials

Product performance

A number card manufactured by taking advantage of the characteristics of PET materials, i.e., lightness and resistance to water exposure. It has been used for track and field events throughout Japan, including the Tokyo Marathon and the Osaka IAAF World Championships in Athletics in 2007 (male events only). Recently, it has also been increasingly used for aerobics and cycling events.

**Active Life co.ltd.**

5-8 Suehiro, Suwa-city, Nagano, 392-0025, Japan
 Tel +81-266-52-3490 Fax +81-266-58-0167
 E-mail info@active-life.co.jp
 URL <http://www.active-life.co.jp/>



EP-5-020

Apparel/textiles

wallets

Funky wallet reclaimed from used overcoat leather

Environmental performance

We remake used overcoat leather into funky wallets. We thus save power that is otherwise used for tanning leather and material resources. The important thing is that we save animals' lives!

Product performance

To hold paper currency (4 slots), credit cards (9 slots), picture of family member or friend (1 slot).

**Triple Pim Co., Ltd.**

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 URL <http://www.triple-pim.com>
 URL <http://www.themaker.com>
 URL <http://www.themaker.com/index.php?page=news>



Available in: Worldwide

Funky Wallet

EP-6-001

Household goods and equipment

craft tapes

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)



エコ商品
ねと掲載

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-6-002

Household goods and equipment

fit light tapes

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.



エコ商品
ねと掲載

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-6-003

Household goods and equipment

toilet rolls

Recycled products using 100% recycled paper and participation in the Green Purchasing Network

Environmental performance

We manufacture and sell products that use 100% recycled paper under our ISO9001- and 14001-certified reliable quality control system.

Product performance

We maintain high quality in our products, which are made from water-soluble, superabsorbent 100% recycled paper.



エコ商品
ねと掲載



Kotobuki Paper Co.Ltd

1-14-45, Daimyou, Cyuou-ku, Fukuoka, 810-0041, Japan
Tel +81-92-717-1070 Fax +81-92-717-1071
E-mail mori@kotobukiseishi.com
URL <http://www.kotobukiseishi.com>

EP-6-004

Household goods and equipment

toilet rolls

Recycled products using 100% recycled paper and participation in the Green Purchasing Network

Environmental performance

We maintain high product quality under our ISO9001- and 14001-certified system.

Product performance

We maintain high quality in our products, which are made from water-soluble, superabsorbent 100% recycled paper.



エコ商品
ねと掲載



Kotobuki Paper Co.Ltd

1-14-45, Daimyou, Cyuou-ku, Fukuoka, 810-0041, Japan
Tel +81-92-717-1070 Fax +81-92-717-1071
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URL <http://www.kotobukiseishi.com>

EP-6-005

Household goods and equipment

toilet rolls

Recycled products using 100% recycled paper "ROYAL 55 S"

Environmental performance

We manufacture and sell products that use 100% recycled paper under our ISO9001- and 14001-certified reliable quality control system.

Product performance

We maintain high quality in our products, which are made from water-soluble, superabsorbent 100% recycled paper.



Waste



Recyclable



エコ商品
ねと掲載



Kotobuki Paper Co.Ltd

1-14-45, Daimyou, Cyuou-ku, Fukuoka, 810-0041, Japan
Tel +81-92-717-1070 Fax +81-92-717-1071
E-mail mori@kotobukiseishi.com
URL <http://www.kotobukiseishi.com>

EP-6-006

Household goods and equipment

toilet rolls

Recycled products using 100% recycled paper "ROYAL 100 S"

Environmental performance

We manufacture and sell products that use 100% recycled paper under our ISO9001- and 14001-certified reliable quality control system.

Product performance

We maintain high quality in our products, which are made from water-soluble, superabsorbent 100% recycled paper.



Waste



Recyclable



エコ商品
ねと掲載



Kotobuki Paper Co.Ltd

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

EP-6-007

Household goods and equipment

toilet rolls

Recycled products using 100% recycled paper "4R MIDORI"

Environmental performance

We manufacture and sell products that use 100% recycled paper under our ISO9001- and 14001-certified reliable quality control system.

Product performance

We maintain high quality in our products, which are made from water-soluble, superabsorbent 100% recycled paper.



エコ商品
おとと掲載



Kotobuki Paper Co.Ltd

1-14-45, Daimyou, Cyuou-ku, Fukuoka, 810-0041, Japan
Tel +81-92-717-1070 Fax +81-92-717-1071
E-mail mori@kotobukiseishi.com
URL <http://www.kotobukiseishi.com>

EP-6-008

Household goods and equipment

system kitchens

Credia - a system kitchen that realizes enhanced comfort

Environmental performance

In pursuit of a more comfortable kitchen, Credia is equipped with Komoranzo cabinets that use a natural material (MOISS) to reduce smell of food as well as moisture. MOISS is a next-generation construction material consisting mainly of a natural mineral called vermiculite. Similarly to clay walls or wood, it functions by cleaning the air through moisture absorption. Moisture reduction properties have also been increased by improving humidity control performance by approximately 15% compared with conventional products. As a measure against sick house syndrome, all the decorative boards used in Credia meet the requirements of the F four-star (F☆☆☆☆) grade provided under the Building Standard Act.

Product performance

Credia was created to improve the functions of the kitchen not only as a place for cooking, but also as the center of home living, from a variety of viewpoints, including designs to match the living room and other living spaces, safety against earthquakes, etc. and comfort through reduction of odors and moisture.



939.6kg-CO₂
not Inspection

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

TOSTEM CORPORATION

1-1, Ojima 2-chome, Koto-ku, Tokyo, 136-8535, Japan
Tel +81-3-3638-8187 Fax +81-3-3638-8254
URL <http://www.tostem.co.jp>
URL <http://www.tostem.co.jp/lineup/kitchen/credia/>



Available in: Japan

System kitchen 「credia」

EP-6-009

Household goods and equipment

hot-water supply systems

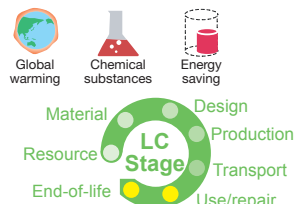
"Eco Cute" Residential Heat Pump Water Heaters with Natural Refrigerant**Environmental performance**

-----<< E : Energy >>-----

APF (Annual Performance Factor of hot water supply) 3.2

Adopting our rotary compressor technology for air conditioners to the heat pump using CO₂ refrigerant, and developing twist and spiral gas cooler in heat exchange at water heating unit, it realizes quite high running efficiency.

-----<< T : Toxicity >>-----

CO₂ natural refrigerant does not deplete ozone layer.**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



SRT-HP37W3

EP-6-010

Household goods and equipment

cogeneration 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 supports comfortable living while contributing to environmental conservation.

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 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

EP-6-011

Household goods and equipment
cogeneration systems

RESIDENTIAL FUEL CELL ENE FARM

Environmental performance

Residential fuel cell "Enefarm" produces power and hot water by using waste heat from power generation. Panasonic Corporation and Tokyo-gas jointly developed and released "Enefarm" as the world's first residential fuel cell cogeneration system.

Compared with conventional thermal power generation and water heating system, the Enefarm system cuts primary energy consumption by approx. 31%, and emissions of CO₂ by approx. 45%, 1.3t/y.

Product performance

Power output: 1kW

Power generation efficiency rate: 37% (lower heating value), 33% (higher heating value)

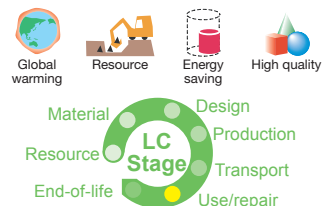
Effective rate of heat recovery: 50% (lower heating value), 45% (higher heating value)

Tokyo Gas Co., Ltd.

1-5-20 Kaigan, Minato-ku, Tokyo, 105-8527, Japan

Tel +81-3-5400-7671 Fax +81-3-3432-5509

URL http://www.tokyo-gas.co.jp/index_e.html



EP-6-012

Household goods and equipment
cogeneration systems

RESIDENTIAL FUEL CELL ENE FARM

Environmental performance

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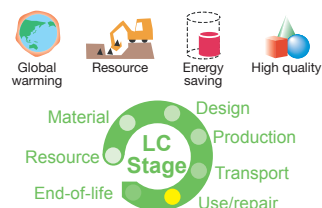
Effective rate of heat recovery: 50% (lower heating value), 45% (higher heating value)

Tokyo Gas Co., Ltd.

1-5-20 Kaigan, Minato-ku, Tokyo, 105-8527, Japan

Tel +81-3-5400-7671 Fax +81-3-3432-5509

URL http://www.tokyo-gas.co.jp/index_e.html



EP-6-013

Household goods and equipment

cooking stoves

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, 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.

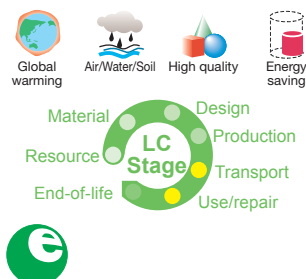
Osaka Gas Co., Ltd.

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



Sensor-equipped cooking stove

EP-6-014

Household goods and equipment

heat pump water heaters

Heat Pump Hot Water Supply Machine using CO₂ Refrigerant

Environmental performance

- Mitigation of climate change: 35% reduction in CO₂ emissions in energy saving mode compared with high power mode
- Efficient use of resources: Cardboard packaging

Product performance

- Clean: High-efficiency operation to heat water using air heat.
- Selectable functions: Functions are selectable by remote control.
- Parallel connection: Parallel connection is possible for a site that consumes much hot water.



TOSHIBA ELECTRIC APPLIANCES CO.,LTD.

2-12, Sotokanda 2-chome, Chiyoda-ku, Tokyo, 101-0021, Japan

Tel +81-3-3257-5947 Fax +81-3-3257-5946

E-mail info@kiki.toshiba.co.jp

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

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

Available in: Japan

EP-6-015

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%.



Global warming



Energy saving



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-6-016

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.

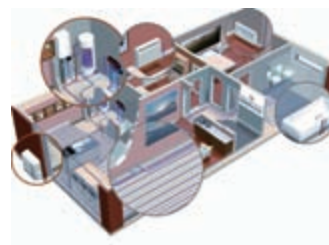
With this heat pump, you can personally contribute to a better environment because heat pumps consume little energy. This heat pump emits no direct CO₂ and also, emits far less CO₂ than fossil fuel boilers.



Global warming



Energy saving



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: Europe

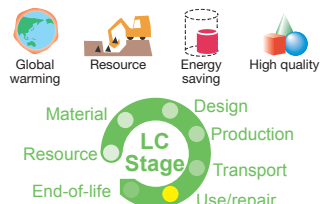
EP-6-017

Household goods and equipment
heat pump water heating systems

Eco-friendly water heater for residential use (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 of around 30% compared with a conventional combustion type water heater together with a reduction in green house gas emission. The use of natural refrigerant CO₂ contributes to environmental conservation including the prevention of global warming.



Tokyo Electric Power Company

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Tel +81-3-6373-1111 Fax +81-3-3596-8517
URL <http://www.tepco.co.jp/en/index-e.html>
URL <http://www.tepco.co.jp/en/challenge/enviro/report-e.html>



Available in: Japan, Europe

CO₂ refrigerant heat pump water heater (Eco Cute)

EP-6-018

Household goods and equipment
heat pump water heating systems

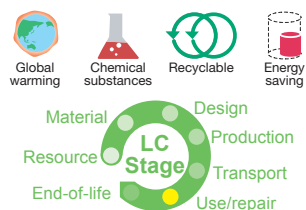
Heat pump hot water system; energy-saving: HE-KU37BXS

Environmental performance

To maximize energy efficiency, the high-performance "CO₂-scroll compressor" and "water-refrigerant heat exchanger" have been developed, and this product has achieved at APF 3.6 in Japan as a top energy-saving device.

Product performance

This hot water system has many functions such as automatic hot water supply control, different temperatures can be set in bath and kitchen, etc.



eco ideas



Panasonic Corporation, Home Appliances Company

2-3-1-1 Noji-higashi, Kusatsu City, Shiga, 525-8520, Japan
Tel +81-77-561-3370 Fax +81-77-567-9874
URL <http://panasonic.jp/sumai/water/>
URL <http://panasonic.net/csr/>

Available in: Japan

HE-KU37BXS

EP-6-019

Household goods and equipment

heat pump water heating systems

Direct Tap-water Pressurized Eco-Cute "NAIAGARA SHUTTOU"

Environmental performance

Energy consumption is reduced by integrating a heat pump that utilizes thermal energy of the atmosphere; this product can generate thermal energy three times greater than an ordinary heater with the same electric energy input. CO₂ refrigerant used in our product avoids ozone depletion and reduces GWP to 1/1700 of that of ordinary R410A.

Product performance

High supply pressure and flow rate are achieved by our method utilizing direct tap-water pressure, which is a unique feature of Hitachi. This high supply pressure provides a variety of functions such as massage shower. Industry first heat pump unit and hot water tank unit in conjunction with the Vacuum Insulation Panel have suppressed radiation heat loss and improved heat-retention performance by 5%. (APF) Annual Performance Factor of hot water supply of 3.6 that is industry top is achieved and energy efficiency is improved 16% compared to the conventional model (BHP-FS37ED).

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>

Available in: Japan



エコ商品
おと掲載

541kg-CO₂
not Inspection

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



BHP-FSV37FD

EP-6-020

Household goods and equipment

heat pump water heater floor heating systems

"Econucool Pico" Heat Pump-type Hot water Floor Heating System for Considerable Energy Saving

Environmental performance

-----<< M : Material >>-----

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.

-----<< E : Energy >>-----

30% up energy consumption ratio 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.

-----<< T : Toxicity >>-----

R410A refrigerant does not deplete ozone layer.

Eliminated the use of the six substances specified by the EU 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
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



VEH-406HCA-M

EP-6-021

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% in hot water supply and 89% in space heating.

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.

Product performance

It produces enough hot water for the bathroom and kitchen. The lineup includes units that are equipped with an automatic control system for hot water supply and additional boiling and can be connected to floor heaters and/or bathroom heaters/dryers.

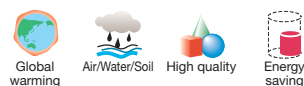
Osaka Gas Co., Ltd.

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



Eco-Jozu

EP-6-022

Household goods and equipment

floor heating systems

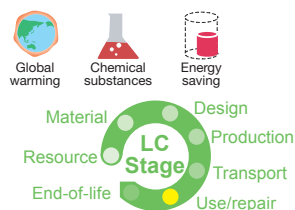
A thermally efficient floor-heating system with vacuum insulation panels

Environmental performance

This structure reduces heat loss through the bottom by half compared with previous panels and increases heat dissipation into the room to 90% of the amount generated, thus improving the efficiency of energy use.

Product performance

It takes just 11 minutes for the floor surface temperature to reach 27°C from 15°C after power on, which is 17 minutes less than with the conventional model (28 min.).



eco ideas



Structure of the floor-heating panel

Panasonic Electric Works Co., Ltd.

1048 Kadoma, Kadoma-city, Osaka-prefecture, 571-8686, Japan

Tel +81-6-6908-2710 Fax +81-6-6908-4503

URL <http://panasonic-electric-works.net/>

URL <http://panasonic.jp/sumai/cwf/yukadan/index.html>

URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan

EP-6-023

Household goods and equipment
generators

Honda EU55is Ultra-Quiet Generator equipped with Sine-wave Inverter

Environmental performance

The EU55is employs Honda's original sine-wave inverter technology to deliver high-quality electrical output in a compact, low-noise design. Honda's dual-voltage mechanism capable of simultaneous 100V and 200V single-phase current output, 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, resulting in at least 20% higher fuel efficiency* than the previous Honda model.

* At 1/4 load, with Eco-Throttle in operation

Not only can this versatile unit be used for powering computer equipment, as an emergency power source, and for leisure activities, it is also capable of powering large electrical tools, 200V household appliances, and other heavy-duty power equipment.

Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan
Tel +81-3-5412-1514 Fax +81-3-5412-1515
URL <http://world.honda.com/>

Available in: Japan, Europe, US, Asia



Global warming



Energy saving



EU55is

2006.11.29

Honda EU55is

EP-6-024

Household goods and equipment
photovoltaic inverter

Photovoltaic Inverter with Industry's Highest Power Conversion Efficiency

Environmental performance

-----<< E : Energy >>-----

This photovoltaic inverter for house use in Japan by mass production realizes the industry highest 97.5% in power conversion efficiency (at rated power input/output of PV-PN40G) in our investigation at December 2008. The industry 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.



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
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-6-025

Household goods and equipment
photovoltaic modules

Highly-efficient Photovoltaic Module

Environmental performance

-----<< E : Energy >>-----

This module for houses in Japan realizes 185W output, 38% larger output from conventional model, by enlarging each photovoltaic cell and devising to take more in the reflecting light from back film.

When installing 3.7kW system in Tokyo, about 3842kWh power is to be generated per year, which reduces about 1208kg-CO₂, corresponding about 61% of CO₂ emission from a general house per year (1980kg-CO₂).

-----<< M : Material >>-----

This module does not need a horizontal rack, which is conventionally used for installation. It contributes about 61kg (13%) weight reduction and resource consumption from conventional installation.

Mitsubishi Electric Corporation

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

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

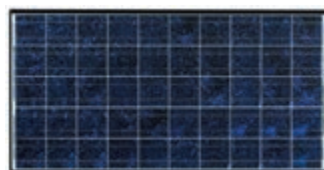
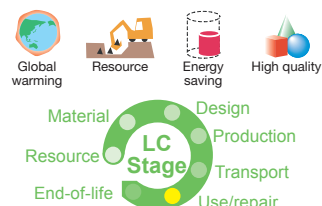
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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

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

Available in: Japan

PV-MX185H



EP-6-026

Household goods and equipment
solar power systems

R3plas Solar Sprinkle System and Ponds

Environmental performance

Environmental Innovation

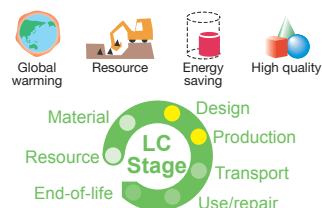
Energy saving

Costing saving

Water saving

Product performance

100% using renewable energy.



WINRIGO (S) PTE LTD

No.21 Toh Guan Road East #04-09 Toh Guan Centre, 608609, Singapore

Tel +65-98715058 Fax +65-65154557

E-mail salewin@singnet.com.sg

URL www.winrigo.com.sg

URL www.winrigo.com.sg

URL www.winrigo.com.sg

Available in: All countries

Solar power consumer products

EP-6-027

Household goods and equipment

elevators

Machine Room-Less Elevator

Environmental performance

-----<< M : Material >>-----

Uses plastic made primarily from corn in a portion of the car control panel.

-----<< E : Energy >>-----

Uses inverter for lighting to reduce electric power consumption by as much as 35%. Regenerative electric power from the elevator reused to cut electric power consumption by about 20% when equipped with the optional "ELSAVE".

-----<< T : Toxicity >>-----

Reduces the amount of chemical substances like toluene and xylene released in the atmosphere or ground.

The generation of chemical substances limited for the elevator as a whole to at least the levels prescribed in "sick house" related laws and regulations in Japan.

Formaldehyde density at or less than the prescribed level of 0.0001g/m³

Product performance

This elevator saves space in the elevator shaft to allow for more flexibility in building design.

Mitsubishi Electric Corporation

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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 except controlled region



AXIEZ series

EP-6-028

Household goods and equipment

hand dryers

JET TOWEL, Environmentally Friendly Hand Dryer

Environmental performance

It eliminates paper waste and fewer natural resources are consumed.

-----<< M : Material >>-----

DC brushless motor has the durability of seven years by 1,000 times of use per one day, which realizes its longer life.

-----<< E : Energy >>-----

Low consumption electricity, reduced 15% compared with that of the conventional model, is industry No. 1. (Our investigation as of February 1, 2007)

It is equipped with a newly developed "hyper slit nozzle" that blows off drops of water on hands with a filmy jet blow at a stretch and improves its drying efficiency.

-----<< T : Toxicity >>-----

Eliminated the use of the six substances specified by the EU's RoHS directive.

Mitsubishi Electric Corporation

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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 and some countries in Asia, Europe etc.



JT-SB116GN / JT-SB216GSN

EP-6-029

Household goods and equipment

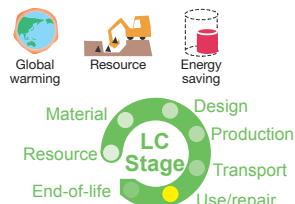
ventilators

Lossnay Recycling Air-conditioning Energy by Heat Exchange Ventilation

Environmental performance

-----<< E : Energy >>-----

"Lossnay" is a energy-saving ventilation system using a heat exchange method that collects and reuses heat energy for both cooling and warming. The Lossnay Central ventilation system ventilates the whole house as one unit. It does not lose the desired comfort level of cooling or warming because it ventilates using heat exchange. A large amount of generated air flow and six ways of separation can ventilate each floor by a single system for multifamily housing that has many and/or spacious rooms.



Mitsubishi Electric Corporation

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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

VL-200PZMS

EP-6-030

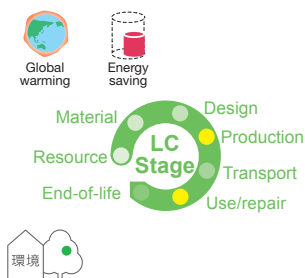
Household goods and equipment

metal sanitary ware

Automatic faucet saving water and electricity

Environmental performance

This automatic faucet saves water and is economical, because the sensor to spout and stop water flow automatically prevents wasted water. The generation unit of water power covers electric power for the sensor and electromagnetic valve, so this mechanism saves electric power.



TOTO LTD.

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan

Tel +81-3-5451-1110 Fax +81-3-5451-1110

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

Available in: Japan

EP-6-031

Household goods and equipment

metal sanitary ware

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 by up to 30% compared with existing sensor faucets, and up to 80% compared with twin handle-style faucets (comparison with this company's products).

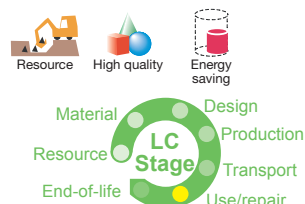
Product performance

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

3-6-8 Kyobashi, Chuo-ku, Tokyo, 104-0031, Japan
Tel +81-3-4332-5164 Fax +81-3-4332-5160
E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Japan



27kg-CO₂

not Inspection

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



Automage:AM-91K

EP-6-032

Household goods and equipment

faucets

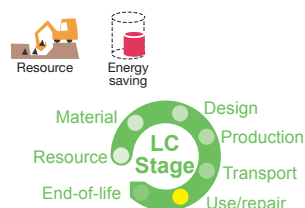
Water-saving faucet WELSTAR

Environmental performance

Water saving

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>



Available in: Consumer market

EP-6-033

Household goods and equipment

bath supplies

RBT700A thermostatic bath & shower set**Environmental performance**

- Water saving effect

How to control the water volume

■ Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

■ Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm²

1. Shower use: 25 seconds to 35 seconds

2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RBT700A Thermostatic Bath & Shower set

EP-6-034

Household goods and equipment

bath supplies

Energy—saving bathroom**Environmental performance**

This product's wrapping the bathtub with double thermal insulation and an insulating cover can keep the water in the bathtub warm, similar to the structure of a thermos bottle. This structure allows the temperature of water in the bathtub to drop only two degrees in six hours, and this insulating performance is four times as high as existing products. This means water in the bathtub does not need to be reheated when a person takes a bath, resulting in saving energy.

**TOTO LTD.**

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan

Tel +81-3-5451-1110 Fax +81-3-5451-1049

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

Available in: Japan

EP-6-035

Household goods and equipment

bath supplies

Water-saving shower head attachment

Environmental performance

This shower allows you to start and stop the water flow by simply pushing the button on the shower head. This function avoids water continuously running while you are washing your hair, resulting in significant water saving and reduced energy for hot water supply.



Global warming



Energy saving



TOTO LTD.

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan
Tel +81-3-5451-1110 Fax +81-3-5451-1049
URL <http://www.toto.co.jp>

Available in: Japan



EP-6-036

Household goods and equipment

bath supplies

RBT721A thermostatic bath & shower set

Environmental performance

- Water saving effect

How to control the water volume

■ Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

■ Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm²

1. Shower use: 25 seconds to 35 seconds

2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.



Waste



Energy saving



ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RBT721A Thermostatic Bath & Shower set

EP-6-037

Household goods and equipment

bath supplies

RBT701A self closing thermostatic bath & shower set**Environmental performance**

- Water saving effect

How to Control Water Volume

■ Water supply volume control

Turn the check knob of eccentric union to the right for smaller water volume, and to the left for larger volume.

■ Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm²,

1. Shower use: 25 seconds - 35 seconds

2. Spout use: 3L - 4L

This setting may not be suitable depending on the condition of the place of use.

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RBT701A Self-closing Thermostatic Bath & Shower set

EP-6-038

Household goods and equipment

bath supplies

RBT710A self-closing thermostatic bath & shower set**Environmental performance**

- Water saving effect

How to control the water volume

■ Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

■ Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm²

1. Shower use: 25 seconds to 35 seconds

2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RBT710A Self-closing Thermostatic Bath & Shower set

EP-6-039

Household goods and equipment

bath supplies

RBT711A self closing thermostatic bath & shower set**Environmental performance**

- Water saving effect

How to control the water volume

■ Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

■ Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm²

1. Shower use: 25 seconds to 35 seconds

2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RBT711A Self-closing Thermostatic Bath & Shower set

EP-6-040

Household goods and equipment

bath supplies

RBT730A thermostatic bath & shower set**Environmental performance**

- Water saving effect

How to control the water volume

■ Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

■ Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm²

1. Shower use: 25 seconds to 35 seconds

2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RBT730A Thermostatic Bath & Shower set

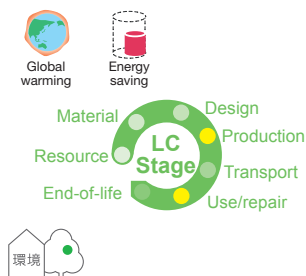
EP-6-041

Household goods and equipment

toilets

NEOREST AH type: A toilet saving electricity and water**Environmental performance**

This toilet incorporates our "Hybrid Ecology System," which is a cleaning system of water flow from the direct water pipes and a new pump developed especially for this product. This technology reduces the quantity of water for cleaning the toilet to 5.5 liters, resulting in a significant water savings compared to 13 liters for existing products. In addition, our "Wonder Wave Cleaning" function, special technology for personal hygienic cleaning, sprays waves of water in strong and weak water jets at more than 70 cycles a minute. This reduces the quantity of water used to nearly half compared to existing products yet leaves the user with the feeling of being fully washed. Also, this toilet saves electricity.



NEOREST AH type

TOTO LTD.

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan
Tel +81-3-5451-1110 Fax +81-3-5451-1049
URL <http://www.toto.co.jp>

Available in: Japan

EP-6-042

Household goods and equipment

toilets

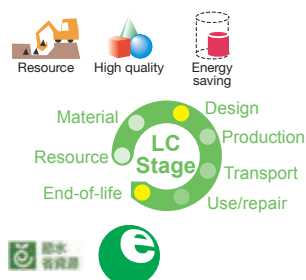
SATIS: the water-saving ECO6 toilet - the world's smallest tankless water closet**Environmental performance**

The world's most compact tankless toilet unit, SATIS, reduces energy consumption by 21% and CO₂ emissions by 24% during manufacture compared with existing products. As a super water-saving ECO6 toilet, full flush (6 liters) and partial flush (5 liters) product line, it cleans the entire bowl and provides water savings of about 60% and electrical savings of 46% compared with existing products. Detergent consumption for toilet cleaning is also reduced 72% by our Proguard treatment, which enables easier cleaning of the toilet surface.

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 world's smallest toilet, 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.



106kg-CO₂
not Inspection

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



SATIS

INAX Corporation

3-6-8 Kyobashi, Chuo-ku, Tokyo, 104-0031, Japan
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URL <http://www.inax.co.jp/>

Available in: Japan

EP-6-043

Household goods and equipment

toilets

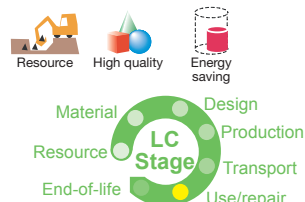
The Sensor Urinal: saves water and energy through its AI-based saving function and hydraulic power generator

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.

49kg-CO₂

not Inspection

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

INAX Corporation

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E-mail inaxpr@i2.inax.co.jp
URL <http://www.inax.co.jp/>

Available in: Japan



Sensor Urinal:AWU-506RAMP/BN8

EP-6-044

Household goods and equipment

toilets

Energy-efficient personal hygiene system:DL-WA50、DL-WA60

Environmental performance

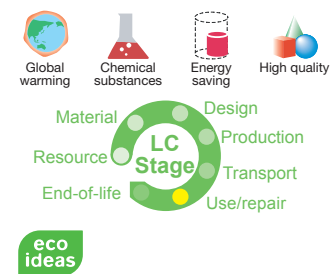
This product is equipped with an instant heating system of the washing water and also equipped with a quick heating system of the toilet seat.

Thanks to those technologies, this product significantly reduced the seasonal power consumption as the toilet seat and water are warmed only when the toilet is in use. And this product achieved the highest level in Japan's industry.

About 75% in energy saving is realized. "304kWh/y to 77kWh/y" when compared with the FY 1998 model (DL-G3).

Product performance

This product is cosmetically designed in smooth form and its surface has less unevenness. This product is equipped with various functions such as: Wash and dry of buttocks, bidet, heating of the toilet seat, and deodorization.



Panasonic Corporation, Home Appliances Company

800 Tsutsui-cho, Yamato Koriyama City, Nara, 639-1188, Japan
Tel +81-743-56-9877 Fax +81-743-56-9934
URL <http://panasonic.jp/toilet/index.html>
URL <http://panasonic.net/csr/>

Available in: Japan

Personal hygiene system: DL-WA50,DL-WA60

EP-6-045

Household goods and equipment

toilets

RWC-127 (one-piece toilet, 6-liter)

Environmental performance

Water saving effect
There is no wasted water; just 6 liters is used compared to the 13 liters of conventional products.

Resource

Energy saving

Material

Resource

End-of-life

Design

Production

Transport

Use/repair

LC Stage



One-piece Toilet (6L)

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

RWC-127

EP-6-046

Household goods and equipment

toilets

RWC-143 (one-piece toilet, 6-liter)

Environmental performance

Water saving effect
There is no wasted water; just 6 liters is used compared to the 13 liters of conventional products.

Resource

Energy saving

Material

Resource

End-of-life

Design

Production

Transport

Use/repair

LC Stage



One-piece Toilet (6L)

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

RWC-143 (One-piece Toilet (6 Liter)

EP-6-047

Household goods and equipment

toilets

RWC-147 (one-piece toilet, 6-liter)

Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of conventional products.



ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-147 (One-piece Toilet, 6 Liter)

EP-6-048

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



Model No. BKC-701R

Low-tank Type

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

EP-6-049

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

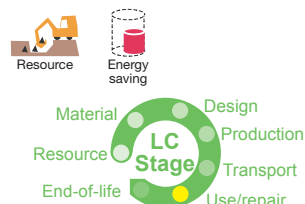
1) Noise reduction effect

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



Model No. BKC-702R

Low-tank Type

Bokwang Ceramics, Ltd.

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-702R, 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

EP-6-050

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

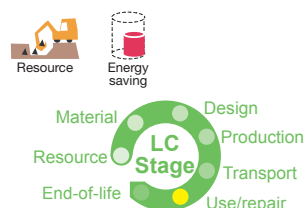
1) Noise reduction effect

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



Model No. BKC-101R

Flush-valve Type

Bokwang Ceramics, Ltd.

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-101R, 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

EP-6-051

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



Model No. BKC-102R

Flush-valve Type

Bokwang Ceramics, Ltd.

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-102R, 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

EP-6-052

Household goods and equipment

toilets

RWC-126 (one-piece toilet, 6-liter)

Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



One-piece Toilet (6L)

One-piece Toilet

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

EP-6-053

Household goods and equipment

toilets

RWC-211 (close-coupled toilet, 6-liter)

Environmental performance

Water saving effect
There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

Resource

Energy saving

Material

Resource

End-of-life

Design

Production

Transport

Use/repair

LC Stage

RWC-211 Close-coupled Toilet (6L)

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

EP-6-054

Household goods and equipment

toilets

RWC-216 (close-coupled toilet, 6-liter)

Environmental performance

Water saving effect
There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

Resource

Energy saving

Material

Resource

End-of-life

Design

Production

Transport

Use/repair

LC Stage

RWC-216 Close-coupled Toilet (6L)

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

EP-6-055

Household goods and equipment

toilets

RWC-229 (close-coupled toilet for children, 6-liter)**Environmental performance****Water saving effect**

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

**ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-229 Close-coupled Toilet for Children (6L)

EP-6-056

Household goods and equipment

toilets

RWC-333 wall-hung toilet**Environmental performance****Water saving effect**

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

**ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-333 Wall hung Toilet

EP-6-057

Household goods and equipment

toilets

RWC-142 (one-piece toilet, 6-liter)

Environmental performance

Water saving effect
There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

Resource

Energy saving

Material

Design

Production

Transport

Use/repair

End-of-life

Resource

LC Stage



One-piece Toilet (6L)

RWC-142 One-piece Toilet (6L)

ROYAL TOTO CO., LTD.
ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

EP-6-058

Household goods and equipment

toilets

RWC-144 (one-piece toilet, 6-liter)

Environmental performance

Water saving effect
There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

Resource

Energy saving

Material

Design

Production

Transport

Use/repair

End-of-life

Resource

LC Stage



One-piece Toilet (6L)

RWC-144 One-piece Toilet (6L)

ROYAL TOTO CO., LTD.
ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

EP-6-059

Household goods and equipment

toilets

RWC-149 (one-piece toilet, 6-liter)**Environmental performance****Water saving effect**

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

**ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-149 One-piece Toilet (6L)

EP-6-060

Household goods and equipment

toilets

RWC-213 (close-coupled toilet, 6-liter)**Environmental performance****Water saving effect**

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.

**ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-213 Close-coupled Toilet (6L)

EP-6-061

Household goods and equipment

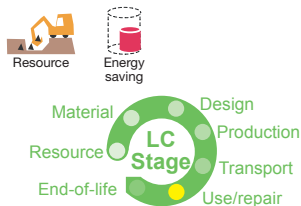
toilets

RWC-217 (close-coupled toilet, 6-liter)

Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-217 Close-coupled Toilet (6L)

EP-6-062

Household goods and equipment

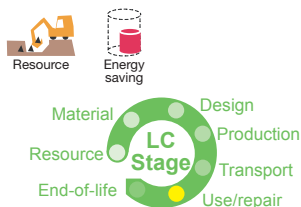
toilets

RWC-303 (close-coupled toilet, 6-liter)

Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-303 Close-coupled Toilet (6L)

Eco-materials

Eco-components

Eco-products // Household goods and equipment

Eco-services

EP-6-063

Household goods and equipment

toilets

RWC-1001 (one-piece toilet)

Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



One-piece Toilet

RWC-1001 One-piece Toilet

ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA

EP-6-064

Household goods and equipment

urine collectors

Automatic Urine Collection System to Reduce Use of Paper Diapers

Environmental performance

Compared to conventional paper diapers (urine pads) that are consumed at a rate of 5 to 7 pieces a day, this product reduces the labor required for nursing care while also greatly reducing the amount of waste (about 1/10).

Product performance

This new excretion care product for elderly people who need nursing care has been cooperatively developed with Unicharm Corporation. This product consists of a urine receptacle and a disposable urine collection pad wherein the special sensor in the pad detects urination and then the urine in the pad is automatically sucked into the urine tank of the urine receptacle. The urine does not remain in the diaper, so the skin can be maintained in a comfortable state while only needing to replace the pads once or twice a day.



HUMAN Care Innovation Venture Company, Hitachi, Ltd.

18-13, Soto-Kanda, 1-chome, Chiyoda-ku, Tokyo, 101-8608, Japan
Tel +81-3-4564-6869
URL <http://www.hitachi.co.jp/products/humancare/>

Available in: Japan

Automatic Urine Collection System

EP-6-065

Household goods and equipment

detergents

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 (NaHCO_3) 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. 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-6-066

Household goods and equipment

detergents

Plus White Concentrated Powder

Environmental performance

Plus White Concentrated Powder consists of 3 main components: Surfactants, made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike most detergents, Sodium Tripoly Phosphate in Plus White Concentrated powder is minimized in the product formula.

Product performance

Plus White Concentrated Powder is a super concentrated detergent with special non-ionic active agents that results in a cleaner and brighter wash. Plus White Concentrated Powder is suitable for both hand and machine washing.

Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore
Tel +65-6267-4523 Fax +65-6264-0260
E-mail Marketing@uiccp.com
URL www.uiccp.com
URL http://www.uiccp.com/d_Plus_White.html



Available in: Singapore, available at selected hypermarkets, supermarkets and provision shops. We also do wholesale trade to regional countries.

EP-6-067

Household goods and equipment

detergents

UIC Big Value Detergent

Environmental performance

UIC Big Value Detergent consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, it is Sodium Tripoly Phosphate (STTP) free.

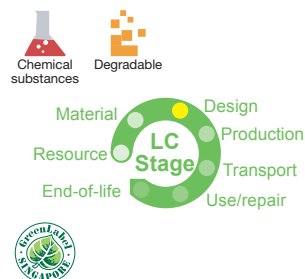
Product performance

UIC Big Value Detergent consists of active ingredient Bio-3TM Action Formula for brighter clothes and is able to remove stubborn stains & odors effectively. Long lasting fragrance with "Floral and Fruity" in Regular variant and "Citrus Splash" for Antibacterial variant. For the Anti-Bacterial variant, it has anti-microbial action that prevents bacterial re-growth & enables a long-lasting disinfection to the fabric.

Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore
Tel +65-6267-4523 Fax +65-6264-0260
E-mail marketing@uiccp.com
URL www.uiccp.com
URL http://www.uiccp.com/d_powder_detergent.html

Available in: Singapore, available at selected hypermarkets, supermarkets and provision shop. We also do wholesale trade to regional countries.



EP-6-068

Household goods and equipment

detergents

Spinmatic Low Suds Detergent

Environmental performance

Spinmatic Low Suds Detergent consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, Sodium Tripoly Phosphate (STTP) is minimized in product formulation.

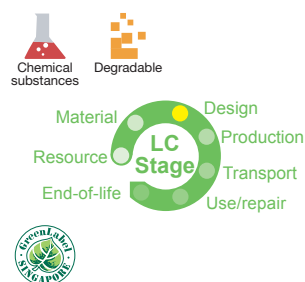
Product performance

Spinmatic Low Suds Detergent suits all kinds of washing machines and is specially formulated for Singapore's water condition. Spinmatic Low Suds Detergent eliminates stubborn stains and dissolves faster in water and brightens colored & white clothes. Spinmatic also comes in an Anti-bacterial variant that penetrates deep into the fabric and eliminates more than 99.9% of harmful pathogenic bacteria.

Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore
Tel +65-6267-4527 Fax +65-6264-0260
E-mail Marketing@uiccp.com
URL www.uiccp.com
URL http://www.uiccp.com/d_SPIN.html

Available in: Singapore, available at selected hypermarkets, supermarkets and provision shops. We also do wholesale trade to regional countries.



Spin

EP-6-069

Household goods and equipment

detergents

Topload Spin Detergent

Environmental performance

Topload Spin Detergent consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, it is Sodium Tripoly Phosphate (STTP) free.

Product performance

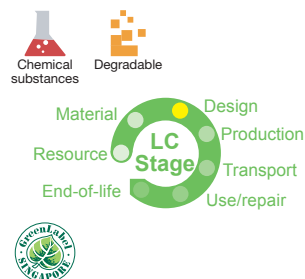
Topload Spin Detergent is specially formulated for top load washing machines. It has Bio-Enzymes & Surfactants Action that enhance washing effects of clothes and brightens colors. With easy ironing effects and fabric softening effects, it provides users with an incredible laundry experience.

Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore
Tel +65-6267-4523 Fax +65-6264-0260
E-mail Marketing@uiccp.com
URL www.uiccp.com
URL http://www.uiccp.com/d_Topload_Spin.html

Available in: Singapore, available at selected hypermarkets, supermarkets and provision shop. We also do wholesale trade to regional countries.

Topload Spin



EP-6-070

Household goods and equipment

detergents

UIC Laundry Liquid Detergent

Environmental performance

UIC Laundry Liquid Detergent consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, Sodium Tripoly Phosphate (STTP) is minimized in the product formula.

Product performance

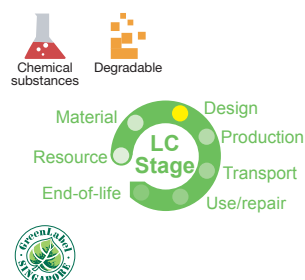
UIC Laundry Liquid Detergent is "Tough on Stain, Gentle on Hands". It has a long lasting fragrance and is specially formulated to remove stubborn stains (mud, curry, lipstick) effectively. For the Anti-bacterial variant, it kills 99.9% bacteria effectively to keep clothes bacteria-free. Comes in Enviro-Friendly Refill Pack, which saves money and the environment.

Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore
Tel +65-6267-4523 Fax +65-6264-0260
E-mail Marketing@uiccp.com
URL www.uiccp.com
URL http://www.uiccp.com/d_Liquid_Detergent.html

Available in: Singapore, available at selected hypermarkets, supermarkets and provision shop. We also do wholesale trade to regional countries.

UIC Laundry Liquid Detergent



EP-6-071

Household goods and equipment

detergents

Compet Ultra Concentrated Powder

Environmental performance

Compet Ultra Concentrated Powder consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, Sodium Tripoly Phosphate (STTP) is minimized in the product formula.

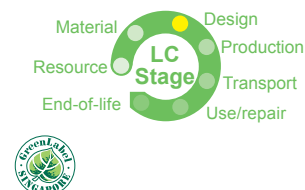
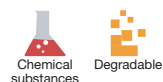
Product performance

The all-new Compet Power Xction's amazing stain-lifting power comes from its advanced Biotechnology formula, which takes action deep inside the fibres of fabrics. It penetrates and attacks the toughest stains, and removes even microscopic dirt effectively without damaging your clothes.

Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore
Tel +65-6267-4527 Fax +65-6264-0260
E-mail Marketing@uiccp.com
URL www.uiccp.com
URL http://www.uiccp.com/d_Compet.html

Available in: Singapore, available at selected hypermarkets, supermarkets and provision shop. We also do wholesale trade to regional countries.



Compet Powder

EP-6-072

Household goods and equipment

detergents

Soapnuts (soapnut shells)

Environmental performance

Ecological and economical compared to other brands of detergent. Two pounds of soapnuts can be used for more than 100 loads of laundry. The soapnut can be easily used in your washing machine. Unlike common washing powders and liquids that contain considerable amounts of chemicals, the soapnut is environmental friendly and is gentle on the skin.

Used for ALL fabrics and with ALL temperatures

Product performance

1. Natural washing of clothes & laundry
2. Mild and soft cleaning for your washing machine
3. Natural washing of gold jewellery for natural shine
4. Natural washing of oily hair
5. Forms good & natural leather when rinsed

The advantages in a nutshell

- * Pure and natural washing detergent that leaves your laundry fresh and clean.
- * Perfect for cloth nappies.
- * Keeps your colors bright.
- * Allergy-free, good for your skin.
- * Environment-friendly. Chemical free.
- * Cultivated through sustainable agriculture.

S S Herbals

485/2, Katra Ishwar Bhawan, Khari Baoli, New Delhi, 110006, India
Tel +91-9212481877 Fax +91-11-23964221
E-mail info@herbsnherbalextracts.com
URL www.herbsnherbalextracts.com
URL www.soapnuts.in

Available in: New Delhi



100kg-CO ₂ not Inspection	Resource/Materials/Production/ Transfer/Use/End-of-Life
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Soapnut Shells

EP-6-073

Household goods and equipment

detergents

Soapnut shells powder

Environmental performance

The somewhat sticky saponine in the shells acts similarly to normal soap. As soon as the shells come in contact with water, natural saponine soap is released and creates a mild suds.

Place 8 to 10 half shells in one of the provided cotton bags. Tie the bag and place it with your laundry in the washing machine. Start your machine as usual, with or without prewash. The remains of the soapnuts can be composted or disposed of through organic refuse.

Tips

- * No need for fabric softeners
- * Works well with delicate fabrics such as silk and wool
- * When washing in cold or warm water, soapnuts can be used a second time on the same day

Product performance

Advantages

- * Pure and natural washing detergent that leaves your laundry fresh and clean
- * Perfect for cloth diapers
- * Keeps your colors bright
- * Allergy-free, good for your skin
- * Environmentally friendly and chemical free
- * Cultivated through sustainable agriculture

S S Herbals

485/2, KATRA ISHWAR BHAWAN, KHARI BAOLI, NEW DELHI, 110006, INDIA

Tel +91-9810631790 Fax +91-11-23964221

E-mail info@herbsnherbalextracts.com

URL www.herbsnherbalextracts.com

Available in: New Delhi



1000kg-CO ₂	Resource/Materials/Production/
Inspection	Transfer/Use/End-of-Life



Soapnut Shells Powder

EP-6-074

Household goods and equipment

detergents

UIC Big Value Dishwashing Liquid

Environmental performance

UIC Big Value Dishwashing Liquid consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other dishwashing liquids, it is Sodium Tripoly Phosphate (STTP) free.

Product performance

UIC Big Value Dishwashing Liquid has a special formula to remove dirt, grease, fishy smell and unpleasant odor effectively. It is gentle to hands.

For the antibacterial variant, it kills bacteria effectively to keep dishes bacteria free. UIC Big Value Dishwashing Liquid comes in Enviro-Friendly Refill Pack, which saves money and the environment.

Universal Integrated Corporation Consumer Products Pte Ltd

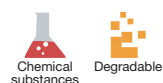
No 3 Jalan Besut Jurong Town, 619556, Singapore

Tel +65-6267-4523 Fax +65-6264-0260

E-mail Marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d_Dishwashing_Liquid.html



UIC Big Value Dishwashing Liquid

Available in: Singapore, available at selected hypermarkets, supermarkets and provision shop. We also do wholesale trade to regional countries.

EP-6-075

Household goods and equipment
washing balls

Glosion Washing Ball

Environmental performance

You can wash clothes without using synthetic detergent—just put the washing ball into your washing machine with your dirty clothes.

80% reduction on washing powder usage

Antibiotic

Chloride exclusion

Conditioner not required

The Glosion Washing Ball is a versatile product that functions as a natural health and wellness product, an environmental protection product, and a scientific product.



Glosion Washing ball

IGTECH

#24, Yongsan-Ri, Chopyeong-Myun, Jincheon-Gun, Chungcheongbuk-Do,
365-852, Korea
Tel +82-43-232-5480 Fax +82-43-838-8239
E-mail igbio@hanafos.com
URL www.igbiotech.com

EP-6-076

Household goods and equipment
adhesives

Adhesive for interior decoration

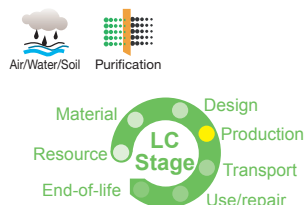
Environmental performance

- 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-6-077

Household goods and equipment

mattresses

Frei Green Environmental Latex Mattress

Environmental performance

Unlike any other latex mattress on the market, Green latex memory foam mattress is the only mattress that has earned the national Toxic-free certification. Highest standards of excellence are held for Function, Quality, and Safety. After an exhausting day of working, lying on Frei Green Environmental Latex Mattress relaxes your entire body through the unique design of breathable bubble-structure supporting your waist. Coupled with the soft, luxurious, and biodegradable Iyocell (TENCEL®) mattress cover. The delicate texture and the non-toxic properties make the ultimate transparency, comfort, and softness. Frei's Green Environmental Latex Mattress - Makes you feel RELUCTANT to wake up!!

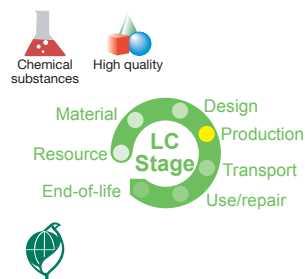
Product performance

Under 80,000-times compression test with only 1.51% out of shape, and the flexibility test as 8.84Kgf

Acircle Corporation

1F, No. 104 Anping Rd., Jhonghe City, Taipei, 23576, Taiwan
Tel +886-2-8941-2421 Fax +886-2-2948-4860
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: Taiwan



Using TENCEL™ as the mattress cover providing additional comfort

EP-6-078

Household goods and equipment

chopping boards

Corn Chopping Board

Environmental performance

It usually takes hundreds years to decompose plastics in the natural environment or sometimes they do not degrade, thus they are accused of environmental contamination because non-degradable packing materials, plastic bags or styrofoam are not properly handled. In addition thousands of plastic products (used plastic bags, nets) are dumped into the sea every year. These wastes are accumulated in the ocean and cause damage to the fishing grounds and marine ecosystem. Therefore, the need for biodegradable materials that do not cause environmental problems gets stronger.

Below are some of the features of the raw material that we use for our corn chopping board.

- 1) Free of environmental hormones (VOCs, Bisphenol, Phthalates)
- 2) Reduces toxic gases while incinerated - Minimizes human casualties at fire
- 3) Reduces CO₂ and realizes clean environment
- 4) 100% compostable within 45 days under proper conditions

Livingwisdom Co.,Ltd

202, Inhyang, Bldg, 377-9 Cheongcheon Dong, Bupyeong-Gu, Incheon, Korea
Tel +82-32-521-7101 Fax +82-32-507-7101
E-mail webmaster@ecomasskorea.com
URL www.ecomasskorea.com



Large and medium size available

EP-6-079

Household goods and equipment

heat ray shielding paints

Heat ray shielding paint with energy saving and CO₂ reduction effects

Environmental 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.

Due to the characteristics of its good weatherability and radio-wave permeability, as well as high-transparency this 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.



Global warming



Energy saving



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: Global

Film coated with IR cutting paint

EP-6-080

Household goods and equipment

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.



Chemical substances



Purification



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!



Samjin industrial's environment-friendly
fresh products are healthy building finishes
not including detrimental mercury, lead,
cadmium, hexavalent chrome as well as
Volatile Organic Compounds (VOCs)

In addition, those exceeding the
performance of existing wallpaper are
semi-permanent products cleaned with
water and detergent, and hygienic for its
anti-fungus character as well.
Those also discharge cozy scent, far-
infrared radiation, and anion during
application.



This product achieved patent of invention in
November, 2003, Eco label logo (Eco-mark)
(Shimizu, Ministerial Environment Prize 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
constructionish products.
Contact Address : Hwabuk 2-dong, Jeju City, Jeju Island.
Tel. 82-6461722-0756 Fax: 82-6461724-0756. Cell 82-11-698-0756
E-mail: km05049@hanmail.net Homepage: www.sj-wallpaper.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-6-081

Household goods and equipment

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 acryl



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-6-082

Household goods and equipment

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-6-083

Household goods and equipment

paints

Natural Antibacterial Water Paint "Fragrance of the Forest"

Environmental performance

1. Natural Paint is an environment-friendly paint developed from pure and healthy natural resources, such as wild plants and minerals.
2. Throughout the entire process of producing, painting and disposing, Natural Paint does not release harmful substances which could threaten the environment or human health.
3. "Fragrance of the Forest" is a Natural Antibacterial Water Paint which is Heavy Metal, Mold, Germ FREE and is effective for chemical toxin interception.

Product performance

1. Be free from sick school syndrome, sick house syndrome, sick building syndrome with natural anion-emitting and air-purifying water-based paint
2. Mold, Germ, Atopy FREE
3. Natural Anion-Emitting and Air-Purifying Matte Finish Water-based Paint
4. First Paint Guaranteed as Anti-Bacterial "Fragrance of the Forest" is the first and only paint in Korea to win the AB (Anti-Bacterial) Mark

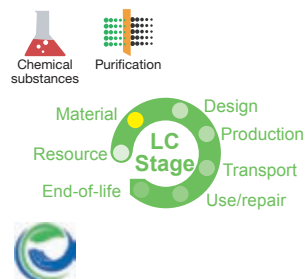
"Enjoy Forest Aromatic Bath Indoors! Inhale Pure Anion Air that Mother Nature Provides!"

HANKOOK SHINHWA PAINT

101-7, Yangbeol-ri, Opo-eup, Gwangju-si, Gyeonggi-do, Korea
 Tel +82-31-766-2983 Fax +82-31-766-6654
 E-mail red237@korea.com
 URL <http://www.hshpaint.com>

Available in: All countries where natural paint is necessary

Fragrance of the Forest



EP-6-084

Household goods and equipment

wet sheet

The sndek cleaning cloth series

Environmental performance

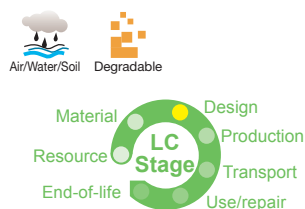
The sndek cleaning cloth series is a range of environmentally friendly cleaning cloths (primarily selected from natural materials such as pulp, cotton and eucalyptus fiber) impregnated with NaHCO_3 electrolysis water. Biodegradable materials are used due to the disposable nature of these cloths, which 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-6-085

Household goods and equipment

bowls

Plant-derived, eco-friendly soup bowl (large)

Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, goldlacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

Product performance

A heat resistant biodegradable material is used as the base of this product after its crystallinity has been increased using advanced molding technology.

HAKUICHI CO. Ltd.

Ishikawa Prefecture, Kanazawa City Morito, 2-Chome, 1st Area, 1, 921-8061, Japan
Tel +81-76-240-0891 Fax +81-76-240-6800
E-mail info@hakuichi.jp
URL <http://www.hakuichi.co.jp/>
URL <http://www.hakuichi.co.jp/style/eco.html>



EP-6-086

Household goods and equipment

bowls

Plant-derived, eco-friendly soup bowl (small)

Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, goldlacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

Product performance

A heat resistant biodegradable material is used as the base of this product after its crystallinity has been increased using advanced molding technology.

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Ishikawa Prefecture, Kanazawa City Morito, 2-Chome, 1st Area, 1, 921-8061, Japan
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E-mail info@hakuichi.jp
URL <http://www.hakuichi.co.jp/>
URL <http://www.hakuichi.co.jp/style/eco.html>



EP-6-087

Household goods and equipment

chopsticks

Plant-derived, eco-friendly chopsticks

Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, goldlacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

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E-mail info@hakuichi.jp
URL <http://www.hakuichi.co.jp/>
URL <http://www.hakuichi.co.jp/style/eco.html>



EP-6-088

Household goods and equipment

chopstick boxes

Plant-derived, eco-friendly chopstick case

Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, gold-lacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

Product performance

A heat resistant biodegradable material is used as the base of this product after its crystallinity has been increased using advanced molding technology.

HAKUICHI CO. Ltd.

Ishikawa Prefecture, Kanazawa City Morito, 2-Chome, 1st Area, 1, 921-8061, Japan
Tel +81-76-240-0891 Fax +81-76-240-6800
E-mail info@hakuichi.jp
URL <http://www.hakuichi.co.jp/>
URL <http://www.hakuichi.co.jp/style/eco.html>



EP-6-089

Household goods and equipment

chopstick boxes

Plant-derived chopsticks and chopstick case

Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, gold-lacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

Product performance

A heat resistant biodegradable material is used as the base of this product after its crystallinity has been increased using advanced molding technology.

HAKUICHI CO. Ltd.

Ishikawa Prefecture, Kanazawa City Morito, 2-Chome, 1st Area, 1, 921-8061, Japan
Tel +81-76-240-0891 Fax +81-76-240-6800
E-mail info@hakuichi.jp
URL <http://www.hakuichi.co.jp/>
URL <http://www.hakuichi.co.jp/style/eco.html>



EP-6-090

Household goods and equipment

heat retaining device for bathwater

Frocky Deluxe

Environmental performance

When using the Frocky Deluxe at the bathtub gas water heater, it can cut 5.36 m³ in propane gas usage per month, 9.648 kg in CO₂ emissions, and 15 liters of crude oil.



Frocky Deluxe

Gruppo Pieta CO., LTD.

1803, Magameryugumae, Kujukuri-machi, Sanbu-gun, Chiba, 283-0114, Japan
Tel +81-475-76-8625 Fax +81-475-76-9151
E-mail public@frocky.com

EP-6-091

Household goods and equipment

glassware

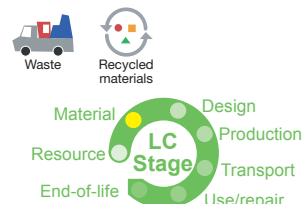
e-glass

Environmental performance

By reusing the glass from discarded fluorescent light tubes, after the mercury has been safely removed, it has made possible environmentally safe glass.

Product performance

Because e-glass is carefully created from recycled glass and by skilled craftsmen, small air bubbles in the glass are purposely not removed to keep a warm texture and to emphasize the special hand-made finish.



e-glass

Shotoku Glass CO.

4-10-4, Kinshi, Sumida-ku, Tokyo, 130-0013, Japan
 Tel +81-3-3625-3511 Fax +81-3-3625-0083
 E-mail mail@stglass.co.jp
 URL http://www.stglass.co.jp/index_e.html

EP-6-092

Household goods and equipment

fragrances

KP CARE S-330/new house syndrome removal product

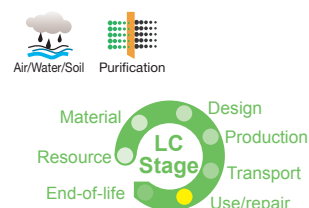
Environmental performance

Formaldehyde emissions, ammonia, and other harmful chemical materials are reduced or eliminated.

Product performance

Helps cure sick house syndrome, made from cypress extract and herbal ingredients.

Reacts with formaldehyde and other hazardous substance to collect, absorb, oxidize, and reduce harmful effects. Removes offensive odors including the smell of tobacco smoke. Pitonchideu effect and Aromatherapy effect also possible through this cypress extract.



Gukpyeong R.I.C Corporation

646 Soonchunyang University #413 Venturecenter B With shinchang-Myun,
 Asan City, Chung-Nam, 336-745, South Korea
 Tel +82-41-544-6119 Fax +82-41-545-6525
 E-mail gomkp@hanmail.net
 URL <http://gombalbadak.com/>

Available in: Korea

EP-6-093

Household goods and equipment

fragrances

KP CARE S-300/new house syndrome removal product**Environmental performance**

Formaldehyde among air, ammonia, Organic chemistry material improve indoor air as is not.

Product performance

Helps cure sick house syndrome, made from cypress extract and herbal ingredients.

Reacts with formaldehyde and other hazardous substance to collect, absorb, oxidize, and reduce harmful effects. Removes offensive odors including the smell of tobacco smoke. Pitonchideu effect and Aromatherapy effect also possible through this cypress extract.

**Gukpyeong R.I.C Corporation**

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Asan City, Chung-Nam, 336-745, South Korea
Tel +82-41-544-6119 Fax +82-41-545-6525
E-mail gomkp@hanmail.net
URL <http://gombalbadak.com/>

Available in: Korea

EP-6-094

Household goods and equipment

fragrances

KP CARE S-1000/new house syndrome removal product**Environmental performance**

Formaldehyde emissions, ammonia, and other harmful chemical materials are reduced or eliminated.

Product performance

Helps cure sick house syndrome, made from cypress extract and herbal ingredients.

Reacts with formaldehyde and other hazardous substance to collect, absorb, oxidize, and reduce harmful effects. Removes offensive odors including the smell of tobacco smoke. Pitonchideu effect and Aromatherapy effect also possible through this cypress extract.

**Gukpyeong R.I.C Corporation**

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Tel +82-41-544-6119 Fax +82-41-545-6525
E-mail gomkp@hanmail.net
URL <http://gombalbadak.com/>

Available in: Korea

EP-7-001

Building and civil engineering
vertical greening system units

The Unit Vertical Greening System "Parabienta"

Environmental performance

The surface temperature is about 11 degrees lower than that of metal walls by the transpiration from plants and soil. It is effective in mitigating the heat island phenomenon. There is a difference of 14 degrees between the temperature of concrete walls and that of walls covered by "Parabienta". It reduces the thermal load for air conditioning.

Product performance

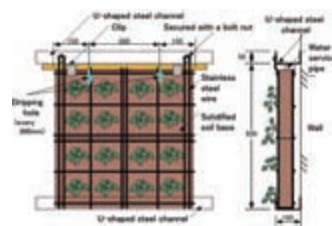
Parabienta, a unit vertical greening system, consists of greening units (made of a solidified soil base and stainless steel wire) and U-shaped channels provided on the wall of a building. With this simple system, the units need only to be fastened to the channels to achieve wall greening. Special fibers are used in the solidified soil base, which is heated to form a molded, solidified planting soil. This soil has outstanding water retention and drainage properties, making it possible to grow various types of plants in just 5 centimeters of soil.



Global warming



Energy saving



Details of the Unit

SHIMIZU CORPORATION

SEAVANS SOUTH No. 2-3, Shibaura 1-chome, Minato-ku, Tokyo, 105-8007, Japan
Tel +81-3-5441-1111
URL <http://www.shimz.co.jp/english/index.html>
URL <http://www.shimz.co.jp/english/environment/env2008e.html>

Available in: Japan

EP-7-002

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.



Resource



Recycled materials



Alfa Green, Ltd

99-1-207 Yamashita-cho, Naka-ku, Yokohama-city, Kanagawa-Pref, 231-0023, Japan

EP-7-003

Building and civil engineering

binders

Waste wood from construction sites can be reused onsite

Environmental performance

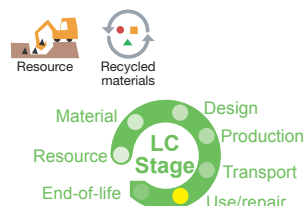
This method uses conventional construction machinery to achieve excellent rooting on and base-layer stability of bedrock and slopes under severe conditions, by just replacing the spray-on material paste with our MC binder. As a result, work periods can be shortened and costs reduced. The method also 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



EP-7-004

Building and civil engineering

insulating panels for residential houses

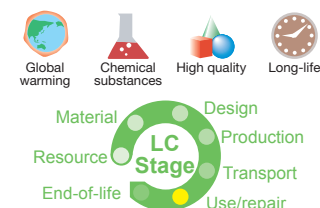
Structural panels that use non-CFC foamed polyurethane as insulation

Environmental performance

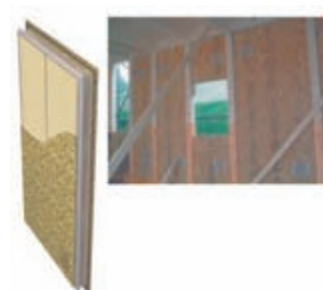
Superwall (SW) panels are labeled with the "Type II Eco-Label" and the materials used were reviewed in consideration of the following two points with the aim of reducing harmful substances: Insulating material made from non-CFC foamed polyurethane, which uses carbon gases with an ozone layer depletion coefficient of 0 and a global warming coefficient of 1, in consideration of global warming. Also, in consideration of measures against sick house syndrome, Grade F four-star (F☆☆☆☆) oriented strand boards (OSB) that emit the least amount of formaldehyde are used.

Product performance

The SW Method using the SW panel developed by our company is a highly airtight, highly insulated and earthquake resistant housing construction method. In addition to its excellent energy-saving performance, it has integrated air-conditioning and programmed ventilation systems to create a comfortable thermal environment. Furthermore, the use of oriented strand boards has increased insulation and enabled the product to attain "wall strength factor 5" certification from the Ministry of Land, Infrastructure, Transport and Tourism. This is the highest level of strength for wooden structures under the Building Standards Act, and makes housing more resistant to earthquakes.



233.8kg-CO₂ not Inspection Resource/Materials/Production/Transfer/Use/End-of-Life



TOSTEM CORPORATION

1-1, Ojima 2-chome, Koto-ku, Tokyo, 136-8535, Japan
Tel +81-3-3638-8187 Fax +81-3-3638-8254
URL <http://www.tostem.co.jp>
URL <http://www.tostem.co.jp/lineup/kouhou/sw/>

Available in: Japan

Heat-insulated panels [SW panel]

EP-7-005

Building and civil engineering

paints

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



Global warming



Long-life



EP-7-006

Building and civil engineering

paints

Building Exterior Paint Invented with Energy Conservation in Mind "MIRACOOl"

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.



Global warming



Energy saving



MIRACOOl 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>

Miracool

EP-7-007

Building and civil engineering

water synthetic resin paints

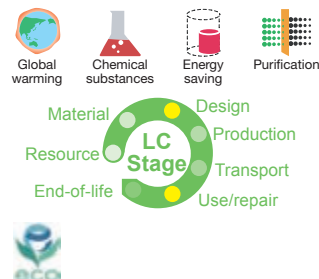
Paints that can efficiently reflect solar energy radiation

Environmental performance

- This is water-based which has lower environmental impact.
- This product provides a thermal screening function.
- This paint can be applied regardless of the old film of the base paint and offers high durability.
- This product contains a very low volatile organic compound content.

Product performance

- This product is nonflammable, which enables safer operations.



Hitachi Chemical Industrial Materials Co.,Ltd.

5-12-15, Namekawa Honcho, Hitachi-shi, Ibaraki Prefecture, 317-0051, Japan
Tel +81-294-22-1313 Fax +81-294-22-1782



Available in: Japan

Roof painted with Histar Shatarou.

EP-7-008

Building and civil engineering

pavement blocks for preventing air pollution by photo-catalysis

Pavement block "NOXER" for preventing air pollution by photo-catalysis

Environmental performance

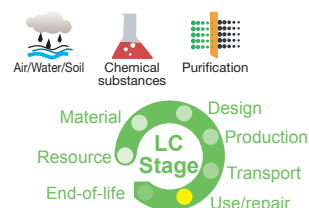
NOXER is a pavement block that has a function to decompose harmful substances by oxidation in the surface layer of concrete blocks. The function is based on the photocatalytic reaction that is caused by titanium oxide.

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

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E-mail noxer@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-7-009

Building and civil engineering

construction materials

Building material "MOISS" having symbiosis with the environment

Environmental performance

MOISS is flame retardant building material for the architecture. It's an epoch-making building material for interior decoration, which has functions of adsorption and decomposition of the volatile organic compounds (VOC) that are the cause of sick house syndrome. In addition, function of humidity control can be used to resolve the problem of dew condensation. And, it is acknowledged as proofstress side material for wooden house because of its workability and nail-holding force like the quality of wood. As a result, the use of MOISS is increasing rapidly. And, recycling of "MOISS" is possible after crushing, when it becomes waste wood. Besides, it was accredited as fertilizer in 2005; it consists of silica acid compound.

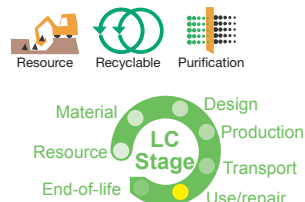
Product performance

Flexural Strength : $\geq 10\text{N/mm}^2$
Moisture Resistance : $3.65\text{m}^2\text{h/mmHg/g}$ (6mm thickness)
Accreditation as Noncombustible Material : NW-8576

Mitsubishi Materials Corporation

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Tel +81-3-5252-5331 Fax +813-5252-5344
URL <http://www.mmc.co.jp/corporate/en/index.html>
URL <http://www.mmc.co.jp/corporate/en/product/construct/09.html>
URL <http://www.mmc.co.jp/corporate/en/csr/csr.html>

Available in: Japan



MOISS is used for interior material

EP-7-010

Building and civil engineering

construction materials

Deck (WPC)

Environmental performance

1. Construction materials from wood and plastic composites
2. Has 80% wood powder content
3. Green technology
4. Energy efficient
5. Reduces global warming through a smaller carbon footprint
6. Quality ISO 9001 and Environmental ISO 14001
7. Recycles available resources
8. Contains no harmful substances
9. 100% recycling is possible
10. Contains no chemical adhesives and does not release harmful substances upon decay or incineration

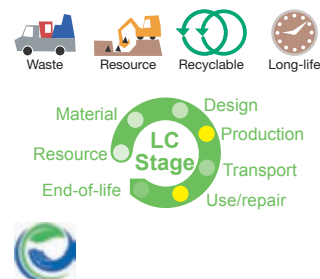
Product performance

- USE: Concourses, greenways, hiking trails, boardwalks, terraces, roof gardens, benches, interiors
1. Strongly resistant to moisture
 2. Will not crack, split, or warp
 3. Termite-proof
 4. Strongly resistant to mold
 5. Requires no painting
 6. Requires little upkeep or preservation expense
 7. Contains no heavy metals
 8. Contains no formaldehyde
 9. Does not emit toxic fumes when burned

ENWPC CORP.

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Available in: Korea



Deck(WPC)

EP-7-011

Building and civil engineering
construction materials

Louver (WPC)

Environmental performance

1. Construction materials from wood and plastic composites
2. Has 80% wood powder content
3. Green technology
4. Energy efficient
5. Reduces global warming through a smaller carbon footprint
6. Quality ISO 9001 and Environmental ISO 14001
7. Recycles available resources
8. Contains no harmful substances
9. 100% recycling is possible
10. Contains no chemical adhesives and does not release harmful substances upon decay or incineration

Product performance

- USE: Concourses, greenways, hiking trails, boardwalks, terraces, roof gardens, benches, interiors
1. Strongly resistant to moisture
 2. Will not crack, split, or warp
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 4. Strongly resistant to mold
 5. Requires no painting
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 8. Contains no formaldehyde
 9. Does not emit toxic fumes when burned

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Available in: Korea



Louver (WPC)

EP-7-012

Building and civil engineering
construction materials

Holcim Green

Environmental performance

Conservation of natural resources.

Product performance

Product performance is better than normal natural fine aggregate concrete, higher compressive strengths, better durability, lower paste porosity, similar external appearance, and higher workability.



Holcim (Singapore) Pte Ltd

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Available in: Singapore

Holcim Green Label Products

EP-7-013

Building and civil engineering
construction materials

Holcim Supercrete HS

Environmental performance

Lower carbon footprint. CO₂ emissions reduced by 65%.
45% savings in concrete volume, thus savings in natural resources.

Product performance

Durable, faster constructions, more usable floor space.



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Available in: Singapore

Holcim Supercrete HS

EP-7-014

Building and civil engineering
construction materials

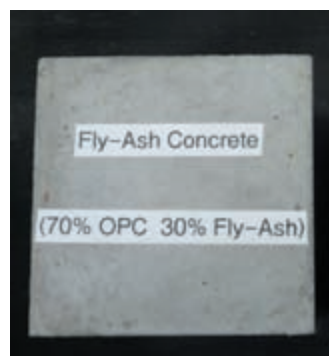
Holcim Green FA

Environmental performance

Lower carbon footprint. CO₂ emissions reduced by up to 50%. Higher strength development at a later age. Higher resistance against sulphates, chlorides and aggressive effluents/gases. Increased durability, strength growing for number of years.

Product performance

Durable and denser product. Lower permeability.



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Available in: Singapore

EP-7-015

Building and civil engineering
construction materials**Holcim Green SL****Environmental performance**

Lower carbon footprint. CO₂ emissions reduced by up to 70%. Higher resistance against sulphates, chlorides, and aggressive effluents/gases and increased durability.

Product performance

Durable and denser product. Lower permeability.

**Holcim (Singapore) Pte Ltd**

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Available in: Singapore

Holcim Green Label Products

EP-7-016

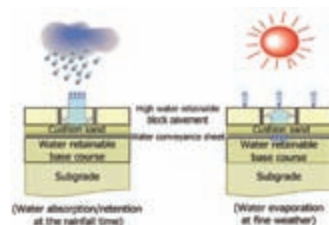
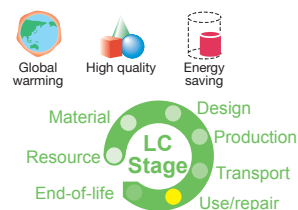
Building and civil engineering

block pavement systems with long-term water-holding function**Earth-cool Block Pavement System with long-term water-holding function****Environmental performance**

As an anti-heat island measure, Mitsubishi Materials Corp. and Tokyohoso Co. jointly developed the "Earth-cool Block Pavement System" that integrates water retainable blocks, water conveyance sheets, and a water-retaining base course.

Product performance

1. Under weather conditions in which the surface temperature of asphalt pavement is over 60 °C, "Earth-cool Block Pavement System" makes it possible to lower the temperature by 15 °C and more in comparison with normal asphalt pavement.
2. Water retention ability is about 56 l/m², and reduced effect of road surface temperature continues for two weeks.
3. There is no need to greatly change the conventional pavement structure, and it is applicable for the renewal of the existing pavement.

**Mitsubishi Materials Corporation**

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

Available in: Japan

System outline chart

Eco-materials

Eco-components

Eco-products // Building and civil engineering

Eco-services

EP-7-017

Building and civil engineering

tiles

Soil ceramics: energy-saving building products made from new materials without burning

Environmental performance

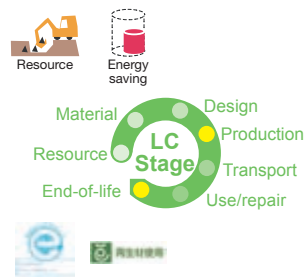
Soil ceramics are floor tiles made from waste clay and other materials. They can be recycled and returned to the soil after use. And their production achieves energy savings of more than 50% compared with cement and more than 80% compared with ceramics. A high-pressure steam curing process that avoids burning means these blocks contribute to energy savings and have a low environmental load.

Product performance

Soil ceramics, which keep the original characteristics of natural soil, absorb and discharge atmospheric moisture through internal holes and maintain a comfortable level of indoor humidity. They also have a deodorizing effect and storing heat. Being soft, they are excellent to walk on, and it has been proven that people feel less tired from walking on soil ceramics.

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SOIL CERAMICS: SCE-300N

EP-7-018

Building and civil engineering

tiles

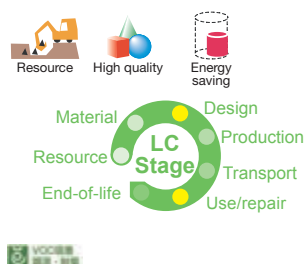
Ecocar: superior health-promoting building materials to support both comfort and health

Environmental performance

Ecocar, 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

Ecocar, 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.



4kg-CO₂
not Inspection

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



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Available in: Japan

ECOCAR:ECO-275NET/R01

EP-7-019

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.

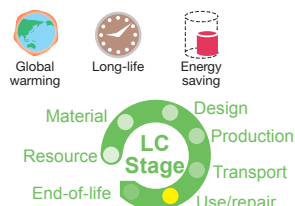
Product performance

The surface of Thermo Tile also offers good drainage thanks to its high hydrophilicity (the property that causes water to spread out on the surface of a material). 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.

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Available in: Japan



TERMO TILE:IFT-300/ML-201,ML-301

EP-7-020

Building and civil engineering

tiles

SANDROCK: Permeability ceramics building materials with recycle materials

Environmental performance

"Sandrock," an environmental symbiosis pavement made using porous ceramics, avoids underground drought and lightens rainwater run-off to rivers and drainage channels through high water permeability that helps return rainwater to the soil. The large number of micro-pores in its composition prevents puddles and water splashing, reduces slipperiness, gives a soft walking feel to pedestrians, and absorbs the heat of road surfaces. SANDROCK is a product from recycled material that utilizes crushed tile, ash from incinerated sewage sludge, etc. in the production process. It is authorized as an ECO MARK PRODUCT with an environmental symbiosis function.

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Available in: Japan



SANDROCK

EP-7-021

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.

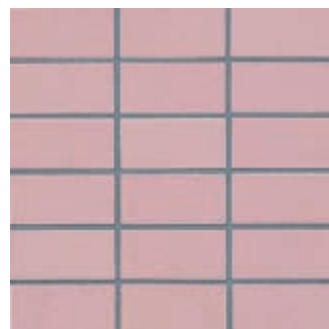
MICRO-GUARD enhances the surface hydrophilicity of conventional tile. Thereby, the condition of the tile surface is always covered with a water film that absorbs water molecules from the air. As a result, it prevents the generation of static electricity which attracts air-borne dust. Moreover, the tile effectively becomes "self-cleaning" since dust and grime are flushed from tile surface when it rains thanks to the MICRO-GUARD treatment.



Global warming



Long-life



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Available in: Japan

MICROGUARD STANDARDNEO:COM-255/MGN-14

EP-7-022

Building and civil engineering

tiles

Re-tile: renovation tile for use with the tile-wrap construction method

Environmental performance

With this product, INAX has halved the weight of tiles while maintaining their original functions, strength and material textures, thus significantly reducing the loads that act on building structures. Re-tile also satisfies INAX's original Nano-hydrophilicity anti-fouling standard, making it highly resistant to stains. Rainfall cleanly washes away the fouling by dust, automobile exhaust gases, etc. As a mineral-based ceramic product, Re-tile offers good weather ability including high resistance to ultra-violet rays, and its color does not fade even over periods of up to 40 years.

Product performance

Re-tile is a lightweight tiling product designed for the exterior renovation of housing walls using the newly developed "tile-wrap" construction method, which involves attaching Re-tiles directly to the existing exterior wall. Special wire nets are screwed to the wall, and the tiles are then stuck directly on top, thus preventing them from becoming detached.



Resource



Long-life



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Available in: Japan

RE-TILE: (JR) RTL-2/DAR-4

EP-7-023

Building and civil engineering

tiles

Recycled-material Tile: wall and floor materials made from waste resources

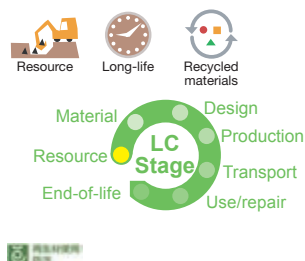
Environmental performance

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). Additionally, various regenerated materials are also used to make these tiles. These include waste glass that has been disposed of, sewage sludge incinerator ash generated at municipal sewage treatment plants, slag that forms in the blast furnaces of iron-making plants, and fly-ash — coal ash generated during coal incineration at thermal power plants that becomes trapped in dust-collecting apparatus.

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Available in: Japan



Recycled Material: IPF-150/KS-KS5

EP-7-024

Building and civil engineering

floor materials

OA-Floor (WPC), Access Floor (WPC)

Environmental performance

1. Wood plastic composites
2. Wood powder content at 85% (max.)
3. Green technology
4. Energy-efficient materials
5. CO₂ decrease for global warming prevention
6. Quality ISO 9001 and Environmental ISO 14001
7. Recycling available resources
8. Harmful substances
9. 100% recycling is possible
10. No chemical adhesive

Product performance

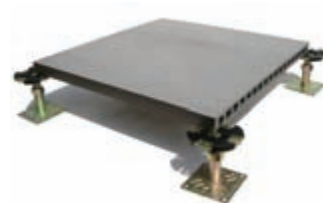
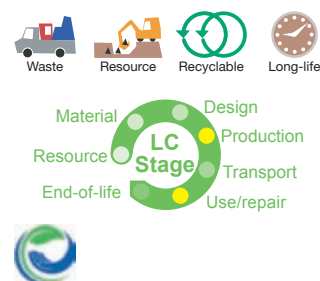
USE: For an intelligent building, computer center, studio, operating room etc.— any place that uses many circuits.

1. EN-OF500 size: 500 x 500 x 30mm
EN-AF600 size: 600 x 600 x 35mm
2. Local compressibility resistance, perpendicularity, flame retardant, resistance, flatness, moisture-proofing, color-fastness are all superior.
3. Formaldehyde super zero
4. Product does not release toxic substances when incinerated.

ENWPC CORP.

5th floor, Yeoksun B/D, #779-2, Yeoksam-dong, Kangnam-gu, Seoul, 135-928, Korea
Tel +82-2-555-2285 Fax +82-2-555-2103
E-mail enwpc@paran.com
URL <http://www.enwpc.com>

Available in: Korea



OA-Floor (WPC), Access Floor (WPC)

EP-7-025

Building and civil engineering

reform doors

Rechent — a door for simple renovations

Environmental performance

The Rechent reform door is a Type II Eco-labeled product. The door's superior insulating properties (next-generation energy-saving standard I product suitable for areas south of Area II) enable it to be used even in Hokkaido. It contributes to savings on energy and electricity bills by achieving highly efficient air-conditioning performance and maintaining comfortable room temperature throughout the year. The design also saves work by enabling existing frames and casings to be simply covered, allowing installation to be carried out in a single day without damaging outer or inner walls.

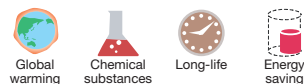
Product performance

Rechent can be used to restore old doors by covering the old doorframes and casings. Since it is not necessary to remove the old frame, installation can be completed in a single day without having to break or re-plaster the outer wall. Installation costs are reduced and there is no need to worry about leaving the door open during the remodeling. It also provides high insulation performance to improve air-conditioning efficiency.

TOSTEM CORPORATION

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URL <http://www.tostem.co.jp>
URL <http://www.tostem.co.jp/lineup/door/reform/reformdoor/>

Available in: Japan



266.5kg-CO₂
not Inspection

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



Reform door [Rechent]

EP-7-026

Building and civil engineering

thermal insulating window sashes

Symphony — a highly insulative window frame built with an aluminum resin composite

Environmental performance

Symphony is an aluminum/resin composite-framed, 12-mm air layer sealed double-glazed window that contributes to heat insulation and energy saving in homes. When energy-saving effects are converted into CO₂ values, a highly insulated, highly airtight house fitted with Symphony double-glazing can reduce carbon gas emissions by approximately 960 kg per year. Furthermore, with scrap dismantling in mind, aluminum and resin materials are fixed with screws to improve recyclability. This product is labelled with a "Type II Eco-Label."

Product performance

Symphony is a window frame made with consideration to security/safety, user-friendliness/design and ecology. It uses a low-heat conductive resin material on the inside and a highly durable and weather-resistant aluminum material on the outside. This composite structure, which makes the most of these two materials, displays high heat-insulating properties, contributing not only to home energy saving, but also to the prolonged life of the house, by preventing condensation in the building frame.

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URL http://www.tostem.co.jp/lineup/sash/dannetu/symphony_wm/

Available in: Japan



145.4kg-CO₂
not Inspection

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



[Symphony] Aluminum Plastic Composite Window Frame

EP-7-027

Building and civil engineering

air conditioning systems

Air Conditioning System with Thermal Storage in Building Mass

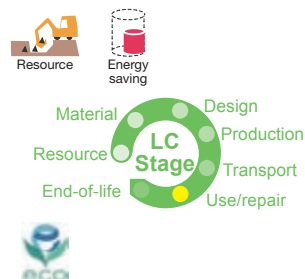
Environmental performance

The system reduces energy cost by 7%, CO₂ emissions by 10%, and running cost by 15%.

Our experimental results have shown 20% reduction in peak-time energy in the daytime (based on our estimate).

Product performance

By storing thermal energy within the mass of the building structure by low-cost night time electricity, our system can reduce day-time energy, space and maintenance workload.



Hitachi Plant Technologies, Ltd.

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URL <http://www.hitachi-pt.com/corporate/csr/report/index.html>

Available in: Japan

Thermal Storage Systems in Building Mass

EP-7-028

Building and civil engineering

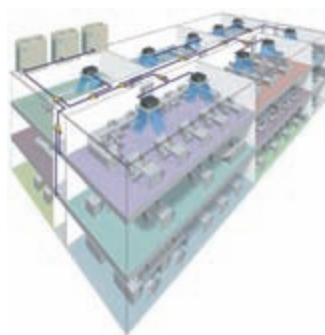
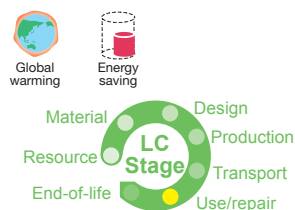
air conditioners

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.

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EP-7-029

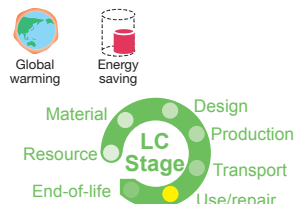
Building and civil engineering

air conditioners

High performance, energy-saving air conditioner

Environmental performance

A special version of the VRV II for small offices and shops. Daikin have remodeled the acclaimed VRV II system aiming to provide the precise power and compactness required by small offices and shops.



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Available in: Outside Japan

VRV III-S Series



EP-7-030

Building and civil engineering

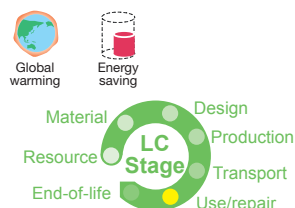
air conditioners

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.

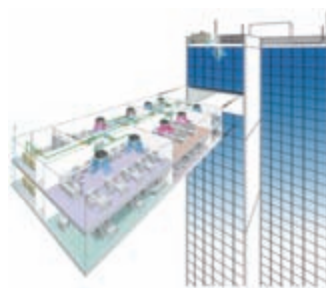


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Available in: Outside Japan

VRV-W II



EP-7-031

Building and civil engineering

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.



Global warming



Energy saving



SUPER MULTI NX

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Available in: Outside Japan

EP-7-032

Building and civil engineering

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 décors. Advanced technology from Daikin has improved COP and reduced sound levels to suit today's modern living environment.



Global warming



Energy saving



Super Multi Plus D

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Available in: Outside Japan

EP-7-033

Building and civil engineering

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° airflow brings out uniform temperature distribution and a comfortable living environment even if the setting temperature is raised by just 1°C in cooling.



Global warming



Energy saving



Sky Air Inverter series

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EP-7-034

Building and civil engineering

freezing/refrigerating/air conditioning systems

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.



Global warming



Energy saving



CONVENI-PACK

DAIKIN INDUSTRIES, LTD.

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EP-7-035

Building and civil engineering

mirror duct systems

Mirror-duct System "Energy-saving with bright sunlight"

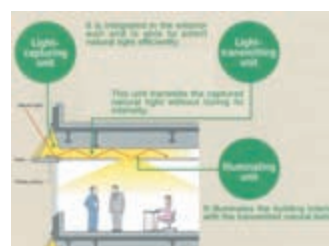
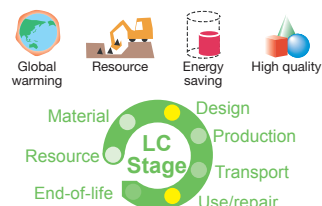
Environmental performance

How can the brilliance of sunbeams be harnessed for use in building interiors as a more efficient source for lighting systems? By a light-ducting system called the "Mirror-duct System." 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.

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Mechanism of the Mirror-duct System

EP-7-036

Building and civil engineering

architecture

NIKKEN SEKKI Tokyo Building "Revolutionary Prototype Openings for Next Generation Buildings"

Environmental performance

The basic approach was that the product should adopt a no-frills design in its plan and exterior, equipment and detailing. Rather than an effort to produce something special for our company's own building, it is intended to serve as a prototype for general office buildings in the future. One of the design concepts is "response to the external environment." The east and west facades have extensive glazed surfaces. The major feature of the building is the motorized blinds mounted on the exterior, which is a redesign of a Japanese traditional sun shade called "Sudare". Also, eaves and multi-pane heated glass protect the openings. The combination of external blinds with multi-pane heated glass is a key characteristic of the building, as it eliminates the need for a perimeter air conditioning system and is effective in both keeping the thermal environment comfortable and saving energy.

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EP-7-037

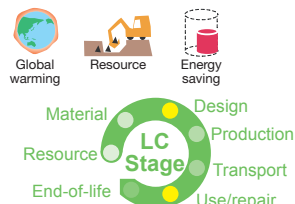
Building and civil engineering

architecture

Pola Museum of Art "In harmony with the Existing Topography and Vegetation"

Environmental performance

Linking and unifying the interior of the site with the surrounding woods and vegetation improves the local environmental topography and builds the strength and vitality of its trees. We endeavor to propose plans that surpass individual buildings to include their surrounding environments, with the aim of further cutting environmental loads. In planning the museum, we carried out a ten-year project on the theme of how to protect and coexist with the natural environment. First we spent one year on a detailed survey of the flora and fauna of the site. Above all, the position allowed the conservation of all the beech trees. The substructure of the museum is hemispherical to avoid interrupting the flow of local aquifers. Impact on the surrounding forest is mitigated by using water sprays to cool air conditioning outlet air and water sprinklers to reduce radiant heat from the roof.



Cross section: The hemispherical substructure was designed to avoid interrupting the flow of groundwater.

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EP-7-038

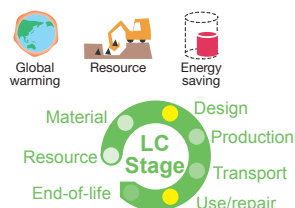
Building and civil engineering

architecture

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 site was an irregularly shaped open space, divided between the west side, at much the same height as the road in front, and a rise on the east side. 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, 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 rooftop planting creating landscaped roofs that reduce the thermal loads radiated directly from them.



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As an environment-themed corporate training facility

EP-7-039

Building and civil engineering

architecture

Nakashibetsu Junior High School "Realizing an eco school at -20°C"

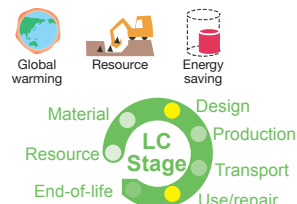
Environmental performance

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 -20°C in winter to 30°C in summer, so the reduction of thermal loads was a major theme. Reduced surface area of exterior walls, external insulation, highly-insulating sash windows and other measures 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.

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The simple building form, exterior insulation and highly-insulative sash windows

EP-7-040

Building and civil engineering

architecture

Amami Hospital for Foundation Jiaikai "The Wind Terrace Draws Breezes into the Wards"

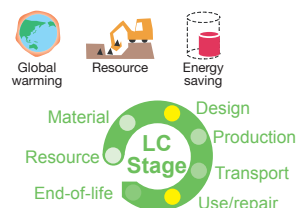
Environmental performance

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 21°C 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.

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EP-7-041

Building and civil engineering

architecture

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.



The floors slabs have removable portions, and each floor has two sets of toilets.

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EP-7-042

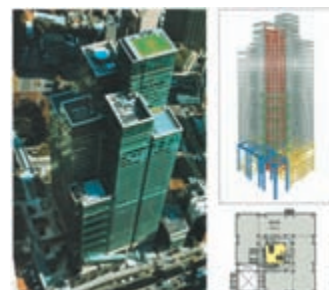
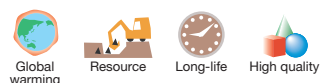
Building and civil engineering

architecture

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. As a structural element, it provides earthquake resistance combined with structural freedom.



The Void Core in the center of the building can be used in many ways, extending the service life of the building.

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EP-7-043

Building and civil engineering

landscape design

I-Garden Air "Joining together city-center greenery"

Environmental performance

Just as human bodies are maintained by the interlinked flow of blood, the urban environment is maintained by linkages of green space and water. The large expanses of green land and water within city centers are the lungs of cities, and fresh air circulates along tree-lined avenues and rivers. 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.

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Global warming



EP-7-044

Building and civil engineering

urban planning and management

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.

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Global warming



Resource



High quality



Energy saving



Area energy management achieves a district with high energy efficiency.

EP-7-045

Building and civil engineering
green roof systems

PEG System - Your Portable Greening Solution

Environmental performance

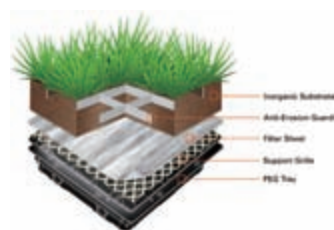
Prefabricated Extensive Green Roof System (PEG) is an innovative lightweight modular green roof tray system manufactured using thermal plastic which can be recycled. It has a built-in reservoir that retains rainwater to sustain plant growth. PEG System allows instant greening for extensive roof garden and is suitable for most new and existing buildings.

The benefits of the PEG System:

- Allows owners to dismantle and move PEG to a new place with ease
- Designer can rearrange PEG trays to achieve different aesthetic look
- Enables a neat and quick installation process on site
- Stores water to sustain the plant growth
- Improves energy efficiency and softens the urban landscape
- High durability and low maintenance
- Reduces surface temperature

United Premas Limited

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EP-7-046

Building and civil engineering
bio green grass

Eco-friendly Biodegradable Hydraulic "Bio Green Grass"

Environmental performance

This environmentally-friendly oil is degraded by microorganisms and will not cause environmental damage if spilled onto grass, soil or into a river following a construction accident. We have developed the technology for the world's first hydraulic oil that does not kill grass. This product satisfies the criteria for eco-label certification as biodegradable, and is certified as an Eco-label Product by the Japan Environment Association.



Bio Green Grass

KUBOTA Corporation

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EP-7-047

Building and civil engineering
concrete products

Concrete Crab-Panel

Product performance

Crab-Panel is a concrete panel that is capable of creating an abundant living space and also improving habitat conditions for aquatic creatures. Recovering the food chain of coastal areas: Conventional concrete revetment is unable to provide a sustainable habitat for living creatures (especially crabs which live near water), as a result a decrease in coastal resources occurred. Crab-Panel is developed to overcome this situation.

- This panel is established in front of the existing revetment or retaining wall.
- Coarse surface of the panel allows algae to grow densely on it.
- Joint of the panel is a suitable part for crabs to hide and move around in.
- Holes are set on the panel, which allow the crabs to burrow and hibernate during winter.
- To reduce light reflection, the surface color of the panel can be adjusted.
- Surface color can be adjusted to be in harmony with the surroundings.

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Crabs on Concrete Crab-Panel

EP-7-048

Building and civil engineering
plastic resin

R3plas Eco-label Recycled Plastics Resins

Environmental performance

R3plas Recycled Resin from closed-loop system. From collecting post industrial plastics waste to consumer plastics waste to reprocess with our technology from Disassembly, Sorting, Crushing, Pellet extrusion, color compounding (pigments, additives and testing, etc), tooling, manufacturing to export of finished products.

Product performance

Good performance as prime virgin resin
Innovative products and environment friendly
Awards design for green products
Green label awards
Meet ISO 14000 and green purchasing policy



R3plas Eco-label recycled plastics tray for roof-top garden with special rain water filter system

WINRIGO (S) PTE LTD

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URL www.winrigo.com.sg
URL www.winrigo.com.sg

Available in: All countries

EP-7-049

Building and civil engineering

floating systems

EcoFloat modular floating system

Environmental performance

The EcoFloat Modular Floating System is a revolutionary highly modular floating system with excellent features. It is cost effective and environmentally friendly, suitable for any leisure activities, waterfront property, aquatic sports, military use, and engineering projects on the water.

The benefits of EcoFloat:

Easy to install, no extensive construction work needed

Low cost

Environmentally friendly

Versatile; can be reconfigured to any size or shape that suits different type of applications

Minimum maintenance

Features:

High load capacity at 350 kg/m²

Durable built material

High Density Polyethylene (HDPE) that is resistant to UV rays, seawater, corrosion, chemicals and oil

Non-slippery surface and sharp edges

Comes in a modular form that aids easy installation, like piecing together "Lego" bricks



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Available in: Singapore, Malaysia, Thailand

EcoFloat Floating System

EP-7-050

Building and civil engineering

continuous subterranean diaphragm wall members

Continuous subterranean diaphragm wall members

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

2-6-3, Otemachi, Chiyoda-ku, Tokyo, 100-8071, Japan

Tel +81-3-3275-5144 Fax +81-3-3275-5979

E-mail kankyo@nsc.co.jp

URL <http://www.nsc.co.jp/en/eco/index.html>

EP-7-051

Building and civil engineering

carpet tile

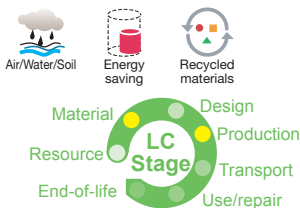
Recycled Carpet Tile: Sumi Green SG-300•400

Environmental performance

SUMI-GREEN is a brand name of carpet tile products whose backing material is made from recycling powder which is finely milled from backing layer of used carpet tile that was collected from the market. Because the process of backing material manufacturing is not a way to paste several recycled sheets together, but a way to blend the recycling powder into the virgin material, the process requires little energy expenditure and additional processes for reproducing. The spun-dyed Sumitron which is recycled polyester for SUMI-GREEN reduces water usage because its dyeing process produces no waste liquid. During the entire product lifecycle, SUMI-GREEN reduces 19% of CO₂ emission than the standard nylon loop carpet tiles manufactured by Suminoe.

SUMINOE TEXTILE CO., LTD.

2-30-4, Nishi-gotanda, Shinagawa-ku, Tokyo, 141-0031, Japan
Tel +81-3-5434-2317 Fax +81-3-5434-2315
E-mail Kiyotoshi_Tsurube@sin.suminoe.co.jp
URL <http://www.suminoe.jp/english/index.html>



Sum Green SG 400

Eco-materials

Eco-components

Eco-products // Building and civil engineering

Eco-services

EP-8-001

Machines and equipment
air conditioning systems

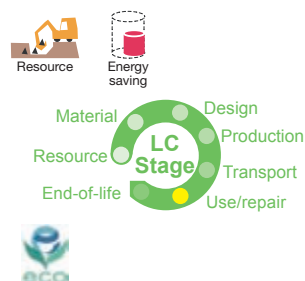
OH Saver (Optimized HVAC Control Systems for Energy Saving)

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. (based on our estimate)

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
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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/corporate/csr/report/index.html>



Available in: Japan

System configuration

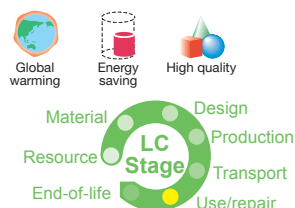
EP-8-002

Machines and equipment
office air conditioners

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-8-003

Machines and equipment

office 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, reaching 1.86, and the generating efficiency, 44%, exceeds the average generating efficiency at the consuming end of thermal power plants in Japan, 40%.

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



High Power Excel

EP-8-004

Machines and equipment

office 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: 54% 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

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

URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>



EP-8-005

Machines and equipment

hydraulic excavators

Super Large Electric Hydraulic Excavator Series "EX3600E-6 EX5500E-6"

Environmental performance

(Good influences for world environment prevention)

- (1) No fuel consumption -> Save fossil fuel resources
- (2) Reduce the amount of CO₂ gas exhaust -> Prevent global warming
Stop NOx gas exhaust -> Prevent air pollution
- (3) Stop scrapping of oil and oil filters -> Reduce the amount of waste / Save resources

Product performance

Recent customers have started to show a stronger preference for electric excavators to cut their operation cost since fuel prices have increased. In response to this market need, HCM has started developing electric excavator series for the mining market, right after HCM has achieved the development of the EX-6 series with EPA Tier 2 regulation engines. We will continue to make contributions to environmental protection through design and development of HCM.

Hitachi Construction Machinery Co., Ltd.

2-5-1 Kouraku Bunkyo-ku Tokyo, 112-8563, Japan
Tel +81-3-3830-8093 Fax +81-3-3830-8219
URL <http://www.hitachi-kenki.co.jp>

Available in: Worldwide



Super Large Electric Hydraulic Excavator EX5500E-6

EP-8-006

Machines and equipment

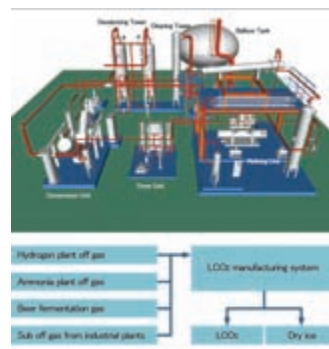
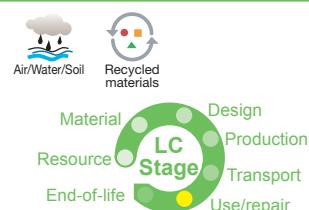
liquefied CO₂ manufacturing systemsLiquefied CO₂ Manufacturing Systems

Environmental performance

Ammonia manufacturing plants and beer breweries emit high levels of carbon dioxide. Our "Liquefied CO₂ Manufacturing System" is capable of capturing and recycling these emissions.

Product performance

Our product produces extremely high levels of liquefied CO₂ with over 99.99% purity. The recycled CO₂ can be used to manufacture carbonated beverages and dry ice.



Hitachi Plant Technologies, Ltd.

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E-mail koho-senden@hitachi-pt.com
URL <http://www.hitachi-pt.com>
URL <http://www.hitachi-pt.com/products/ip/engineering/co2.html>
URL <http://www.hitachi-pt.com/corporate/csr/report/index.html>

Available in: Japan

System configuration

EP-8-007

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.



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-8-008

Machines and equipment
rubber hoses

Hydrogen dispenser hose

Environmental performance

Fuel cell system in the limelight as the next-generation ultimate power source

Improving the infrastructure for hydrogen distribution as the energy of fuel cells is a major problem that confronts the energy industry. Bridgestone has applied a conventional technique using high-pressure hose (Primoline), and developed a 70MPa hydrogen dispenser hose (with over 280MPa burst pressure). So we have made an important contribution to improve the infrastructure for the use of hydrogen.



Bridgestone Corporation

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan
Tel +81-3-5202-6706 Fax +81-3-5202-6718
URL <http://www.bridgestone.co.jp/english/index.html>



Hydrogen dispenser hose

EP-8-009

Machines and equipment

tire temporary mobility restoration kits

Tire Temporary Mobility Restoration Kit (TMK)

Environmental performance

Waste reduction, Energy Saving: With the use of Tire Temporary Mobility Restoration Kit(TMK), which can be used with most general tire punctures, spare tires are unnecessary. This leads to the reduction of resources and energy of producing spare tires, which are rarely used.

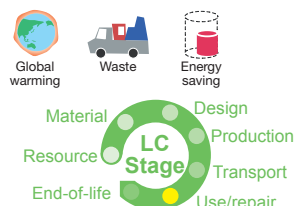
Global warming prevention: The TMK, the weight of which is approximately 1.5kg, is substantially lighter than a spare tire, which weights approximately 11kg. With its light weight, TMK helps to improve automobile mileage.

Product performance

Bridgestone corporation has been developing TMK, which can be used in major puncture case instead of spare tire, to allow the driver to continue driving to a place to replace the punctured tire. The kit will be effective in countries with good road condition.

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>



Tire Temporary Mobility Restoration Kit (Prototype)

EP-8-010

Machines and equipment

biomass boiler systems

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
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EP-8-011

Machines and equipment
generators

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

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URL <http://www.jfe-eng.co.jp/>



EP-8-012

Machines and equipment
power boilers

RPB coal-fired super critical once-through, sliding pressure, BHK-type Benson Boiler

Environmental performance

5% decrease in fuel input rating and amount of CO₂ emission have been achieved by applying a high-pressure, high temperature steam condition.

Product performance

The original 1997 concept has been improved in the current design by enhancing the steam condition to increase thermal efficiency, producing a reduction in exhaust gas and improving fuel consumption. Materials used in the construction of the unit have also been designed to significantly reduce the total mass and allow optimization of the physical characteristics of many components.



Babcock-Hitachi K.K.

Akihabara UDX Building, 14-1 Soto-Kanda 4-chome, Chiyoda-ku, Tokyo, 101-0021, Japan
URL <http://www.power-hitachi.com/>



790MW coal-fired super critical boiler

EP-8-013

Machines and equipment

heat pump water heaters for business use

Heat pump water heater "Eco-Cute" for business use

Environmental performance

ODP (Ozone Depletion Potential) is zero, and GWP (Global Warming Potential) is reduced to 1/1700 by employing natural refrigerant CO₂. This product's significant energy-saving feature suppresses CO₂ emission.

Product performance

Energy consumption is reduced by integrating a heat pump that utilizes thermal energy of the atmosphere; this product can generate thermal energy three times greater than ordinary heater with the same electric energy input. Flexible integration is available for combining one heat pump unit with one up to three hot water tanks. Applicable to instantaneous hot water circulation systems that require immediate temperature control; distant hot water faucets or showers can be supplied instantaneously.



エコ商品
おと掲載

17800kg-CO₂
not Inspection

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

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
105-8410, Japan
Tel +81-3-3502-2111
URL <http://www.hitachi-ap.co.jp/>



EP-8-014

Machines and equipment

heat pump water heaters for business use

Energy-saving and cost-effective heat pump water heater with a large capacity suitable for a large facility.

Environmental performance

● Mitigation of climate change: While combustion-type water heaters are the mainstream, this highly efficient heat pump water heater halves CO₂ emissions and the running cost is one third that of a conventional water heater.

Product performance

- Large-capacity water supply: Up to 40 tons of hot water consumption per day. Also capable of responding to the instantaneous demand for a large amount of hot water.
- Simple operation: Control unit with a LCD touch panel for integrated control of the entire system.
- Simple installation: Greatly reduced piping work. 25% reduction in installation space.



Toshiba Carrier Corporation

Shinagawa Center Building, 23-17, Takanawa 3-chome, Minato-ku, Tokyo,
108-0074, Japan
Tel +81-3-6409-1735 Fax +81-3-5447-8388
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>



Heat Pump Water Heater for Commercial Use "Hot Power Eco Ultra-BIG"

EP-8-015

Machines and equipment

pumps

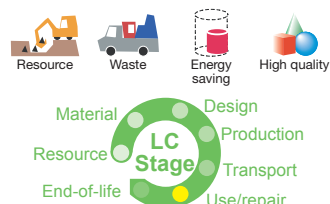
Energy-saving canned motor pumps

Environmental performance

8-steps controlled energy-saving drive can be done with the internal inverter carried on the pump. Further, it has an automatic variable speed control function by external signal input and trouble caution signal output function as standard.

Product performance

Application of the canned motor and inverter enable the pump to be compact. Because of the leakage-free design, the sealing device is maintenance free.



Hz-free pump model MMF

EBARA CORPORATION

11-1 Haneda Asahi-cho, Ohta-ku, Tokyo, 144-8510, Japan
Tel +81-3-3743-6111 Fax +81-3-5736-3100
E-mail webmaster@ebara.com
URL www.ebara.co.jp

EP-8-016

Machines and equipment

textile machinery

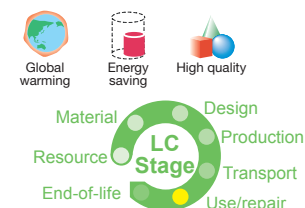
Air Jet Loom "JAT710"

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-8-017

Machines and equipment

computerized numerical controllers

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 >>----

It is a saving resource design which is small and lighter. (Volume:13% reduction Mass: 29% reduction)

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

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 >>----

Conforming to EU RoHS Directive, the occurrence of six regulated substances (.Lead, Mercury, Cadmium, Hexavalent chromium, PBB, and PBDE) is controlled.



M700VS 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: Worldwide

EP-8-018

Machines and equipment

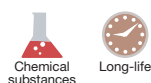
electronic microscopes

CD-Measurement SEM "CG4000"**Environmental performance**

Reduced measuring time per workpiece

Product performance

Improved resolution



CD-Measurement SEM CG4000

Hitachi High-Technologies Corporation

24-14, Nishi-Shimbashi, 1-chome, Minatoku, Tokyo, 105-8717, Japan

Tel +81-3-3504-5805 Fax +81-3-3504-5948

E-mail kawamoto-yoshimizu@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/index.html>

EP-8-019

Machines and equipment
electronic microscopes

Scanning Electron Microscope SU1510

Environmental performance

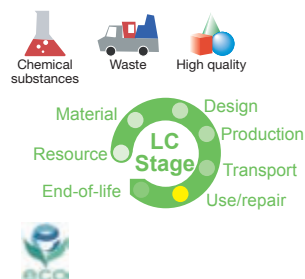
Width of the main unit has been reduced by 20% (compared to Hitachi Scanning Electron Microscope S-3000N) so that the microscope can be installed in a more confined space.

Product performance

The specimen chamber and stage have been designed to accommodate samples as large as 153mm in diameter. Imaging can be completed on a sample that is 60mm in height at the analytical working distance of 15mm. Flexibility for sample size is a key feature of the SU1510. To assist inexperienced users SU1510 provides an on screen operation guide that guides the user step by step through the complete imaging process; from vacuum mode selection to taking a picture. This unique feature allows users of any level of experience to quickly obtain high quality images.

Hitachi High-Technologies Corporation

24-14, Nishi-Shimbashi, 1-chome, Minatoku, Tokyo, 105-8717, Japan
Tel +81-3-3504-5805 Fax +81-3-3504-5948
E-mail kawamoto-yoshimizu@nst.hitachi-hitec.com
URL <http://www.hitachi-hitec.com/global/index.html>
URL http://www.hitachi-hitec.com/global/em/sem/sem_index.html
URL <http://www.hitachi-hitec.com/global/csr/2007/index.html>



Scanning Electron Microscope SU1510

EP-8-020

Machines and equipment
wire electric discharge machines

Next Generation WEDM: Realizing High-precision Machining and Reduced Running Costs

Environmental performance

----<< Material >>----

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.

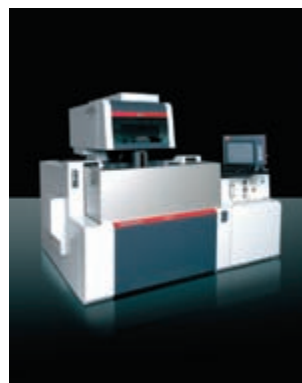
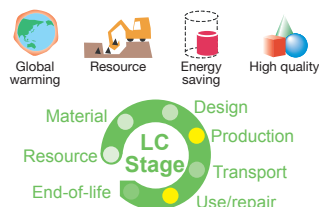
----<< Energy >>----

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 >>----

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

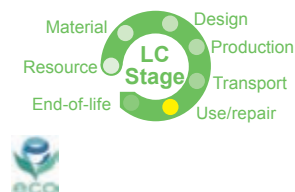
EP-8-021

Machines and equipment
valves

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.



Stainless Steel Bellows Valve

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/pr02.htm>

EP-8-022

Machines and equipment
assembly equipment

Direct Drive Modular Mounter "GXH-3"

Environmental performance

- (1) Large cut in power consumption by 29% and excellent improvement in productivity by 95% compared to Hitachi standard models.
- (2) More quiet during operation by 12% noise reduction.
- (3) P.C.B. height measure feedback and the soft mounting nozzle has realized reduction of cracking and chipping on installation components and has improved process yield.

Product performance

- (1) Throughput 95,000cph (Under optimum conditions)
- (2) Wide range component size : 0.4×0.2mm~55×55mm, 100×26mm
- (3) Mounting accuracy ±0.05mm



Direct drive modular mounter GXH-3

Hitachi High-Tech Instruments Co., Ltd.

6, Menuma-nishi, 1-chome, Kumagaya-shi, Saitama, 360-0238, Japan
Tel +81-48-506-6086 Fax +81-48-567-0084
URL <http://www.hitachi-hitec.com/group/hti/en/index.html>
URL <http://www.hitachi-hitec.com/group/hti/en/index.html>

Available in: Asia, North America, South America, Europe, Japan

EP-8-023

Machines and equipment

welding tips

Collet tip, a welding tip that realizes energy saving and resource saving.

Environmental performance

High-speed and energy-saving are growing needs in the welding industry. To meet such needs, we developed "collet tip", a welding tip for our welding robots; TAWERS. Practical use of HOT effect allows our collet tip to have the following characteristics.

- High speed and less welding current reduced energy consumption by 10% or more compared to before.
- Adoption of the separate structure of tip and collet allows our welding tip to serve 3 to 5 times longer than the life of our conventional tips.

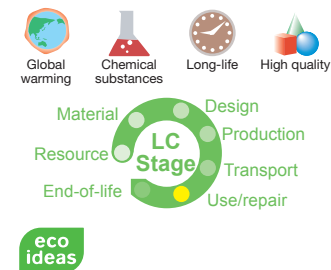
Product performance

- Increased deposition rate ensures (1) stability at high speed welding and (2) wider allowance at misalignment, which produces high-quality welding results.
- Stabilized feeding point controls output current fluctuation, which improves welding quality.
- Improved wire positioning accuracy reduces spread of welded points.

Panasonic Welding Systems Co.,Ltd.

3-1-1 Inazu-cho, Toyonaka City, Osaka, 561-0854, Japan
Tel +81-6-6866-8556 Fax +81-6-6862-1441
URL <http://panasonic.net/pws/>

Available in: Japan, North America, Europe, China



Tip (AET41062) and Collet (AGT41130)

EP-8-024

Machines and equipment

power transformers

Energy Saving Inverter for buildings and factories, fan and pump applications

Environmental performance

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

By using an inverter for fan or pump application and to control the flow rate using damper or valve or motor on-off control.

Optimal excitation control (a distinct function in DREQROL-F700) makes more energy saving compared to conventional V/f control.

----<< Toxicity >>----

Complies with the EU RoHS Directive to use alternatives to all six hazardous substances.

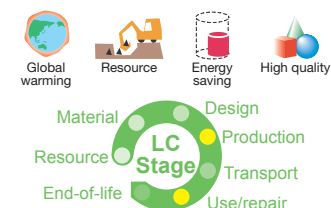
Product performance

Received Honorable Award at the 2006 Electrical Manufacturers Awards sponsored by the Japan Electrical Manufacturers' Association. Using inverter for fan or pump application is more efficient and saves more energy than conventional flow rate control using damper or valve or motor on-off control.

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, America, Japan, etc.



Inverter FREQROL-F700

EP-8-025

Machines and equipment
cogeneration

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. Heated water is stored in the storage tank and then supplied to the building. This system is ideal for small and mid-sized hotels, hospitals and restaurants because of its energy-saving features and because of its 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



GENELIGHT

EP-8-026

Machines and equipment
polymer electrolyte fuel cells

Polymer Electrolyte Fuel Cell (PEFC) Cogeneration System for residential use

Environmental performance

Osaka Gas is currently developing the PEFC Cogeneration System jointly with Toshiba Fuel Cell Power Systems Corp. It generates electricity through the electrochemical reaction of oxygen in the air and hydrogen extracted from natural gas.

It is a highly energy-saving system which has realized a reduction of energy consumption by 27% as well as CO₂ emissions by 40%, if electric power and recovered hot water are utilized ideally. In addition, power generation through chemical reaction causes no vibration troubles. It is currently undergoing durability and verification tests as part of a government-sponsored "large scale stationary fuel cell demonstration project".

It reduces CO₂ emissions by 40% resulting from the primary energy reduction of 27%.

Product performance

Power generation efficiency: 35% (LHV)

Total energy efficiency: more than 80%

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



Polymer Electrolyte Fuel Cell

EP-8-027

Machines and equipment

polymer electrolyte fuel cells

Polymer Electrolyte Fuel Cell (PEFC) Cogeneration System for residential use

Environmental performance

Osaka Gas is currently developing the PEFC Cogeneration System jointly with ENEOS Celltech Corp. It 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 a reduction of energy consumption by 27% as well as CO₂ emissions by 40%, if electric power and recovered hot water are utilized ideally. In addition, power generation through chemical reaction causes no vibration troubles. It is currently undergoing durability and verification tests as part of a government-sponsored "large scale stationary fuel cell demonstration project".

It reduces CO₂ emissions by 40% resulting, from the primary energy reduction of 27%.

Product performance

Power generation efficiency: 35% (LHV)

Total energy efficiency: more than 80%

Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

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URL <http://www.osakagas.co.jp/indexe.html>

URL http://www.osakagas.co.jp/csr_e/index.html



Polymer Electrolyte Fuel Cell

EP-8-028

Machines and equipment

solid oxide fuel cells

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.

The New Energy Foundation started a field test subsidized by NEDO in 2007. Osaka Gas strives toward the commercialization of this system by making use of the experiences and results of the field test.

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

Operational performance (HHV): generating efficiency of 41%, waste heat recovery ratio of 36%

* Size (DxWxH, mm):

Generation unit: 350 x 570 x 960

Exhaust heat utilization unit: 300 x 700 x 1700



Solid oxide fuel cell

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

EP-8-029

Machines and equipment

vending machines

NonFron Vending Machine with Heat Pump System: NS-9P36HP

Environmental performance

A waste heat recovery heat-pump system of the NS-9P36HP is realized by placing the two external heat exchangers, one for cooling and the other for heating cycle, together in one unit. Equipped with this technology, the model provides more than twice effective heating operation than the FY 2005 model (NS-5R30) and achieves the year 2012 energy regulation by the Japanese government.

Product performance

The model contains a wide range of drinks and its easy-to-find color promotes sales.



eco ideas



NS-9P36HP

Panasonic Corporation, Home Appliances Company

3-4-74 Noji-higashi, Kusatsu City, Shiga, 525-0058, Japan
Tel +81-77-566-4805 Fax +81-77-566-4843
URL <http://panasonic.net/csr/>

Available in: Japan

EP-8-030

Machines and equipment

gas meters

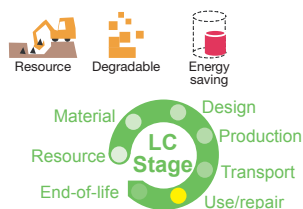
Gasoline Dispenser

Environmental performance

Lightening (Weight: Old model 390kg → New model 370kg)
Energy Saving (Power Consumption: Old model 100W → New Model 85W)

Product performance

Gasoline dispenser for self-service gas stations



BB26NA-QQJ

Tokico Technology,Ltd.

3-9-27 Tsurumi Chuo, Tsurumi-ku, Yokohama City, Kanagawa Prefecture,
230-0051, Japan

EP-8-031

Machines and equipment
wind turbines

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. It becomes almost zero at the stage of operation. The amount of 127 t CO₂ is produced per the average annual electric output, 4,380,000 kWh. (52% of a solar cell system)

Product performance

Hitachi wind turbine is of 2MW type with active yaw downwind type three blades with controllable pitch. When selecting the site for wind turbine installation, mountainous areas are considered unsuitable. However the complex terrains provide a distinct concentration of high speed, up-flow wind. This downwind turbine is specifically designed to take advantage of this wind. Downwind turbine design has smaller misalignment towards up-flow wind compared to upwind turbine design, which brings about an advantage in more power generation up to 7.6% than upwind type.

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 (Sorry for Japanese page alone, English page is under construction)



Global warming



Energy saving



2MW Downwind Turbine Generator System

EP-8-032

Machines and equipment
wind turbines

Three Vertical Blades Born From Ingenuity

Environmental performance

Thankfully, the earth provides us with a natural and infinite source of energy as it spins on its axis: Wind. WINPRO takes the wind and converts it into energy effectively.

Product performance

Through our unique design and production, the three vertical blades made from recyclable, noncorrosive aluminum alloy are tough against high wind speeds while operating in near silence.

Although wind speed and direction are unpredictable, the curved design of the aerodynamic blades utilizes both drag and lift to capture winds coming from 360 degrees and harness wind power safely into usable energy.

The light weight feature of the curved blades allow our generators to begin rotating at very low wind speeds from 1 m/s, while its strength allows it to withstand winds of up to 90 m/s.

WINPRO generators are environmentally friendly, low in noise pollution and compared with other blades, occupy a smaller area thus increasing human and wildlife safety.

WINPRO Co Ltd

Omote-Sando NESPACE 2F, 4-11-7 Jingu-mae, Shibuya-ku Tokyo, 150-0001, Japan

Tel +81-3-5771-6502 Fax +81-3-5771-6503

E-mail sano@winpro.co.jp

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



Resource



Global warming



Energy saving



SAIL

Available in: Worldwide

EP-8-033

Machines and equipment

motors

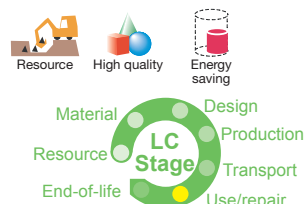
High-efficiency motors

Environmental performance

This product is a new highly effective motor that contributes to conservation of energy applicable to various machines. The optimization of the shape of the core and high-quality material have decreased the loss by about 20-30% (compared to our standard motor).

Product performance

The stator coil temperature has been decreased by about 10-20°C by a optimally designed high cooling capacity and an aluminum alloy frame.



TFO-K

Hitachi Industrial Equipment Systems Co.,Ltd.

AKS Bldg., 3, Kanda Neribei-cho, Chiyoda-ku, Tokyo, 101-0022, Japan
Tel +81-3-4345-6071 Fax +81-3-4345-6913
URL <http://www.hitachi-ies.co.jp/english/products/motor>

EP-8-034

Machines and equipment

standard transformers

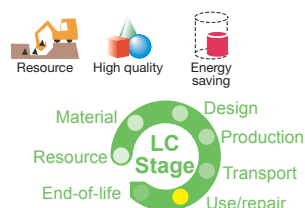
Super-energy-saving transformers "Super Amorphous"

Environmental performance

Super Amorphous can decrease energy loss even 44% better than the (Japanese) top-runner target level. In addition, no-load loss (corresponds to stand-by loss) is 1/3 of that of the top-runner qualification level.

Product performance

Amorphous alloy material for iron core of the transformer has a long life-time of 20-30 years, and decreases no-load loss (eddy current disadvantage + disadvantage of hysteresis) to about 1/5 of that of the conventional silicon steel material.



Amorphous transformer

Hitachi Industrial Equipment Systems Co.,Ltd.

AKS Bldg., 3, Kanda Neribei-cho, Chiyoda-ku, Tokyo, 101-0022, Japan
Tel +81-3-4345-6076 Fax +81-3-4345-6913
URL <http://www.hitachi-ies.co.jp/english/products/trans>

EP-8-035

Machines and equipment

uninterruptible power supplies

HIVERTER-UP201i "UNIPARA"

Environmental performance

- High efficiency of this product reduces electric power consumption. ((400kVA) Efficiency: conventional 92%→UNIPARA 95%, Electric power consumption reduction: 162MWh for a year, CO₂reduction : 62t for a year).
- Light weight and downsizing reduces the requirement for the building structural strength and installation space. ((400kVA) Weight : conventional 3,700kg→UNIPARA 1,950kg, Footprint: conventional 2.53m²→UNIPARA 1.62m²)
- Long life parts avoid frequent replacement of cooling fans and electrolytic capacitors. (Period of replacement: conventional 8 years→UNIPARA 15 years)

Product performance

UPS protects important equipment such as facilities of data centers against instantaneous power failure. According to the scale requirement of equipment, eight UPSs can be connected in parallel at maximum. With the Unit-Parallel concept, UPS system capacity becomes scalable according to the demand of the facility.

Hitachi, Ltd.

5-2-1 Omika-cho, Hitachi-shi, Ibaraki-ken, 319-1293, Japan
 URL <http://www.hitachi.co.jp>
 URL <http://www.hitachi.co.jp/Div/ise/upshp/> (Japanese Only)

Available in: Japan



62000kg-CO₂
not Inspection

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



HIVERTER UP-201i "UNIPARA" 540kVA

EP-8-036

Machines and equipment

turbo-molecular pumps

Turbo-molecular Pump and Energy-saving-type Power Unit

Environmental performance

Turbo Molecular Pump (TMP) is a high vacuum pump to create "clean ultra-high vacuum". Die-forged alminum rotor rotates with high-speed, compresses and pumps molecular flow from inlet to outlet. The rotors of the model name TMP-W2403 and W3503 are specifically designed to endure high backing pressure. This feature allows a combination with a smaller backing pump, which can save the total power consumption of a TMP & backing pump exhaust system.

New controller, EI-D series, for TMP, has achieved weight reduction with the help of a new control circuit which comprises DSP (Digital Signal Processor) and HIC (Hybrid IC) in association with high-density packing technology. In comparison with our previous model, the volume and weight have been reduced by 50% as well as the maximum power consumption can be reduced by 30%.

SHIMADZU CORPORATION

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

Available in: Worldwide



EI-D Series pump power supply unit

EP-8-037

Machines and equipment

compact green laser modules

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

Environmental performance

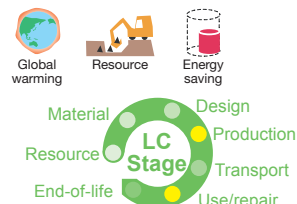
Small green laser modules are now attracting more attention from industries as a light source for laser line markers and projectors. To meet increasing market demand, Shimadzu has developed the green laser module "BEAM MATE™" for built-in applications. It is compact in size and has low power consumption. "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.

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

SHIMADZU CORPORATION

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

Available in: Worldwide



Compact Green Laser Module [BEAM MATE™]

EP-8-038

Machines and equipment

medical equipment

Offset & Open Style Multipurpose Imaging System "CUREVISTA"

Environmental performance

The number of composition units is reduced for space-saving. The total number of systems can be reduced by multiple-purpose use of this system as well as a multi-modality image display function; e.g. substitution of a urinary-organs inspection with simple PACS. The packaging material is reduced by the efficient use of transport equipment.

Product performance

This system put though a redesign that pursue ideal functions for individual inspection methodology and resulted in:

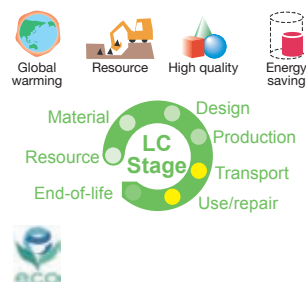
①Offset open system ②2-way arm mechanism.

These features extend the work area 1.5 times larger. In addition, this system's 1.3 times larger fluoroscopic range enables fluoroscopy at the edge of the top plate, which allows inspection of patients using wheelchairs.

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



Appearance of CUREVISTA System

EP-8-039

Machines and equipment
medical equipment

MR Imaging System "AIRIS Elite"

Environmental performance

While typical MRI imaging equipment using superconductors in a helium cooling unit consumes 8 KW of electricity, this Elite system using permanent magnets does not consume energy for magnetic field generation. Elimination of the helium-cooling unit also reduces the running cost and space for installation. Materials within the magnetic circuit consist of neodymium, iron, and aluminum all of which can be reused after de-magnetization.

Product performance

Open MRI is of a vertical magnetic type which generates the magnetic field in vertical direction. Wide open space offers numerous benefits to provide a patient with comfort.

A vertical magnetic field type MRI can obtain a higher signal than a horizontal magnetic field type with the same magnetic field strength due to a solenoid receiver coil used in it. Open MRI system takes full advantage of it.

Hitachi Medical Corporation

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URL <http://www.hitachi-medical.co.jp/>



AIRIS Elite

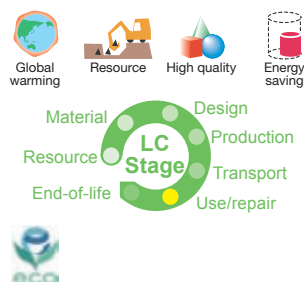
EP-8-040

Machines and equipment
medical equipment

Digital Ultrasound Diagnostic Scanner "EUB-7000HV"

Environmental performance

Our company announces "We defend human happiness and the earth environment" as our environmental policy for development, production, and sales of medical equipment. This ultrasound diagnostic scanner "EUB-7000HV" has reduced the unit size adopting large scale FPGA and ASIC, cut weight by 11% and decreased the power consumption by 20%. In addition, only Pb-free solder is used for all products of our company.



Hitachi Medical Corporation

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Available in: Europe, Japan

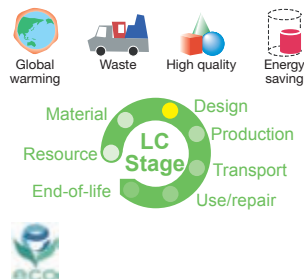
EP-8-041

Machines and equipment
medical equipment

Whole-body X-ray CT system "ECLOS"

Environmental performance

- By increasing the number of the slices per scan in our X-ray CT system, the electric power consumption per slice has been reduced to 1/2-1/4 during scanning.
- The weight of X-ray CT system reduced about 10%.



Hitachi Medical Corporation

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan
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 URL <http://www.hitachi-medical.co.jp/>



EP-8-042

Machines and equipment
medical equipment

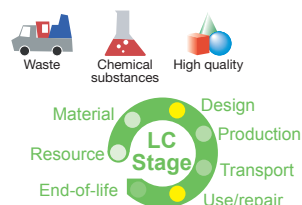
Biochemical Analyzer Offering Enhanced Test Efficiency and Resource Saving

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: 33% 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.
- Expanded scope of test: One operator can perform continuous biochemical and immunoassay measurements.
- Reduced test time: Optimum operation is possible, such as the fast provision of biochemical data with high priority.



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/worldwide.php>
 URL <http://www.toshiba-medical.co.jp/tmd/english/corporate/img/report08e.pdf>



Biochemical Analyzer TBA-c16000

EP-8-043

Machines and equipment
medical 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
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 URL <http://www.toshiba-medical.co.jp/tmd/worldwide.php>
 URL <http://www.toshiba-medical.co.jp/tmd/english/corporate/img/report08e.pdf>

Available in: Japan, USA, Europe



Magnetic Resonance Imaging System "EXCELART Vantage Powered by Atlas" MRT-2003

EP-8-044

Machines and equipment
medical equipment

Energy- and Resource-saving Cross-sectional X-ray Scanning of the Human Body

Environmental performance

- Mitigation of climate change: 60% reduction in energy consumption thanks to the development of a new unit and increased processing speed.
- Efficient use of resources: Resource consumption reduced by approximately 20% with the adoption of new technology; need for X-ray films also eliminated.
- Management of chemicals: Amount of lead used for shielding minimized through the adoption of an anode-grounded X-ray tube.

Product performance

- Superior image quality: Sophisticated image-processing technology achieves high-definition images of the heart and cardiovascular organs (high image quality achieved by 0.5-mm slices).
- Reduction of exposure dose: Exposure reduced by about 50% with the adoption of denoising software.
- Patient friendly: More detailed examination in a shorter time greatly reduces the burden on the patient.

TOSHIBA MEDICAL SYSTEMS CORPORATION

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 URL <http://www.toshiba-medical.co.jp/tmd/worldwide.php>
 URL <http://www.toshiba-medical.co.jp/tmd/english/corporate/img/report08e.pdf>



Aquilion 64 TSX-101A

EP-8-045

Machines and equipment
medical equipment

Advanced Ultrasound System with High-Speed Acquisition of 4D Volume Data

Environmental performance

- Mitigation of climate change: 30% reduction in energy consumption as a result of reduced examination time thanks to innovative imaging technology.
- Efficient use of resources: A common platform enables the use of many conventional mechanical parts (40%).
- Management of chemicals: 10% reduction in non-recyclable items as a result of fewer printed circuit boards thanks to high-integration technology.

Product performance

- Excellent Image Quality: Improved realtime 3D imaging performance thanks to original technology.
- Efficient diagnosis: Efficient diagnosis of cardiovascular diseases realized through the use of novel algorithms.
- Shorter examination time: Major reduction in examination time due to the use of innovative transducers.

TOSHIBA MEDICAL SYSTEMS CORPORATION

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 URL <http://www.toshiba-medical.co.jp/tmd/worldwide.php>
 URL <http://www.toshiba-medical.co.jp/tmd/english/corporate/img/report08e.pdf>

Available in: Global



Diagnostic Ultrasound System "Aplio ARTIDA" SSH-880CV

EP-8-046

Machines and equipment
measuring instruments

F-7000 Fluorescence Spectrophotometer

Environmental performance

- Resource reduction (Compact Design): approx. 2/3 the size of the F-4500
- Ease of decomposition: easier to be decomposed by 23% reduction of screws
- Energy efficiency: 30% reduction of motor's electric power consumption

Product performance

- High S/N Ratio (using Raman band of water): S/N 800 RMS, equivalent to S/N 250 peak to peak
- Ultra-Fast Scanning: 60,000nm/min
- Compact Design: approx. 2/3 the size of F-4500
- Multiple Accessories: a wide range of accessories accommodating various applications



F-7000 Fluorescence Spectrophotometer

Hitachi High-Technologies Corporation

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 Tel +81-3-3504-5805 Fax +81-3-3504-5948
 E-mail kawamoto-yoshimizu@nst.hitachi-hitec.com
 URL <http://www.hitachi-hitec.com/global/index.html>
 URL <http://www.hitachi-hitec.com/global/science/fl/f7000.html>
 URL <http://www.hitachi-hitec.com/global/csr/index.html>

EP-8-047

Machines and equipment
measuring instruments

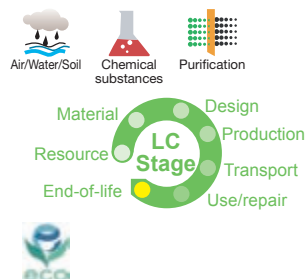
Online Dioxin Precursor Monitor "CP-2000"

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. The chlorophenols in the flue gas are ionized by atmospheric-pressure chemical-ionization (APCI) using needle electrode corona-discharge. Ionized chlorophenols are detected by a three-dimensional quadrupole mass analyzer (3DQMS). This monitor can measure in high sensitivity up to a few tens of ppt levels of chlorophenols in flue gas.

Hitachi High-Tech Trading Corporation

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Tel +81-3-3504-7311 Fax +81-3-3504-7363
E-mail keisoku@nst.hitachi-hitec.com



Online Dioxin Precursor Monitor CP-2000

EP-8-048

Machines and equipment
measuring instruments

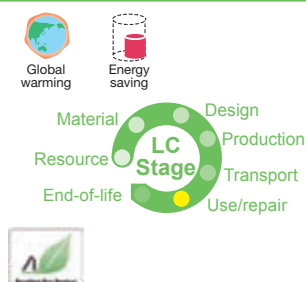
Combining Measuring Capability and Compactness "MT9090A Network Master Series"

Environmental performance

We adopted new parts in order to make the instrument compact and light enough for any worker to carry. In particular, we succeeded in making the optical module, the key to effective operation, a one-piece unit without sacrificing performance. We thus combined measuring accuracy, such as short dead zone performance (short length of the unmeasurable 'blind zone' area), with compactness. We have also reduced CO₂ emissions during the instrument's operation by 35% compared with a conventional model.

Product performance

The Fiber To The Home (FTTH) service, provided by the laying of fiber optic cable to homes, has been spreading widely across the world. The MT9090A Network Master Series is a measuring instrument for detecting the location of a break point in optical fiber between the optical splitter and the home.



MT9090A Network Master 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/AboutAnritsu/csr/08csr.asp>

EP-8-049

Machines and equipment
measuring instruments

Handy Measuring Instrument "ML8760A Handy Area Tester"

Environmental performance

Demand has been rising for a light, compact, battery-operated model that can be easily carried and used in a confined space that is inaccessible to vehicles, or in an underground mall. We selected parts and devised a method to install them onto printed circuit boards through trial and error, realizing a small size measuring instrument. It also cuts CO₂ emissions during operation by as much as 85% compared with a conventional model.

Product performance

The ML8760A Handy Area Tester is an instrument for measuring radio wave strength of a mobile phone base station.



Global warming



Energy saving



Environmentally friendly



ML8760A Handy Area Tester

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/AboutAnritsu/csr/08csr.asp>

EP-8-050

Machines and equipment
measuring instruments

Measures various values from high voltage/low voltage circuits of power distribution

Environmental performance

----<< Material >>----

Pursuing downsizing and weight saving.

This instrument can be installed as an add-on, so is easy to dismantle

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

This measuring instrument measures load status, and displays various values taken from high voltage/low voltage circuits of power distribution systems. Also, a variety of output functions allow for remote monitoring. 25% less energy consumption than the previous model.

----<< Toxicity >>----

RoHS-compliant



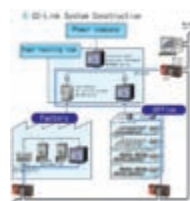
Global warming



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
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 and Europe

ME96NSR-MB, ME96NSR

EP-8-051

Machines and equipment
measuring instruments

High performance and crystal clear display supports measuring and monitoring systems

Environmental performance

----<< Material >>----

15% reduction in parts number.

40% less kinds of connection improves ease of dismantling.

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

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 >>----

RoHS-compliant

Mitsubishi Electric Corporation

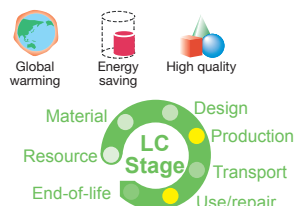
2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

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 and Europe



ME110NSR(-4A2P,-4APH,-C,-MB)

EP-8-052

Machines and equipment
measuring instruments

Energy Measuring Unit "Eco Monitor Pro"

Environmental performance

Following is its environmental performance features compared to our previous model (per 1 circuit).

----<< M : Material >>----

45% reduction of resource consumption and non-recycling resource

----<< E : Energy >>----

51% reduction of electricity consumption when used and 82% reduction of electricity consumption on standby

----<< T : Toxicity >>----

Compliant with EU RoHS Directive

Product performance

"EcoMonitor Pro" 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

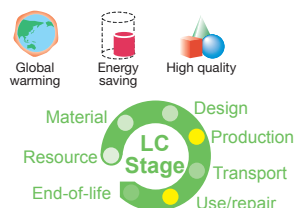
2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

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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 except controlled region



EMU2 - RD7 - B

EP-8-053

Machines and equipment
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.

-----<< M : Material >>-----

31% reduction of resource consumption (MDU part only)

-----<< E : Energy >>-----

37% reduction of electricity consumption (MDU part only)

-----<< T : Toxicity >>-----

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

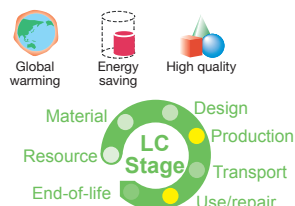
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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 (limited to MCCB with MDU)



NF400-SEP with MDU

EP-8-054

Machines and equipment
measuring instruments

Energy saving data collecting server "EcoServer II"

Environmental performance

Features in environmental conscious design compared to the previous model.

-----<< M : Material >>-----

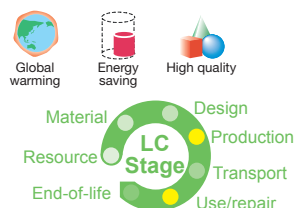
66% reduction of resource consumption

-----<< E : Energy >>-----

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.



MES-255BR-A

Mitsubishi Electric Corporation

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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-8-055

Machines and equipment

signal analyzers

Efficient Use of Space, Down to the Millimeter "MS2690A/91A/92A"

Environmental performance

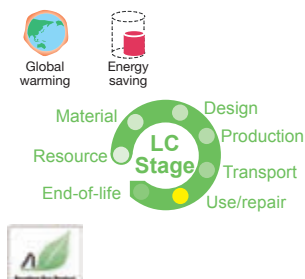
We digitized the circuit into a single LSI (large-scale integrated circuit), which previously required one complete board, and achieved efficient use of space down to the millimeter mainly by employing state-of-the-art memory technologies. As a result, these analyzers have three slots for expanding future functions, and an additional signal generator enables both transmission and reception tests with a single unit. With these improvements, we not only achieved higher frequencies and wider bandwidths, but also reduced CO₂ emissions by 7% compared with a conventional model.

Product performance

The MS2690A/91A/92A Signal Analyzers are signal-measuring instruments utilized for such applications as transmission tests during development of next-generation mobile phone terminals.

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/AboutAnritsu/csr/08csr.asp>



MS2690A Signal Analyzer

EP-8-056

Machines and equipment

catalytic PFC decomposers

Catalytic PFC Decomposer

Environmental performance

To reduce the emission of the gases such as PFC which has high potential of global warming, catalyst type PFC decomposition equipment "HICDS" was developed with an original catalyst. With high safety and economy that are the features of the catalyst method, this equipment decomposes gases such as PFC efficiently emitted from the manufacturing process of the semiconductors and the liquid crystals, while maintaining air quality. This equipment has been supported by a lot of users since it was released to the market, and achieved 380 total number of sales as of 2007.



CD200

Hitachi, Ltd.

Akihabara Daibiru Building, 18-13 Soto-Kanda 1-chome, Chiyoda-ku, Tokyo, 101-8608, Japan

Available in: Japan

Eco-materials

Eco-components

Eco-products // Machines and equipment

Eco-services

EP-8-059

Machines and equipment

ozone generators

Produce High Concentration Ozone Efficiently, Greatly Contributes to Reducing Life-cycle Cost

Environmental performance

----<< Material >>----

40% of weight is reduced by downsizing compared to that of our previous model.

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

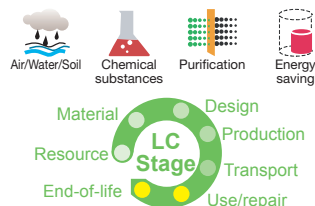
15% lower energy consumption compared to that of our previous model.

----<< Toxicity >>----

Different from sterilization and oxidation by chlorine, that by ozone does not pollute the environment because it turns into oxygen after treatment.

Product performance

High concentration ozone gas can be generated efficiently. It realizes maximum ozone concentration of 225g/m³ while our previous model was 150g/m³.



Mitsubishi Electric Corporation

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

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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, North America, China



EP-8-060

Machines and equipment

electronic hybrid functional control panels

Integration Brings Water Treatment Plants Simplicity and High Performance

Environmental performance

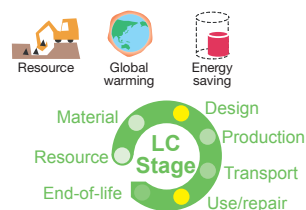
In power instrumentation and control at water purification plants or sewage-treatment plants, each function is installed in each control panel. Electronic Hybrid Functional Control Panel gathers all these circuits into fewer panels which enables reduction of space, hard-wiring and interconnection, and reduced energy consumption in electrical installation.

----<< Material >>----

Previous 3 control panels are able to be incorporated in 2 hybrid panels.

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

Almost 40% in energy saving is realized (compared to our previous model)



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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



MACTUS 30LCB

EP-8-061

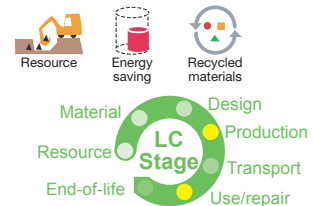
Machines and equipment

LPG regulators

QO-674

Environmental performance

Used to reduce pressure of LPG, preventing leakage gas.



Gastech Industries

Nisbat Road, Daska., 51010, Pakistan
URL www.gastechpakistan.com



EP-8-062

Machines and equipment

switchgear

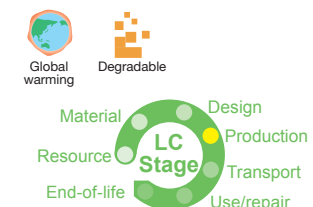
Completely new type SF6 gas-free switchgear using high-performance epoxy resin for insulation of main circuit

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>



Solid insulated switchgear

EP-8-063

Machines and equipment

switchgear

Hybrid "Dry Air" and Solid Insulation SF6-free Switchgear

Environmental performance

----- << Greenhouse gas free >>-----

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.

-----<< Components reduced to 70% >>-----

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.

-----<< Operating energy reduced to 70%, heat loss to 60% >>-----

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

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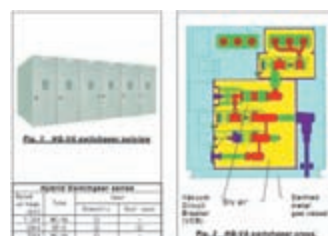
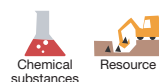
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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, Japan, etc.



HG-VA switchgear

EP-8-064

Machines and equipment

air compressors

Variable Speed Control Oil-Free Rotary Screw Air Compressors

Environmental performance

Hitachi inverter-driven variable frequency control keeps the pressure of compressed air stable within a narrow fluctuation band. This technology has achieved a significantly larger energy saving compared to conventional control methods.

Product performance

Gear-case oil mists are not vented to the atmosphere but recaptured using Hitachi's patented oil mist remover. Oil mists are recycled to save maintenance oil and to eliminate possibility of polluting the environment as well as to ensure purity of air compression.



Hitachi Industrial Equipment Systems Co.,Ltd.

AKS Bldg., 3, Kanda Neribeicho, Chiyoda-ku, Tokyo, 101-0022, Japan

Tel +81-3-4345-6075 Fax +81-3-4345-6913

URL http://www.hitachi-ies.co.jp/english/products/air/of_screw

Available in: Japan, Asia, China, USA

DSP Series V-type

EP-8-065

Machines and equipment
air compressors

Variable Speed Control Packaged Oil-Free Bebicon

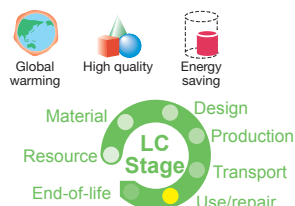
Environmental performance

Inverter-driven variable frequency control keeps the pressure of compressed air stable within a narrow fluctuation band. This technology has achieved a significantly larger energy saving compared to conventional control methods.

Product performance

Frequency controlled start with the inverter drive reduces the starting noise and vibration.

In particular, the sound level of low speed operation is significantly lower than normal operation.



POD series V-type

Hitachi Industrial Equipment Systems Co.,Ltd.

AKS Bldg., 3, Kanda Neribeicho, Chiyoda-ku, Tokyo, 101-0022, Japan
Tel +81-3-4345-6075 Fax +81-3-4345-6913
URL <http://www.hitachi-ies.co.jp/english/products/air/bebicon>

Available in: Japan, Asia, and China

EP-8-066

Machines and equipment
condensing unit

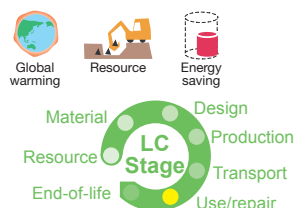
Energy-saving Condensing Unit Suitable for Various Refrigeration Systems

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.



Out-door Inverter Condensing UnitTAM130AM-SVTAM200AM-SVTAM350AM-SV

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>

EP-8-067

Machines and equipment
condensing unit

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. 99.9% 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 +81-3-5447-8388
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba-aircon.jp/aboutus/emvirement.htm>



Water-cooled Super Flex ModularChiller, Type-VRUW-TBP-S series

EP-8-068

Machines and equipment
chiller

R410A Water-Cooled Screw Chiller "RCUA-WHYZ"

Environmental performance

Hitachi has succeeded to introduce R410A refrigerant in all its range of products first in the world, ranging from room air conditioners, package air conditioners to currently released water cooled SCREW CHILLER. The quantity of refrigerant required for equivalent cooling capacity is smaller than other refrigerant (R22, R134a). R410A has less impact on the environment than other refrigerants.

Product performance

Innovative technologies are applied for the design and development of the compressor, refrigerant cycle, and chiller itself to realize this R410A screw chiller. The COP of R410A chiller is 39% higher than that of R22. R410A refrigerant and optimized design of equipment for R410A achieved COP value dramatically improved to become more than 5.1 for all models.

Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo,
 105-8410, Japan
 Tel +81-3-3502-2111
 URL <http://www.hitachi-ap.co.jp/>



Available in: Asia (Except for 60Hz market such as Korea, Philippines Taiwan, and Japan)

EP-8-069

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.



Air-cooled Super Flex Modular Chiller, Type-VRUA-TBP-S series

Toshiba Carrier Corporation

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan

Tel +81-3-6409-1735 Fax +81-3-5447-8388

URL <http://www.toshiba.co.jp/index.htm>URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>

EP-8-070

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.

The mat also works as a filter for the protection of fins against dust, exhaust gas, etc.

Product performance

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



FUJIKOKI Co.Ltd

7-17-24, Todoroki, Setagaya-ku, Tokyo, 158-0082, Japan

Tel +81-3-3702-5141

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

Available in: Japan

EP-8-071

Machines and equipment
chiller**"Compact Cube" Chiller of High partial load performance and small installation space****Environmental performance**

----< M : Material >----

The weight of a unit is 1,640kg, which is 24% lighter than our previous model (CAH-J1800A) of 2,150kg.

----< E : Energy >----

Improving efficiencies of compressor, heat pump, and fan, and highly-developing control of cooling cycle makes it more energy-saving.

COP in cooling condition is 4.3 (66% improvement from our previous model of 2.59), and that in warming condition is 3.85 (17% improvement from 3.29).

----< T : Toxicity >----

R410 refrigerant is used (it does not deplete ozone layer)
Substances prohibited by EU RoHS directive are not used.

Product performance

Air-cooled heat pump type chiller is a heat reserver for air conditionig of buildings. Compared to those using gas fuel, this type can produce cool or hot water with fewer CO₂ emissions.

Mitsubishi Electric Corporation

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

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

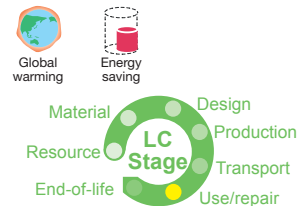
E-mail eqd.eco@pj.MitsubishiElectric.co.jp

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



"Compact Cube" MCHV-P1800AE

EP-8-072

Machines and equipment
chiller**High-efficiency absorption chiller with two-stage absorption and evaporation****Environmental performance**

RFW series efficiency reaches steam consumption ratio 3.5 kg/h USRT, by improving approximately 20% from the current running series. Besides, RFW series flow rate of chilled/cooling water is decreased with large temperature head, which contributes to savings of pumping energy.

Product performance

Steam-driven double effect absorption chiller RFW series is awarded "PRESIDENT OF THE JAPAN MACHINERY FEDERATION AWARD" in "IMPLEMENTATION OF ENERGY CONSERVING MACHINERY AWARDS" as high efficient absorption chiller with dual evaporation/absorption cycle. RFW series has steam consumption ratio 3.5 Kg/h USRT, highest efficient ratio in the world, covering in the range of 1,864 kW (530 USRT) to 10,549kW (3000 USRT).

EBARA CORPORATION

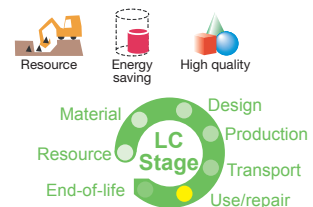
11-1 Haneda Asahi-cho, Ohta-ku, Tokyo, 144-8510, Japan

Tel +81-3-3743-6111 Fax +81-3-5736-3100

E-mail webmaster@ebara.com

URL www.ebara.co.jp

Available in: Japan and 17countries



Ebara Steam Absorption Chiller RFW model

EP-8-073

Machines and equipment
lighting control systems

FULL-2WAY Remote Control Wiring Devices (Energy-saving supported lighting control system)

Environmental performance

By combining with the passive infrared ceiling unit or program timer unit, an energy-saving supported lighting control system may be achieved.

For example:

- ① For spaces such as restroom and locker room, 60% of energy saving may be achieved by combining with a passive infrared unit.
- ② For spaces such as office and entire building, 8% of energy saving may be achieved by thinned-out lighting control before start of work and at the noon time.

Product performance

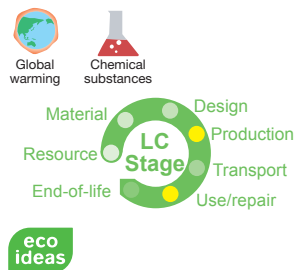
Energy saving supported components are lineup:

- ① Passive Infrared Ceiling Unit: Ceiling-mounting type, ceiling-mounting type under eaves and wall-mounting type.
- ② Timer: 30 programs, solar timer and annual schedule available.
- ③ Eight-Free Switch: Half size. ON/OFF controls in smaller area are available for energy saving.

Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan
 Tel +81-6-6909-1614 Fax +81-6-6906-4338
 URL <http://panasonic-electric-works.net/>
 URL http://pewa.panasonic.com/full2way/Lighting_Control.html
 URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan, Asia and North America



WRT3375K: Passive Infrared Ceiling Unit
 WRT3540: Program Timer Unit
 WRT5518: Eight-free Switch

EP-8-074

Machines and equipment
programmable displays

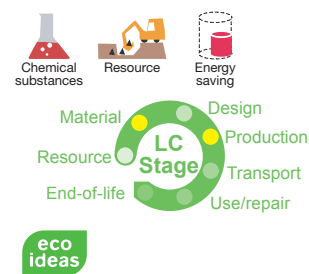
Programmable operation terminal GT05 (compact & intelligent, high luminance)

Environmental performance

- GT05 circuits have been integrated to promote 76% less energy consumption and 54% weight compared with the previous model, achieving compactness and light weight and saving energy.
- Mercury (Hg) free using LED back-light.

Product performance

- 4inch wide view angle type LCD"QVGA" is installed, achieving 4096 colors.
- maintenance free using LED back-light.
- SD memory card (1GB) and USB are installed as standard.



Panasonic Electric Works Co., Ltd.

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 URL <http://panasonic-denko.co.jp/ac/j/index.jsp>
 URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan, China, North-East Asia, North America, Europe, Asia Pacific

GT05S black (AIGT05S02D)

EP-8-075

Machines and equipment

UV curing systems

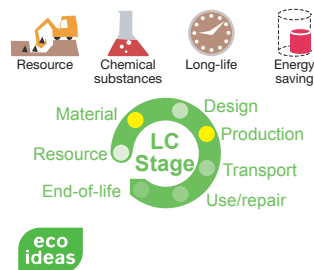
UV curing system UJ20 (energy efficiency and environmental friendliness in a compact size)

Environmental performance

- Light source life: 20,000 hours using LED
- Minimum low power consumption: 60VA is achieved by fanless and downsizing design.

Product performance

- Most powerful intensity 8000mw/cm² in its class
- Provides excellent and stable UV irradiation performance by temperature feedback.
- 80mm wide and the smallest in its class, winning the 2007 Good Design Award in Japan.
- Two irradiation modes with excellent irradiation stability.

**Panasonic Electric Works Co., Ltd.**

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 URL <http://panasonic-denko.co.jp/ac/j/index.jsp>
 URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan, China, North-East Asia, Asia Pacific

UJ20 controller(ANUJ5024)

EP-8-076

Machines and equipment

scrubber

MU SCRUBBER: Wet type exhaust gas treatment device

Environmental performance

Since our company's first day, January 1983, we have endeavored to develop exhaust gas and wastewater treatment devices. Based on our patented innovation "MU Mixer", named "Static type Fluid Mixer", we have supplied a lot of MU Scrubbers to many clients in chemical and other industries, who have been happy with the performance of our supplies as they have realized remarkable reduction of production and maintenance costs of their operations.

Product performance

The photo shown is the "Deodorization Device" supplied to one of rendering plants for handling animal meat and fats. Our device is being operated as maintenance-free because no-adhesion of solid materials appears on the air-liquid matching place in column. High performance of reaction speed, reaction efficiency, pressure loss, flexible response to variety of gas components etc. are the remarkable points of our devices in various fields.

**MU Company Limited**

18-8-306, Ueno-Kouen, Taito-ku, Tokyo, 110-0007, Japan
 Tel +81-3-3828-7090 Fax +81-3-3828-2890
 E-mail 0325muc@mu-company.com
 URL <http://www.mu-company.com>

Available in: Mainly for domestic markets, but worldwide in future

Odor control device for a rendering plant

EP-8-077

Machines and equipment

scrubber

Wet-type MU Scrubber for High Concentration Dust

Environmental performance

MU Scrubber, a wet-type high-concentration exhaust gas treatment device, is now attracting a great deal of interest from people concerned with solar energy, one of the most important energy sources for the protection of the Earth. MU Scrubber is best suited to the treatment of highly-concentrated fine dust like silane compounds which are generated through the production process of polycrystal silicone, one of important components of a solar electricity generator. Our MU Scrubber is intended to protect our Earth.

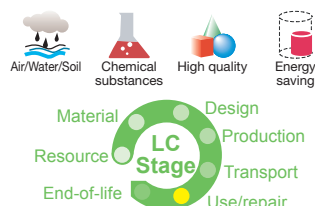
Product performance

MU Scrubber is best applied to hydrolysis reaction or physical absorption treatments of highly-concentrated exhaust gases, containing SiCl_4 , SiH_2Cl_2 , SiHCl_3 , SiF_4 , TiCl_4 , HCl and so on. It has the three advantages in performance of high efficiency, being maintenance free, and being space saving.

MU Company Limited

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Available in: Presently for domestic markets only, but worldwide in future



For high concentrated exhaust gas treatment

EP-8-078

Machines and equipment

scrubber

Wet-type Gas-Liquid Separation Device

Environmental performance

Every industrial factory sometimes emits hazardous gases that threaten the health of humans. Many factories are doing their best to collect these hazardous materials before discharge, but still some of them escape over the barriers in the form of dust and mists which cause air pollution. MU Separator has helped to prevent such problems with the help of "Static type fluid mixer, MU Mixer[®]", one of our own innovative products.

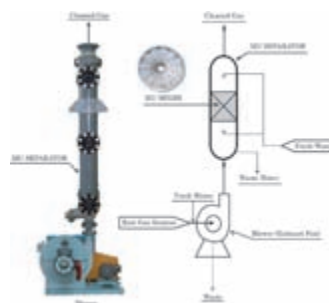
Product performance

The function of MU Separator is to catch foreign materials contained in exhaust gases through the processes of absorption and separation, which are achieved by increasing moisture contained in the foreign materials and causing them to swell. Exhaust gases simply pass through a special MU Mixer, and mist, dust and hazardous gases are eventually separated, caught and recovered.

MU Company Limited

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URL <http://www.mu-company.com>

Available in: At present for domestic market, but worldwide in future



Wet type gas-liquid separation device

EP-8-079

Machines and equipment

aerators

MU AERATOR**Environmental performance**

"MU Aerator" is designed to economize electricity consumption to the minimum, more than 20% of electricity can be saved compared to conventional aerators. Further, the aerator itself is made of PP (polypropylene) to maintain mechanical strength for safety, in the end, you can easily dispose the obsolete devices at any time because of no generation of hazardous gas.

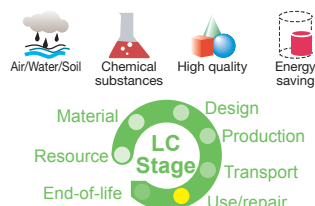
Product performance

Special feature of this aerator is that 2 pieces of efficient static type fluid mixer [MU Mixer][®] are installed in 2 locations. Lower mixer has the function of creating air bubbles as well as generating strong water circulation in the tank. Air circulation in the tank is stirred and mixed with strong force to create further fine bubbles. Oxygen contained in these fine bubbles is absorbed into the raw water with high efficiency.

MU Company Limited

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URL <http://www.mu-company.com>

Available in: Mainly for domestic market, but in future overseas too.



Aeration Device for wastewater treatment

EP-8-080

Machines and equipment

reactors

MU Reactor as Stripping Tower**Environmental performance**

The "MU Reactor" is being considered as one of measuring apparatus for radon that is slightly contained in the water of the Antarctic Ocean. MU Reactor is expected to be utilized as a radiation measuring instrument for radon in seawater, as the apparatus is able to demonstrate expected performance even if the sea-going vessel is inclined 20 to 30 degrees. This is just one of a number of important applications of MU Reactor

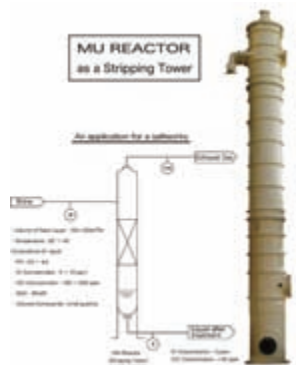
Product performance

Basically, we consider this apparatus as "A device for radiation, removal, and deaeration of dissolved oxygen or carbon acid gas dissolved in seawater." Compared to conventional apparatus, our device is small in size, no maintenance is necessary and it has an anti-corrosive body of low cost. The first unit has been supplied to a seawater salt manufacturing plant and is being applied to processing brine of 20% salt content with successful performance since its commissioning.

MU Company Limited

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Available in: Mainly domestic market, but worldwide in future.



MU Reactor as a stripping tower

EP-8-081

Machines and equipment

turbine systems

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: Reduced emissions of CO₂, NO_x, SO_x and soot.

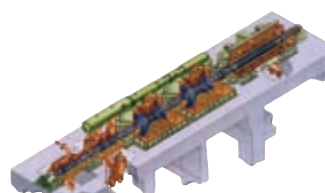
Product performance

- 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: Compact system thanks to reduced fuel consumption.



TOSHIBA CORPORATION Power Systems Company

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 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-8-082

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.



TOSHIBA CORPORATION Power Systems Company

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



Turbine generator

EP-8-083

Machines and equipment

residential fuel cells

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 1 ton) for a typical household.
- Efficiency use of resources: Weight reduction of Fuel cell package to 100kg. Easy to handling.

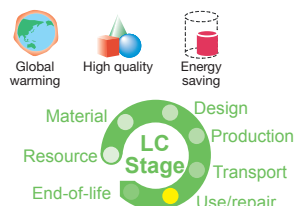
Product performance

- Increased efficiency in terms of both power and heat: Overall efficiency, combining power generation efficiency and heat recovery efficiency of more than 85%.
- Low noise: Quiet operation: 40dB or less. Silence is similar in a library.
- Maintenance saving: Annual maintenance; Reduced to visit customer.
- Clean: Emissions consist of only water and CO₂.

Toshiba Fuel Cell Power Systems Corp.

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
 Tel +81-3-3457-3622 Fax +81-3-5444-9199
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>

Available in: Japan



Proton-exchange membrane fuel cell for home use TM1D Type

EP-8-084

Machines and equipment

hydro-power generation systems

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.

TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

36-5, Tsurumichuo 4-chome, Tsurumi-Ku, Yokohama, 230-8691, Japan
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 URL <http://www.toshiba-tpsc.co.jp/english/company/act.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Hydro-eKIDS S type

EP-8-085

Machines and equipment

protective relays

Highly-reliable, Low Power-consumption Protection Relay with Five Times Faster Processing than Conventional Relays

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 PCBs and suppressed temperature increase.
- Improved maintainability: Improved maintainability thanks to enriched guidance functions and simple structure.

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



Protection Relay D4 Series

EP-8-086

Machines and equipment

high frequency relays

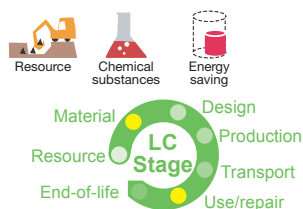
Ultra-Compact 1cType 3GHz High-Frequency Relay "RS Relay"

Environmental performance

Microminiature 1c-type high frequency relay with 3GHz capability. Compared to our conventional product "RK relay", the volume was reduced approximately 60% (through-hole type). This makes it the smallest class in the industry.

Product performance

- Microminiature 1c-type high frequency relay with excellent high frequency quality.
- Quiet type (30dB), surface mount type and reverse contact type are available for the broadcasting and other various markets.



Ultra-Compact 1cType 3GHz High-Frequency Relay: ARS104H

Panasonic Electric Works Co., Ltd.

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URL <http://panasonic-denko.co.jp/ac/j/index.jsp>

URL <http://panasonic-denko.co.jp/e/corp/csr/index.html>

Available in: Japan, Europe, North America, Asia Pacific Region

EP-8-087

Machines and equipment

traction motors

Low-noise Totally Enclosed Traction Motor for Railway Rolling Stock

Environmental performance

- Mitigation of climate change: 9% 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.

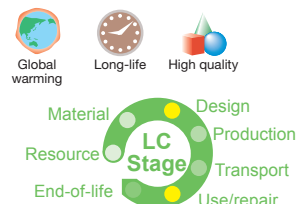
Product performance

- Reduced loss: 2-3% 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: Low noise thanks to the totally enclosed design to minimize noise.

TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

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

Available in: Japan, Asia, USA, Europe, and other countries



Totally enclosed fan-cooled motor

EP-8-088

Machines and equipment

gas-insulated switchgears

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

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



145kV gas-insulated switchgear (GIS) G3A-b

EP-8-089

Machines and equipment

remote terminal units for distribution automation systems

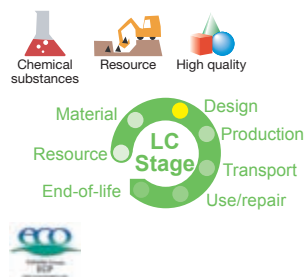
Next-generation remote terminal unit applicable in an IP network environment equipped with fault detection and waveform recording

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

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Remote Terminal Unit for Distribution Automation Systems TOSDAC-D24E

EP-8-090

Machines and equipment

distribution transformers

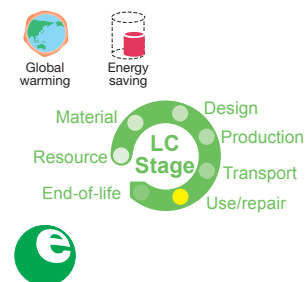
Energy-saving, compact new series of transformers

Environmental performance

- Mitigation of climate change: Energy consumption reduced by about 40% compared with the previous model. CO₂ emissions reduced by 4.0 tons at a 40% load factor.

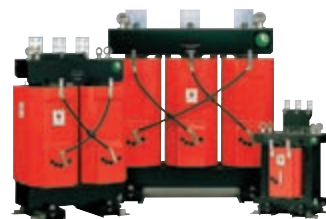
Product performance

- 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.



TOSHIBA CORPORATION Social Infrastructure Systems Company

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



Top-runner Cast Resin Transformers RCT-N22A

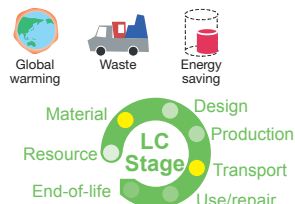
EP-8-091

Machines and equipment
switchboards

High-density Packaging-type Low-voltage Motor Control Center SM3000

Environmental performance

With the conventional product, the maximum mounting number of control units was 7 pieces per panel. In SM3000, this has been increased to 40 pieces per panel, owing to the miniaturization of the control unit by the use of electronics parts and the power feeding method.



Fuji Electric Systems Co.,Ltd

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E-mail masuda-masahiko@fesys.co.jp
URL <http://www.fesys.co.jp/sougou/seihin/ecodesign/index.html>

Available in: Japan

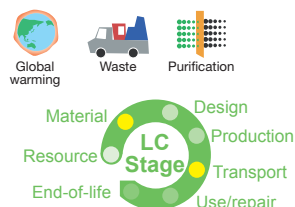
EP-8-092

Machines and equipment
switchboards

Compact-type high-voltage switchgear and controlgear, "SLIMEC-V6"

Environmental performance

This product is a high-voltage switchgear and controlgear which has reduced the conventional board depth of 2,000 mm to 700 mm by downsizing the instrument and improving the electricity feed method. The warming load has been reduced by 28%; the power consumption has been reduced by 10%. The reduction of total weight is more than 40%.



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URL <http://www.fesys.co.jp/sougou/seihin/ecodesign/index.html>

Available in: Japan

EP-8-093

Machines and equipment
switchboards

Eco-type thin high-voltage switchgear and control gears

Environmental performance

This product is a high-voltage switchgear and controlgear used for water and sewage facilities. Owing to the downsizing of the instrument, a depth of 600mm was achieved in comparison with the 2000mm of the conventional product. As a result, the installation space has been reduced by 30%, and a reduction of electric room building costs has become possible. In addition, the dismantling time has become 1/6 of that before by the adoption of a rivet fastener structure. Environmentally-friendly materials such as eco-type electric wires are used.



Fuji Electric Systems Co.,Ltd

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Available in: Japan

EP-8-094

Machines and equipment
power meters

HMM 3702AC™ power meter

Environmental performance

HMM 3702AC™ Power Meter measures a wide range of AC electrical parameters, such as power, voltage, and current. It is a low-cost, multi-function monitoring and control solution for domestic, commercial, industrial, and power generation applications. The menus, measurements, and control settings are displayed clearly on an LCD for ease of reading.

Product performance

With proper power management, power from the grid, renewable energy sources, or any other power generation sources can be utilized effectively to optimize the electrical system performance.



Grenzzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0560 Fax +65-6579-0561
E-mail info@grenzzone.com
URL www.grenzzone.com

Available in: Global

HMM Power Meter

EP-8-095

Machines and equipment

modular power management

Modular power management

Environmental performance

Phocos is one of the largest suppliers of off-grid power supply system components in the world. Headquartered in Ulm, Germany, Phocos develops, designs, and manufactures products to suit the needs of all stakeholders in the global solar power market.

Phocos is strongly committed in developing and producing products that meet the company's strict specifications in terms of quality, innovation, and technology.

Product performance

The award-winning Modular Power Management design sets new standards for versatility by enabling the installers to design their system as they see fit. The use of multi-functional components ensures that there are virtually no system design demands that cannot be met. This innovative concept empowers the installer to truly explore the "Art of Charge."

Phocos SEA Pte Ltd.

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URL www.phocos.com

Available in: Global



Phocos Modular Power Management

EP-8-096

Machines and equipment

fluoride gas capture abatement systems

F (Fluoride) gas capture abatement system

Environmental performance

(Effect of reduce environmental load)

2,000 ton-CO₂/year•FDS1set Calcium fluoride will be able to reused for cement, and to reduce waste of sludge.

Product performance

FDS series developed by EBARA decomposes over 99% of PFC_s gas into calcium fluoride.



F (Fluoride) gas captured abatement system (FDS series)

EBARA CORPORATION

4-2-1 Honfujisawa, Fujisawa-shi, Kanagawa, 251-8502, Japan
Tel +81-466-83-7320 Fax +81-466-82-0127
E-mail osato.masaaki@ebara.com
URL www.ebara.co.jp

Available in: Japan, Taiwan, Singapore, Korea, Europe

EP-8-097

Machines and equipment
purifying systems

Density current generator

Environmental performance

Structure: A Density Current Generator sucks simultaneously waters from the surface and bottom in enclosed water through a pipe, which is located vertically in the water. The waters are sucked and discharged by using a pump located somewhere in the middle of the pipe. The density of the discharged water depends on the mixing ratio between surface and bottom. The position of discharged water can be arranged. The discharged water diffuses horizontally over long distance without any energy since the principle of this diffusion is based on the density current theory.

Purpose: To improve the water quality in enclosed waters (enclosed bay and lake)

Effects

1. Inhibition of overgrowth of phytoplankton (e.g. red tides and water blooms)
2. Agitation of water, which has long residence-time
3. Reduction or reduce the area of low dissolved oxygen (prevention of oceanic anoxic event)
4. Activation of benthos
5. Weakening or elimination of thermoclines
6. Improvement of transparency in enclosed water

Product performance

Amount of discharged water: 30,000-200,000 tons/day

Power consumption: 1-10kWh

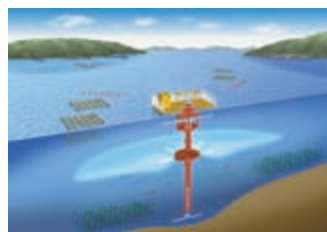
Recommended operational period: 180-200 days/year (Spring to Autumn)

NAKASHIMA PROPELLER Co.,Ltd.

688-1 Jodo-Kitagata, Okayama, 709-0625, Japan

Tel +81-86-279-5111 Fax +81-86-279-3107

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



EP-8-098

Machines and equipment
water purification systems

Hitachi Ballast Water Purification Systems

Environmental performance

This ballast water purification equipment does not use any disinfecting agents and causes no secondary marine pollution to protect ecosystems and prevent pandemic spread.

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.html>

URL <http://www.hitachi-pt.com/corporate/csr/report/index.html>

Available in: Worldwide

View of Hitachi Ballast Water Purification Systems

EP-8-099

Machines and equipment
recycling systems

Waste Plastics Liquefaction System

Environmental performance

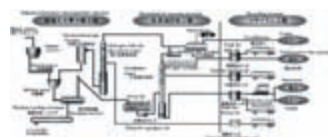
- Mitigation of climate change: The product oil can be used as an alternative fuel for boilers and power generation, and therefore its substitute share corresponds to a CO₂ reduction. In addition, a higher CO₂ reduction effect is obtained, if feeding stock recycling in which the product oil is returned 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 +81-3-3457-4305
 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Waste Plastic Liquefaction System

EP-8-100

Machines and equipment
recycling systems

Carbon Fuel Recovery System Using Pyrolysis and Gasification

Environmental performance

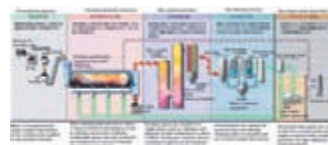
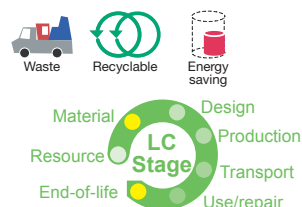
- Mitigation of climate change: The produced gas is used for fuel and power generation, and as chemical raw material. As for generation, a higher efficiency than engine power generation is possible even in a small scale facility.
- Efficient use of resources: Since various organic matter (ASR, waste plastic, biomass, etc.) can be used as the charge, and the product is gas and carbide; therefore, the total recycling ratio is high.

Product performance

The product is a system to heat organic substances and wastes by heat-source equipment, to separate combustible gas and carbide of high utility value, and to use them as fuel and power generation material. 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 decomposed to a combustible gas containing CO₂ and H₂O through pyrolysis and gas-reforming under high temperature. Namely, a gas usable as fuel is recovered. And, it is possible to take out carbide (char) of high utility value from the charge.

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Recovery system of carbon fuels by pyrolysis and gasification

EP-8-101

Machines and equipment
energy collection systems

High concentration organic effluent treatment / energy collection system

Environmental performance

- Mitigation of climate change: The gas steadily produced from organic drainage can be used as fuel for gas-engine power generation and boilers.
- Efficient use of resources: The biogas of biomass origin can be used as the alternative fuel for boilers and power generation, and its substitution share corresponds to a CO₂ reduction.

Product performance

The product is an excellent total system to recover energy efficiently, while processing organic drainage provided from stock raising and food processing. The system consists of methane fermentation equipment, subsequent aerobic processing denitrification equipment, biogas purification and utilization equipment, etc. For the effective utilization of the sludge residue, it is also possible to combine composting equipment or carbonization equipment, etc.



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High concentration organic effluent treatment system

EP-8-102

Machines and equipment
recycle systems

Recycle System of Sewage Treatment 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.



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



Recycle system of sewage treatment sludge

EP-8-103

Machines and equipment

elevators

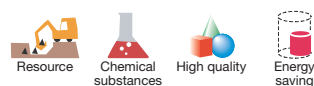
Elevator Without Machine Room for Safety and Energy Saving

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.



ElevatorSPACEL-EX

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-8-104

Machines and equipment

room dryers

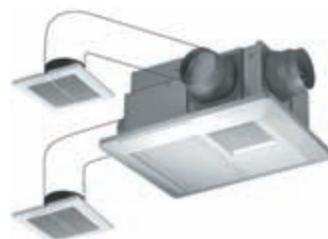
Bathroom Ventilation Dryer for Drying Clothing with Reduced Power Consumption

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.



DVB-18STD

Toshiba Carrier Corporation

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 URL <http://www.toshiba.co.jp/index.htm>
 URL <http://www.toshiba-aircon.jp/aboutus/emvionment.htm>

EP-8-105

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.

DAE SHIN INDUSTRIAL CO.,LTD

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Tel +82-32-814-0211 Fax +82-32-814-0213
E-mail dsdemister@naver.com
URL www.dsdemister.com



EP-8-106

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.



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URL www.dsdemister.com



CHEVRON TYPE (BAFFLED MIST ELIMINATOR)

EP-8-107

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.

DAE SHIN INDUSTRIAL CO.,LTD

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URL www.dsdemister



DSM-193 (MESH DEMISTER SUS 316L)

EP-8-108

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 INDUSTRIAL CO.,LTD

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URL www.dsdemister.com



EP-8-109

Machines and equipment

oil

Kixx G1 5W/30 (gasoline engine oil)

Environmental performance

Kixx G1 5W/30 (Gasoline Engine Oil)

- Gives longer engine life

Proven metal-organic anti-wear additive system protects engines under all operating conditions.

- Maintains high power and performance

Metallic detergent and ashless dispersant additive system maintains high power and performance. Special friction modifiers assist in reducing internal engine friction for maximum fuel economy.

- Saves on maintenance costs

High thermal stability and excellent oxidation resistance provide outstanding protection against in-service oil degradation that contributes to filter blocking and sludge formation in the oil galleries, crankcase and valve train.

- Reduces fuel consumption

Specifically tailored viscosity characteristics and effective friction modifier minimize internal engine frictional losses.

- Reduces oil consumption

Low volatility, hydro-cracked base oil minimize oil loss through evaporation.

GS Caltex Corporation

GS Tower, 679, Yeoksam-dong, Gangnam-gu, Seoul, 135-985, Korea



EP-8-110

Machines and equipment

oil

Kixx D1 10W/40 (diesel engine oil)

Environmental performance

Kixx D1 10W/40

- Minimizes fleet maintenance costs.

Exceptional soot dispersancy keeps fuel soot in suspension, avoiding filter plugging, cylinder head sludge, abrasive polishing wear and oil thickening.

- Minimizes fleet operating costs.

Excellent deposit control on valves and piston crownland reduces oil consumption. Exceptional oxidation stability and soot control extends oil drain capability so that equipment is in service longer generating revenue. Outstanding valve train wear protection maintains fuel economy.

- Extends engine life to overhaul.

High level of anti-wear additive protects against valve train wear and scuffing of highly loaded parts operating under boundary lubrication conditions.

GS Caltex Corporation

GS Tower, 679, Yeoksam-dong, Gangnam-gu, Seoul, 135-985, Korea
URL www.gsclttx.com

oil

oil

EP-8-113

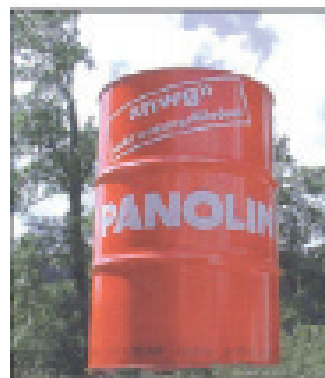
Machines and equipment

oil

PANOLIN HLP SYNTH 32**Environmental performance**

PANOLIN HLP SYNTH 32 features

- extremely long oil-change interval,
- far greater reserve capacities than conventional hydraulic oils,
- outstanding high-pressure characteristics,
- excellent cold flow characteristics (extremely Low pour point), and
- oxidation-resistant at high temperatures.

**GS Caltex Corporation**

GS Tower, 679, Yeoksam-dong, Gangnam-gu, Seoul, 135-985, Korea

EP-8-114

Machines and equipment

oil

PANOLIN HLP SYNTH 46**Environmental performance**

Performance standards

1. ASTM D 943 (Dry TOST test) > 2000 h
2. FZG Test A/8.3/90 loading stage 12
3. ISO 15380
4. Rotary -bomb-test 1162 min
5. VDMA 24568 HEES (synthetic esters insoluble in water)
6. Vickers 35 VQ-25, V104 C

**GS Caltex Corporation**

GS Tower, 679, Yeoksam-dong, Gangnam-gu, Seoul, 135-985, Korea

EP-8-115

Machines and equipment

oil

PANOLIN HLP SYNTH 68

Environmental performance

In case of any leakage, PANOLIN HLP SYNTH is fully decomposed by soil or water microorganisms, without affecting the environment.

Environmental compatibility

- 1. ASTM D-6046-98a: PW1, TW1, TS1
- 2. Blauer Engel UZ 79(The Blue Angel) due to its rapid biodegradability; 3502 - 3506
- 3. Czech Ecolabelling Agency (Ekologicky Setrny Vyrobek 15 - 02)
- 4. Japan Environment Association-Eco Mark, Certified Number 05110021
 - * This product is manufactured by PANOLIN AG, Switzerland, and is sold by GS Caltex Corporation. The party to the Eco Mark utilization contract for this product is PANOLIN AG, Switzerland. For more information, see www.panolin.com
- 5. OECD 301: 70% (mean value)
- 6. ÖNORM, Part 5
- 7. Swedish Standard SS 15 54 34
- 8. Water hazard classifications (VwVwS) 3502 - 3504 = nwg; 3505 - 3507 = WGK-1

GS Caltex Corporation

GS Tower, 679, Yeoksam-dong, Gangnam-gu, Seoul, 135-985, Korea



Eco-materials

Eco-components

Eco-products // Machines and equipment

Eco-services

EP-9-001

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 due to less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-Threonine contributes to reduction of nitrogen excretion from animals to the environment by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency. 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.

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 URL www.ajinomoto.com/aan
 URL <http://www.ajinomoto.com/csr/index.html>

Available in: Worldwide



EP-9-002

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 contributes to the reduction of nitrogen excretion from animals to the environment by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency. 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.

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 URL <http://www.ajinomoto.com/csr/index.html>

Available in: Worldwide



EP-9-003

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 due to less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-Tryptophan contributes to reduction of nitrogen excretion from animals to the environment by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency. 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.

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URL <http://www.ajinomoto.com/csr/index.html>

Available in: Worldwide



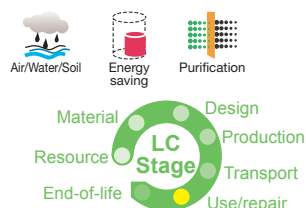
EP-9-004

Others

fertilizers

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 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.**

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E-mail ibuki@hanyokagaku.com
URL <http://www.hanyokagaku.com/>

EP-9-005

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.

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Good Harvest Story

EP-9-006

Others

wood pellet heating burners

Wood Pellet Heating System

Environmental performance

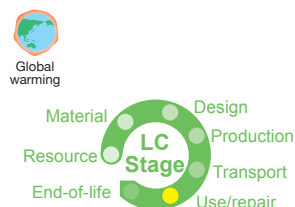
- (1) Attachable to agricultural heat exchangers
This wood pellet burner is attachable to the currently used heat exchangers.
※ There are some types of heat exchangers that are not applicable
- (2) Simple and compact structure with efficient combustion
This product is designed to enable easy handling and maintenance. Also, the wood pellet heating system can produce heat efficiently.
- (3) Environmentally friendly system
Because wood pellets are made of sustainable natural resource, the wood pellet heating system can produce environmental and human-friendly heat.

Product performance

Heatable area	app. 1000-2000 m ²
Type of fuel	Wood pellets
Energy consumption	17.4-28.5 kg/h
Output	91-149 kW (78,000-128,000 kcal/h)
Control system	On-Off automatic control
Dimensions	860 x 620 x 550 mm
Weight	app. 100 kg

Soai co.,ltd.

266-2 Shigekura, Kochi-shi, Kochi Pref., 780-0002, Japan
Tel +81-88-846-6709 Fax +81-88-846-6713
E-mail head-office@soai-net.co.jp
URL http://www.soai-net.co.jp/service_01/shinene.html



EP-9-007		Others
		jelly
<h3>Honey Herbal Jelly</h3> <div>Environmental performance<p>We safeguard the environment as follows. This product has obtained the Green Mark in recognition of our efforts for recycling. The product waste material is recycled and used for efficient purposes. This is our view of positive environmental effects, which assures the consumer on the credibility of our products.</p></div> <div>TAISUN ENTERPRISE CO., LTD.<p>NO.788, SEC.1, YUAN-CHIRD, TEN-CHUNG JEN, CHANG-HUA SHIEN, TAIWAN, R.O.C. 520 Tel +886-4-8742211 ext 306 Fax +886-4-8752829 E-mail jeky@taisun.com.tw</p></div>		  

EP-9-008		Others
		jelly
<h3>Peanut Soybean Curd Jelly</h3> <div>Environmental performance<p>We safeguard the environment as follows. This product has obtained the Green Mark in recognition of our efforts for recycling. The product waste material is recycled and used for efficient purposes. This is our view of positive environmental effects, which assures the consumer on the credibility of our products.</p></div> <div>TAISUN ENTERPRISE CO., LTD.<p>NO.788, SEC.1, YUAN-CHIRD, TEN-CHUNG JEN, CHANG-HUA SHIEN, TAIWAN, R.O.C. 520 Tel +886-4-8742211 ext 306 Fax +886-4-8752829 E-mail jeky@taisun.com.tw</p></div>		  

EP-9-009

Others
congee

Mixed Congee

Environmental performance

We safeguard the environment as follows.

This product has obtained the Green Mark in recognition of our efforts for recycling.

The product waste material is recycled and used for efficient purposes.

This is our view of positive environmental effects, which assures the consumer on the credibility of our products.



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Available in: Asian, Southeast Asia, Japan, USA

EP-9-010

Others
congee

Okinawa Brown Sugar With Mixed Congee

Environmental performance

We safeguard the environment as follows.

This product has obtained the Green Mark in recognition of our efforts for recycling.

The product waste material is recycled and used for efficient purposes.

This is our view of positive environmental effects, which assures the consumer on the credibility of our products.



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EP-9-011

Others

congee

Red Yeast Rice With Mixed Congee

Environmental performance

We safeguard the environment as follows.

This product has obtained the Green Mark in recognition of our efforts for recycling.

The product waste material is recycled and used for efficient purposes.

This is our view of positive environmental effects, which assures the consumer on the credibility of our products.



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EP-9-012

Others

peanut milk

Peanut milk

Environmental performance

We safeguard the environment as follows.

This product has obtained the Green Mark in recognition of our efforts for recycling.

The product waste material is recycled and used for efficient purposes.

This is our view of positive environmental effects, which assures the consumer on the credibility of our products.



TAISUN ENTERPRISE CO., LTD.

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E-mail jeky@taisun.com.tw

EP-9-013

Others

soup

Peanut soup

Environmental performance

We safeguard the environment as follows.

This product has obtained the Green Mark in recognition of our efforts for recycling.

The product waste material is recycled and used for efficient purposes.

This is our view of positive environmental effects, which assures the consumer on the credibility of our products.



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EP-9-014

Others

displays

Electronic Paper "QR-LPD®"

Environmental performance

The QR-LPD® (Quick Response Liquid Powder Display) technology 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 and so on).

The QR-LPD® technology aims to become a new standard display technology for electronic paper applications and is expected to contribute to the reduction of paper resources.



Bridgestone Corporation

3-1-1, Ogawahigashi-Cho, Kodaira-Shi, Tokyo, 187-8531, Japan
Tel +81-42-342-6271 Fax +81-42-342-6714
URL <http://www.bridgestone.co.jp/english/index.html>
URL <http://www2.bridgestone-dp.jp/global/adv-materials/QR-LPD/index.html>

Electronic Paper "QR-LPD®"

EP-9-015

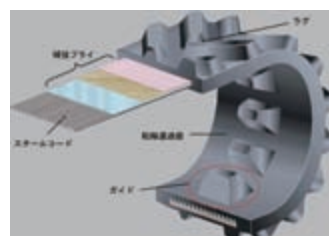
Others

mechanical rubber products

Rubber Track

Environmental performance

Bridgestone manufactures a wide range of rubber tracks which fit onto the undercarriage of mini-excavators and tracked loaders. One key feature of rubber tracks is that they do not damage the road surface. Also Bridgestone has been developing more eco-friendly products such as non-core-metal rubber tracks which can be recycled more easily than traditional tracks, avoiding the need to separate out the core metals before the recycling process.



Rubber Track

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>

EP-9-016

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 customer friendliness. Compared with existing lines, it has 9% less plastic package and requires 31% less packing solution. The 17% lighter individual package makes the 32-lens box 9% lighter while containing 2 extra lenses. The smaller and lighter packaging and the domestic production enables a drastic reduction of CO₂ emissions from transportation when compared with imported products.

The manufacturing site, SEED Konosu Laboratory, is the first all-electric plant in the industry and has realized zero CO₂ emissions from its production facilities. It is also a water-saving plant 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-9-017

Others

photovoltaic modules

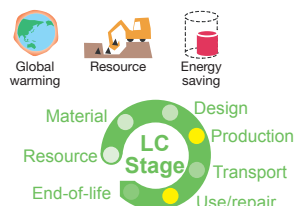
Multi-crystalline Photovoltaic Module

Environmental performance

Creating energy from unlimited solar energy

Product performance

Advanced cell-connection technologies cultivated for Sharp Space-use solar cells for many years are applied to terrestrial solar cells and modules. Newly developed Stress Proof inter connector and unique electrode pattern enable us to relieve the contraction stress originating from thermal expansion by temperature change. These technologies are effective to improve yield in production and to secure reliability of modules especially for modules using thin cells.



Multi-crystalline Photovoltaic Module ND-153AU

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/csr_report/2008pdf/sharp_eall.pdf

Available in: Japan

EP-9-018

Others

photovoltaic modules

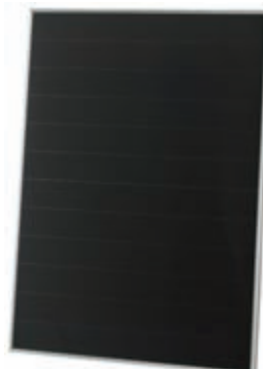
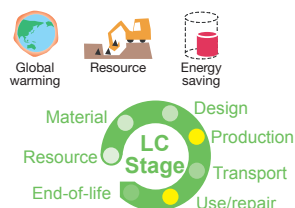
Thin-Film Photovoltaic Module

Environmental performance

High energy-creation performance by using unlimited solar energy

Product performance

This module includes photovoltaic thin-film silicon with a thickness of $2\mu\text{m}$ ($1/100$ comparing with crystalline silicon photovoltaic), which was born from state-of-the-art nanotechnology. Its superior thermal characteristics enable high performance of power generation in a region which has a hot climate. Since the thin-film silicon photovoltaic cell is manufactured by low-temperature processes under 200 degrees Celsius, it requires less energy in production than conventional wafer-type silicon photovoltaic cells.



Thin Film Photovoltaic Module NA-F121A5

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/csr_report/2008pdf/sharp_eall.pdf

Available in: EU

EP-9-019

Others

field microscopes

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

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
 Tel +81-3-3214-5311
 URL <http://nikon.com/>
 URL <http://nikon.com/about/csr/report/index.htm>

Available in: Japan



Nikon fieldmicroscope "Fabre Photo EX"

EP-9-020

Others

laser rangefinders

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)
 - Eliminate 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

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan
 Tel +81-3-3214-5311
 URL <http://nikon.com/>
 URL <http://www.nikon.com/products/sportoptics/lineup/laser/350/index.htm>
 URL <http://nikon.com/about/csr/report/index.htm>

Available in: Worldwide



Nikon portable rangefinder "Laser 350G "

EP-9-021

Others

lenses

EF Lens

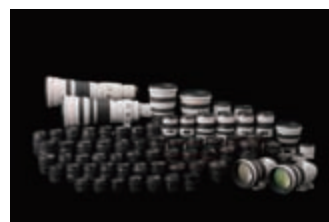
Environmental performance

- (1) 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).
- (2) Lead-free glass is utilized to produce the environmentally sound lenses.



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>



EP-9-022

Others

electronic toll collection (ETC) devices

Minimum and lightest of industry's top class, separate type ETC devices

Environmental performance

- Realize minimum (▲12% than previous year model) and lightest with adoption of thin power supply connector and optimal layout of component parts.
- One unit ETC reduce about 11kg of CO₂ in one year at highway tollgate and contribute to prevention of global warming

Product performance

- Change button display into icon from text display, and improvement of visibility. (Universal design).
- Inherit a slide type card extraction button and prevents taking out a card by mistake.



Panasonic Corporation, Automotive Systems Company

4261 Ikonobe-cho Tsuzuki-ku, Yokohama City, Kanagawa, 224-8520, Japan
 Tel +81-45-939-6111
 URL <http://panasonic.co.jp/pas/>
 URL <http://panasonic.net/csr/>



Available in: Japan

Separate type ETC Devices :CY-ET908D/KD

EP-9-023

Others

memory card camera recorders

P2HD Memory Card Camera-Recorder: AG-HPX170

Environmental performance

- The P2 Card media is totally free from abrasion and dropout.
- There is no drive mechanism required, as there is for tape and disc-based recorders, so power consumption is low and size and weight are reduced. Malfunctions are less likely to occur, and there is no need to replace heads or transport components.
- This translates into lower costs and easier maintenance, greater energy savings, and less waste when the unit is eventually disposed of.

Product performance

Lightest P2 HD Model Brings Even Greater Mobility to Video production and News Gathering

- Thanks to an exclusive, P2 card recording design, the new model weighs in at only 1.9kg, assuring exceptional mobility.
- The AG-HPX170 series also introduces a newly designed camera section that features a 28mm wide-angle zoom lens — widest in the class — plus a newly developed 1/3-inch 16:9 progressive CCD that provides low-noise, low-smear performance.

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

Available in: Global



eco ideas



P2HD Memory Card Camera-Recorder : AG-HPX170

EP-9-024

Others

memory card camera recorders

AVCCAM Memory Card Camera-Recorder: AG-HMC150

Environmental performance

- The SDHC/SD Memory Card media for the AVCCAM camcorder is totally free from abrasion and dropout.
- There is no drive mechanism required, as there is for tape and disc-based recorders, so power consumption is low and size and weight are reduced. Malfunctions are less likely to occur, and there is no need to replace heads or transport components.
- This translates into lower costs and easier maintenance, greater energy savings, and less waste when the unit is eventually disposed of.

Product performance

High Image Quality and Advanced Functions in an AVCCAM Camcorder with Easy Mobility and Solid-State Reliability

- Using the cost-saving AVCHD format to record onto SDHC or SD Memory Card media, the AG-HMC150 produces exceptional images and responds to creative production needs.
- It also features a 28mm (35mm equivalent) wide-angle lens — widest in a professional camera of this class — and a newly developed 1/3-inch 16:9 progressive CCD.

Panasonic Corporation, AVC Networks Company

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 Tel +81-6-6905-8356 Fax +81-6-6905-4755
 URL <http://panasonic.biz/sav/>
 URL <http://panasonic.net/csr/>

Available in: Global



eco ideas



AVCCAM Memory Card Camera-Recorder : AG-HMC150

EP-9-025

Others

DVD/CD discs

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.

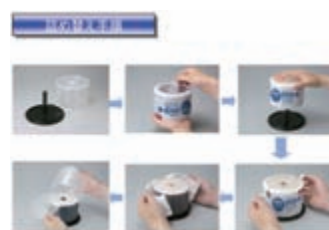


エコ商品
おと掲載

Imation Corp. Japan

Forest Hills West Wing, 18-16, Minami-Aoyama 4-Chome, Minato-ku Tokyo, 107-0062, Japan

Available in: Japan



EP-9-026

Others

toys

PlanToys — educational wooden toys

Environmental performance

PlanToys are made with eco-friendly materials. Each toy is made from rubber trees that have become too old to produce latex. Prior to PlanToys, these trees were cut, burned, and discarded while emitting huge amounts of CO₂. Through PlanToys these trees are recycled and treated to a chemical-free kiln drying process to create safe and innovative wooden toys. This also helps reduce air pollution and lower greenhouse gas emissions. Moreover, PlanToys are assembled using certified E-Zero glue and non-toxic water-based dyes that contain no lead or other heavy metals. All products and packaging are designed based on the eco-efficiency concept to minimize waste and hazardous materials as well as optimize the storage and increase the shipping efficiency. Every piece of PlanToys is certified with the Thai Green Label by Thai Environment Institute.



Plan Creations Co., Ltd.

114/1 Sathorn 10, North Sathorn Rd., Bangrak, Bangkok, 10500, Thailand
Tel +66-2237-9070 Fax +66-2237-5790
E-mail mktg@plantoy.com
URL www.plantoy.com
URL www.plantoy.com



Green Toy - Green Company

Available in: Worldwide; America, Europe, Asia & Africa

EP-9-027

Others

wrist watches

wn-2, the globe-shaped wrist watch

Environmental performance

An important point in its development was that it could be used for a long time by customers. And, for example, it is possible to obtain a different face only by changing the bezels. The package is not only made by the regenerated paper of milk cartons, but is also designed to be usable as a display without being thrown away.

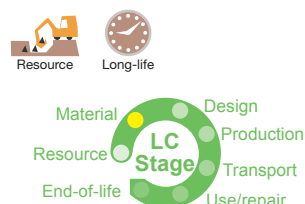
Product performance

The letter "w" in the code "wn-2" is the initial of the word "watch," which has two meanings. One is a tool showing the time and the other is to see something, here the globe. Regarding global environment problems including global warming, we would like to offer the opportunity for people to regard them as their own issues and act voluntarily. The global watch wn-2 is a world clock by which we can know at a glance the time of all places in the Northern Hemisphere. It is also a sensory item with which we feel a link with the world, and which brings us fresh surprise and emotion about the place where we are now.

SPACEPORT INC.

3-1-202 Sarugaku-cho, Shibuya-ku Tokyo, 150-0033, Japan
Tel +81-3-5459-2181 Fax +81-3 5459-2194
E-mail tte-sales@spaceport.co.jp
URL <http://www.thinktheearth.net/>
URL <http://www.thinktheearth.net/watch/index.html>

Available in: Worldwide



wn-2 white, the globe-shaped wrist watch

EP-9-028

Others

solar chargers

Metered solar charging station (MSCS)

Environmental performance

The Metered Solar Charging Station (MSCS) brings affordable electricity to remote villages. It is the cheapest means of rural electrification for individual homes as actual ownership of the solar energy system is not necessary. Each household only owns a battery. Both new and old car batteries can be charged right in the village, saving time and money. MSCS can be owned and operated by the community, school, NGO, or a well-off individual in the village. The users are billed fairly according to power usage regardless of their battery's capacity.

Product performance

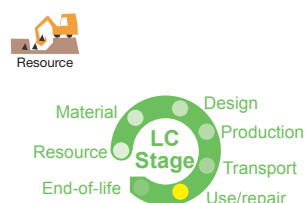
The MSC (Metered Solar Charger) is the heart of a Metered Solar Charger Station (MSCS). The MSC measures and displays the cost incurred for each charge. Based on the meter reading, users can pay the charging fee accordingly without any guesswork.

MSC accepts a DC power source such as a solar panel, and charge different types of 12V and 6V lead acid batteries. It requires minimum operation and maintenance.

Grenzzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore
Tel +65-6579-0560 Fax +65-6579-0561
E-mail info@grenzzone.com
URL www.grenzzone.com

Available in: Global



MS Charger

EP-9-029

Others

pens

Copic Multiliner SP — developed in response to demand in Europe

Environmental performance

Copic Multiliner SP is a brand of water-pigment milli pens that feature a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

Product performance

An eco-friendly European model designed for repeated use. With line sizes from 0.03 to 0.7, this product is widely used by amateurs on a hobby level in the USA as well as by designers, illustrators and artists around the world.



エコ商品
ねと掲載



Too Corporation

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan
Tel +81-3-3440-6141
E-mail tmp-jpn@toomarker.co.jp
URL <http://www.too.com/>

EP-9-030

Others

pens

Copic alcohol-based markers — winner of the Good Design Long Life Design Award

Environmental performance

Copic is a brand of alcohol-based color markers for drawing that features a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. As the solvent alcohol used is highly biodegradable, less polluted water is produced during the washing of these drawing tools than when using drawing paints, thereby causing less harm to the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

Product performance

Winner of the Good Design Long Life Design Award. Boasting 214 colors (including a colorless blender), Copic markers are used by designers and artists globally in fields from the cutting edge of design to the world of academia.



エコ商品
ねと掲載



Too Corporation

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E-mail tmp-jpn@toomarker.co.jp
URL <http://www.too.com/>

EP-9-031

Others

pens

Copic Sketch Markers — ideal for color illustrations

Environmental performance

Copic Sketch Markers are a brand of alcohol-based color markers for drawing that feature a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. As the solvent alcohol used is highly biodegradable, less polluted water is produced during the washing of these drawing tools than when using drawing paints, thereby causing less harm to the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

Product performance

Winner of the Good Design Long Life Design Award. Boasting 322 colors (including a colorless blender), Copic Sketch Markers are widely used by amateurs on a hobby level as well as by cartoonists, illustrators, designers and artists around the world, and are also adopted as teaching materials at universities and technical colleges.



エコ商品
ねと掲載



Too Corporation

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Tel +81-3-3440-6141
E-mail tmp-jpn@toomarker.co.jp
URL <http://www.too.com/>

EP-9-032

Others

pens

Copic Ciao Markers — an entry-level model for beginners

Environmental performance

Copic Ciao Markers are a brand of alcohol-based color markers for drawing that feature a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. As the solvent alcohol used is highly biodegradable, less polluted water is produced during the washing of these drawing tools than when using drawing paints, thereby causing less harm to the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

Product performance

A low-priced entry-level model in the Copic Marker series. Boasting 144 colors (including a colorless blender), Copic Ciao Markers are widely used by amateurs on a hobby level as well as by cartoonists, illustrators, designers and artists around the world, and are also adopted as teaching materials at universities and technical colleges.



エコ商品
ねと掲載



Too Corporation

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EP-9-033

Others

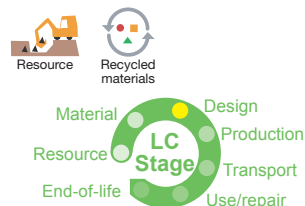
drawing boards

Crescent No. 16 Cold Press Illustration Board**Environmental performance**

Illustration board with a board interface (unbleached, 100% recycled waste paper)

Product performance

Featuring the purest shade of white among all cold press boards, this product is also known as the blue white board, and is used extensively by both students and professionals.



エコ商品
ねと掲載

Too Corporation

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Tel +81-3-3440-6141
E-mail tmp-jpn@toomarker.co.jp
URL <http://www.too.com/>

Economical
Grade

台紙
紙100

EP-9-034

Others

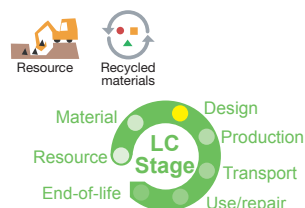
drawing boards

Crescent No. 20 Hot Press Illustration Board**Environmental performance**

Illustration board with a board interface (unbleached, 100% recycled waste paper).

Product performance

A relatively low-priced hot press board with a strong elastic surface, this product is used extensively by both students and professionals.



エコ商品
ねと掲載

Too Corporation

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan
Tel +81-3-3440-6141
E-mail tmp-jpn@toomarker.co.jp
URL <http://www.too.com/>

Economical
Grade

台紙
紙100

EP-9-035

Others

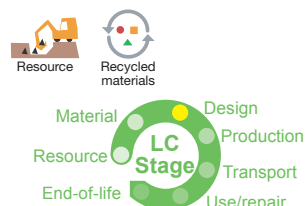
drawing boards

Crescent No. 99 Cold Press Illustration Board**Environmental performance**

Illustration board with a board interface (unbleached, 100% recycled waste paper).

Product performance

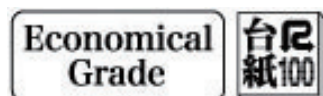
A low-priced option among cold press boards, this model is recommended for both students and professionals.



エコ商品
おと掲載

Too Corporation

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



EP-9-036

Others

drawing paper

Ecofriendly Drawing or Artist Paper**Environmental performance**

The ecofocus artist paper is made from sustainable materials like cotton waste. The paper is made on VAT machines and requires very less energy. The water used in manufacturing this paper is recycled and no harmful or hazardous chemicals like chlorine or bleaching agents etc. are used. The paper is dried naturally without any use of electricity. This paper is 100% eco-friendly.

Product performance

The ecofocus color series paper is made in Pune, India. The paper is made with traditional methods on vat from long cotton fibers & is well sized. It allows the artist to color at will with the help of his choice of media. It will offer very good flow of colors with exceptional color stability. Eco-focus Water Color Paper is available in sheets in different weights from 180 gsm to 1200 gsm, with deckle edges or even cut edges as per requirement. All full size sheets in this range have various surfaces. The available are from post card to 8ft x 4ft.

**Ideas & Solutions**

A3/19, Sarita Vihar, 119/3 Parvati, Sinhadag Road, Pune, 411030, India
Tel +91-9850008082
E-mail ecofocusin@gmail.com
URL www.ecofocusin.com



Available in: Worldwide

Ecofriendly drawing paper

EP-9-037

Others

handmade paper

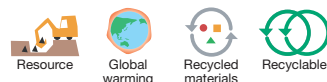
Eco-friendly, tree-free paper

Environmental performance

Our paper is made from 100% tree-free materials. It is manufactured from cotton waste, crop waste, etc. This helps save trees that are cut down for paper manufacturing.

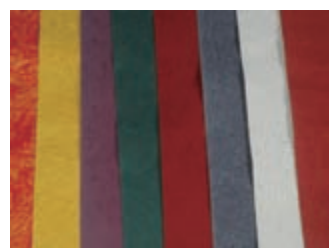
Product performance

Excellent quality of paper; made from 100% cotton, high strength, useful for making bags, wrapping, envelopes, and other stationery products.



Ideas & Solutions

A3/19, Sarita Vihar, 119/3 Parvati, Sinhagad Road, Pune-411030, India
Tel +91-9850008082
E-mail ecofocusin@gmail.com
URL www.ecofocusin.com



Available in: Japan

Handmade Paper

EP-9-038

Others

scrub pads

COIR SCRUB PAD

Environmental performance

We welcome you to the future of the environmentally responsible consumer. Safix scrub pad is your all-purpose scrub pad made from nature's gift: Coir fibers. We have never realized the endless number of household scrubbers being dumped in our landfills, causing immense damage to our environment. "Safix" scrub pad has revolutionized cleaning.

Product performance

This product has amazing features—Never rusts, splinters or degenerates on several uses. Easily removes baked on, burnt and stubborn greasy deposits from all types of utensils. Uses less detergent. No foul odor and extremely hygienic. Lasts for months together.

This product is extremely economical compared to any scrub pads. Even after multiple uses, this scrub pad maintains its shape, texture and abrasive action unlike any other scrub pads available. After use, you can dump it into landfills without worrying about destroying the environment.



Inovex Enterprises Pvt. Ltd.

30A Bommasandra Industrial Area, Hosur Road, Bangalore, 560099, India
Tel +91-80-26683216 Fax +91-80-41178633
E-mail info@inovexenterprises.com
URL <http://www.inovexenterprises.com>
URL <http://www.inovexenterprises.com>
URL <http://www.inovexenterprises.com>



COIR SCRUB PAD

EP-9-039

Others

file folders

File Folders with 20-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 -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 sy_elite@hotmail.com



EP-9-040

Others

file folders

File Folders with 40-pocket display book

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.

Product performance

- 40 -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 sy_elite@hotmail.com



EP-9-041

Others

file folders

File Folders with 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 sy_elite@hotmail.com



EP-9-042

Others

file folders

File Folders with 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 sy_elite@hotmail.com



EP-9-043

Others

file folders

File Folders with 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 sy_elite@hotmail.com



EP-9-044

Others

file folders

File Folders with 80-pocket display book

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.

Product performance

- 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 sy_elite@hotmail.com



EP-9-045

Others

file folders

File Folders with Ring Binder

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 - 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 sy_elite@hotmail.com

EP-9-046

Others

file folders

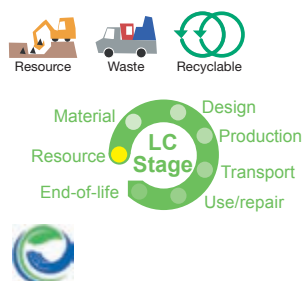
File Folders with Ring Binder (2 Ring)

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.

Product performance

TRIGGER TYPE - 2-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 sy_elite@hotmail.com

EP-9-047

Others

file folders

File Folders with Ring Binder (3 Ring)

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.

Product performance

TRIGGER TYPE - 3-D RING

Resource

Waste

Recyclable

Material

Design

Production

Transport

Use/repair

End-of-life

Resource

LC Stage

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 sy_elite@hotmail.com

EP-9-048

Others

clipboards

CLIP BOARD

Environmental performance

Our CLIP BOARD is made of recycled materials.
The ratio between raw materials and recycled ones is 60 : 40.

Waste

Recyclable

Material

Design

Production

Transport

Use/repair

End-of-life

Resource

LC Stage

Elite Information Industry

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-do, Korea
E-mail kkkon@unitel.co.kr

EP-9-049

Others
towels

Low-pollution, high-performance, high-strength, environmentally friendly 100% non-woven disposable-type paper towels

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
- ★ An environmentally friendly low-halogen towel with a low dioxin content in consideration of the environmental impact of its disposal and incineration.



Unichemy Co.,Ltd.

1-11-1 Tenma-cho, Atsuta-ku Nagoya-shi, Aichi-ken, 456-0034, Japan
 Tel +81-52-682-5619 Fax +81-52-682-5574
 E-mail eigyobu@unichemy.co.jp
 URL <http://www.unichemy.co.jp>
 URL <http://www.unichemy.co.jp/Products2/syohuin%20top/rabotaoru%20new1.pdf>

Available in: Japan

LABOTOWEL

EP-9-050

Others
towels

Low-pollution, high-performance, high-strength, environmentally friendly 100% non-woven disposable-type paper wiper

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.
- ★ Proper adjustment of water and oil absorption rates helps keep the wiper's hands as clean as possible.
- ★ 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
- ★ Environmentally friendly with a low dioxin content in consideration of the environmental impact of its disposal and incineration



Unichemy Co.,Ltd.

1-11-1 Tenma-cho, Atsuta-ku Nagoya-shi, Aichi-ken, 456-0034, Japan
 Tel +81-52-682-5619 Fax +81-52-682-5574
 E-mail eigyobu@unichemy.co.jp
 URL <http://www.unichemy.co.jp>

Available in: Japan

Labowiper mini

EP-9-051

Others

dust cleaners

BTS-77 PCB Dust Cleaner**Environmental performance**

Prevents respiratory disease

BTS-77 is an eco-friendly product with no airborne dust.

Product performance

The printed circuit board (PCB) in electronic devices and facilities attracts dust by static electricity. This static electricity leads to the PCB, which short-circuits the degradation of performance, and shortens the service lifespan. BTS-77 is a newly invented material to keep electronic devices and facilities from those possible risks and dangers. BTS-77 blocks dust from coming into the PCBs, preventing unwanted losses and accidents.

*** Features of BTS-77**

.BTS-77 can clean equipment without the concern of conducting electricity, even in high voltage up to 50,000V.

.BTS-77 consist of unique materials that leave no corrosion or damage to PCBs and all other electronic parts.

.BTS-77 can slip into any tiny, narrow gaps, completely removing dust.

.BTS-77 neutralizes the static electricity generated by air compressors.

BNF CO.,LTD.

7F, Neulpureun B/D, 979-2, Yeongtong-Dong, Yeongtong-Gu, Suwon-Si,
Gyeonggi-Do, 443-812, Korea
Tel +82-31-273-3540 / +82-10-8787-1495 Fax +82-31-273-3543
E-mail bci21s@hananet.net
URL www.bts77.com



EP-9-052

Others

glasses

Eco-friendly eyewear Linkskin**Environmental performance**

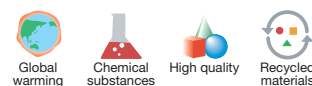
Linkskin encompasses a unique combination of recycled plastic and stainless steel (inherently 80% recycled) components to create what is probably the world's first recycled eyewear. It is environmentally friendly and RoHS compliant with international environment protection standards through the adoption of eco-friendly processes in the production cycle.

Product performance

A buckle-lock (patented mechanism) secures the temples to both sides of the metal bar. The tip of the bar, shaped like a fork, is secured to the temple by sliding it through the groove of the temple metal front. This application means easy handling with no soldering or screws required for frame assembly, and the holding of the lens is more secure compared to a conventional frame with screws. Weighing less than 10 grams, the frame is extremely lightweight, durable, and versatile.

Eye-biz Pte Ltd.

82 Genting Lane #06-05 Media Centre, 349567, Singapore
Tel +65-6744-9151 Fax +65-6748-7435
E-mail info@eye-biz.com
URL www.eye-biz.com
URL www.linkskin.com



Available in: Europe, USA and Asia

Linkskin Eyewear

EP-9-053

Others
fonts

EcoFont

Environmental performance

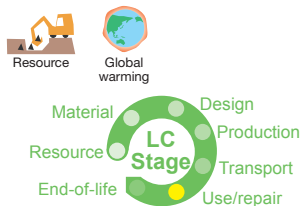
EcoFont is aimed at helping to protect the environment. A single line is inserted inside each character to reduce the printing area and consumption of toner/ink.

Product performance

The font can be used in Windows XP, Windows Vista, MacOS9 or Mac OSX environments, and is activated simply by selecting EcoFont when making a document — no new capital investment is needed. Printer toner/ink consumption is reduced by approx. 25% when using small-sized characters (compared with MS Gothic) and by around 40% when using large-sized characters. A total of seven font types are available: three square Gothic and three round Gothic fonts for Japanese, and one Roman font for English and other European languages (see Example).

NIS Corporation

5-4-4 Koishikawa, Bunkyo Tokyo, 112-0002, Japan
Tel +81-3-3814-3201 Fax +81-3-3814-3206
E-mail ito@nisfont.co.jp
URL <http://www.nisfont.co.jp>



Example

Economy&Ecology
Economy&Ecology

(Upper: RegularFont Lower: EcoFont)

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 2009*, “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

returnable container managing systems

NETLOOPASS — a system using IC-tags to manage returnable containers in logistics

Environmental performance

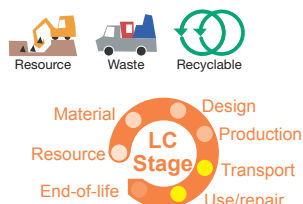
From the perspective of consideration for the environment, returnable containers are frequently used for logistics between enterprises. However, there are many new problems related to management such as a lack of containers when shipping a product or an excess of containers. These problems are caused 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 pallets, 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 depending upon their specific needs and it is possible to use IC-tags even if the container is made of metal.



TOPPAN PRINTING CO., LTD.

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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/>

Available in: We have sold our products throughout the world.

ES-1-002

Product-related

treatment of metal surfaces

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 operating life, Hitachi Metals developed "the TRIBEC™ Series". By identifying the necessary performance attributes of each application based on an extensive analysis on mold abrasion over many years, Hitachi Metals 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, mold abrasion can be suppressed with polishing to remove damaged portions and enables reuse of "TRIBEC™".



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/>
URL http://www.hitachi-metals.co.jp/e/prod/prod19/p19_02.html
URL http://www.hitachi-metals.co.jp/e/corp/corp14_01.html

Products with TRIBEC™ applied

ES-1-003

**Product-related
green gifts**

Present Tree

Product performance

A Present Tree is a gift that involves the delivery of a certificate detailing a planted tree, along with a message card. Trees will be planted for the reproduction of tropical forests on Kalimantan Island.

You can have two planted trees.

One of the trees is planted for recovering tropical forest.

The other is a teak, and this afforestation enables the sustainable supply of woods, and creates the employment of locals.

After ten years, the teak will be cut down and sold. The income from the teak will be paid to the owner. The income will also be able to be used for reforestation or environmental conservation activities.

As another privilege, a CO₂ offset certificate comes with the Present Tree. The planted tree will become forest and that will absorb carbon dioxide. It contributes to the prevention of global warming.

The owner certificate features the owner's name, and latitude and longitude of the position where the teak sapling is planted, which is measured by GPS (Global Positioning System).

VIVO Corporation Co.,Ltd

3-5-4, Tanashicho, Nishitokyo-shi, Tokyo, 188-0011, Japan

Tel +81-42-465-7563 Fax +81-42-465-7241

E-mail info@vivo.jp

URL <http://www.env-r.com/tree>



Available in: Japan

Present Tree contents

ES-1-004

**Product-related
elevator refurbishment services**

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>

ES-2-001

Reuse and recycling
retreaded tires

Retread tires for trucks and buses

Environmental performance

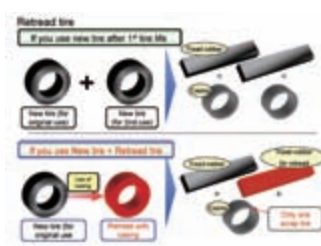
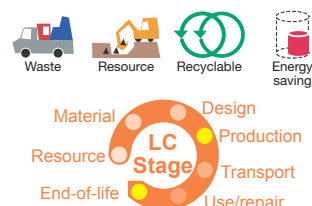
Through the retreading method, CO₂ emissions and energy consumption during tire manufacturing process can be significantly reduced as well as scrap tire reduction. Bridgestone also provides new tires properly designed as a retread casing in order to maximize the value of casing and reuse efficiency. Bridgestone will make continuous effort for further public enlightenment of the Eco concept responding to social justice and the needs of customers through retread activity.

Product performance

"Retread" means attaching new tread rubber on a worn-out tire to revive tire life. There are two ways of retreading. One is assembling already cured tread (Pre-Cured Tread or PCT) on a worn-out tire, which is called "COLD" type retread, because the curing temperature is relatively low (100-120 degrees C). The other is assembling non-cured tread, which is called "HOT" type retread, because the curing temperature is relatively high (140-150 degrees C) and this is similar to new tire production.

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-2-002

Reuse and recycling
recycling systems

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

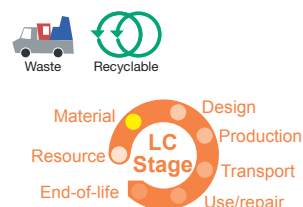
1. This system ensures that dioxins contained in residues are safely decomposed during high temperature in excess of 1,350°C.
2. This system includes equipment that extracts and refines heavy metals contained in the incineration residues for recycling.
3. This system contributes to decrease of landfill 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

St. Luke's Tower, 8-1, Akashi-cho, Chuo-ku, Tokyo, 104-8518, Japan
Tel +81-3-6226-9088 Fax +81-3-6226-9172
URL <http://www.taiheiyo-cement.co.jp>



Ecocement System

ES-2-003

Reuse and recycling
recycling systems

Ash Washing System

Environmental performance

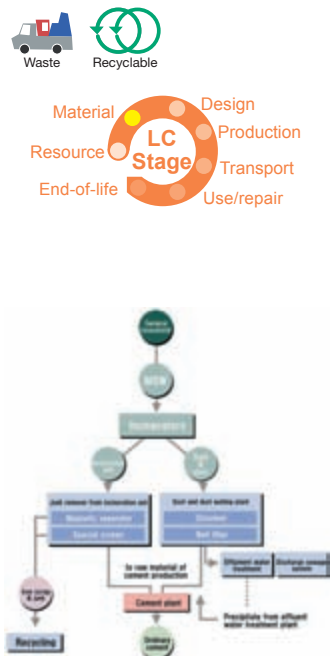
Ash Washing System is a recycling system for incineration residues, otherwise known as soot & dust and bottom ash from MSW incineration, as a cement raw material. This system can be introduced at existing cement plants simply by installing pretreatment facilities of the Ash Washing system.

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. Soot & dust and bottom ash are utilized as a cement raw material after pre-treatment

TAIHEIYO CEMENT CORPORATION

St. Luke's Tower, 8-1, Akashi-cho, Chuo-ku, Tokyo, 104-8518, Japan
Tel +81-3-6226-9088 Fax +81-3-6226-9172
URL <http://www.taiheiyo-cement.co.jp>



Ash Washing System

ES-2-004

Reuse and recycling
recycling systems

AK System

Environmental performance

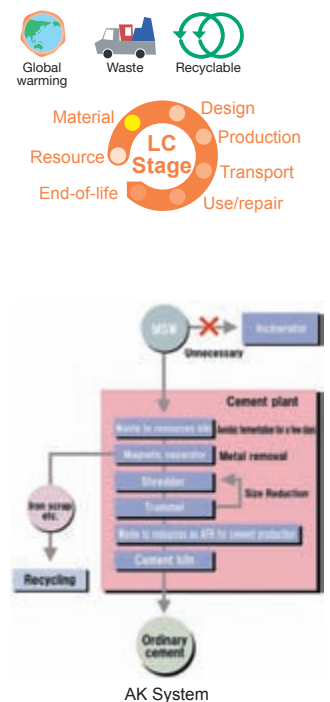
AK (Applied Kiln) System recycles household garbage into raw material and alternative fuel for ordinary Portland cement production. This can be introduced at existing ordinary Portland cement plants by modification and installation of specific equipment.

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

St. Luke's Tower, 8-1, Akashi-cho, Chuo-ku, Tokyo, 104-8518, Japan
Tel +81-3-6226-9088 Fax +81-3-6226-9172
URL <http://www.taiheiyo-cement.co.jp/>



AK System

ES-2-005

Reuse and recycling
recycling systems

FRP Recycling Using Depolymerization Under Ordinary Pressure

Environmental performance

This technology is unique in that it does not require pretreatment (crushing, etc.) or the facilities and energy for the pressurization. This technology helps reduce processing costs and environmental load while ensuring health and safety. Moreover, the relatively long glass fibers recovered enable production of reusable FRPs with about 70% of the tensile strength of virgin FRPs.

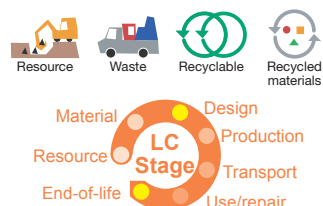
Product performance

FRP raw materials such as thermosetting resins make FRP difficult to recycle because they cannot be decomposed after being molded. Hitachi Chemical's FRP recycling technology, which uses tripotassium phosphate as a catalyst and benzyl alcohol as a solvent, can decompose FRP at 200 degrees centigrade under ordinary pressure for about 10 hours. FRPs are readily separated into glass fibers, fillers, resins and other components, which are reprocessed into FRPs at a low cost.

Hitachi Chemical Co., Ltd.

1500 Ogawa Chikusei-shi, Ibaraki, 308-8521, Japan
Tel +81-296-20-2304 Fax +81-296-28-4637
URL <http://www.hitachi-chem.co.jp/english/index.html>
URL <http://www.hitachi-chem.co.jp/english/products/index.html>
URL <http://www.hitachi-chem.co.jp/english/csr/index.html>

Available in: Japan



FRP dissolving process

ES-2-006

Reuse and recycling
recycling systems

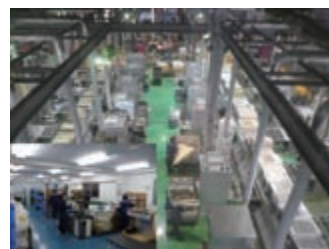
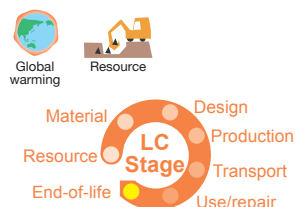
Recycling of Electronic Appliances Toward Recycling-oriented Society

Environmental performance

Tokyo Eco Recycle Co., Ltd. disassembles used electric appliances manually to separate valuable resources thoroughly. One step forward from an effort just to "recover resources" for environmental protection to "create resources" has achieved a new business model. Tokyo Eco, a front-runner in the world has been striving to establish a novel approach representing the recycling industry. Tokyo-Eco strives for "zero emission", which means waste going to landfill sites be reduced to zero. Our landfill ratio of 0.1% is at the top level in Japan. At the same time, information security is highly taken into account (e.g., being certified for "privacy marking") in order to promote recycling in the information society.

Tokyo Eco-Recycle, Ltd.

38 Wakasu, Koutou-ku, Tokyo, 136-0083, Japan
Tel +81-3-3522-6690 Fax +81-3-3522-6688
URL <http://www.tokyo-eco.co.jp>



Recycling of PCs, washing machines, and air-conditioners

ES-2-007

**Reuse and recycling
recycling systems**

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. 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-2-008

**Reuse and recycling
recycling systems**

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 PET bottles and 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 Teijin Fiber trademark.



Teijin Fibers Limited

2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-8585, Japan
Tel 0088-22-0175
E-mail tfj0604@teijin.co.jp
URL http://www.ecocircle.jp/index_e.html

Closed-loop recycling system

ES-2-009

Reuse and recycling
recycling systems

Tea dregs recycling system

Environmental performance

With the increase of demand for green tea beverages, the amount of tea dregs discharged during the process of production is increasing year by year. Even though the tea dregs contain a lot of functional ingredients such as polyphenol, it is easy to rot because of its containment of water and high temperature.

As a way to dispose tea dregs discharged, it can be dried out and reused. However, a large amount of energy is consumed to make it dry because of its water containment. That is not good for the environment.

As a result, most of the usage of tea dregs is for compost so far.

At ITO EN we have overcome those obstacles and succeeded in developing a technology to process the tea dregs with water in it.

Creating products made out of tea dregs such as board, gypsum-board, resin, and paper, making a good use of green tea function with the technology is "the tea dregs recycling system".

ITO EN, LTD.

21 MEKAMI, SAGARA-CHO, MAKINOHARA-SHI, SHIZUOKA-KEN,

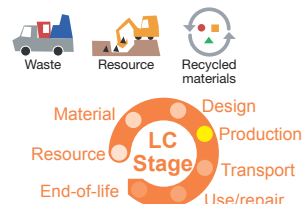
421-0516, Japan

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

URL <http://www.itoen.co.jp/csr/recycle/index.html>

URL <http://www.itoen.co.jp/csr/report/index.html>

Available in: Japan



Sample (Resin with tea)

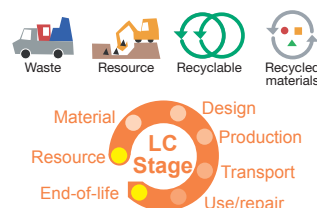
ES-2-010

Reuse and recycling
recycling systems

Efforts to achieve a higher recycling rate under the concept of compliance

Environmental performance

We strive to recycle used resources, including metals (e.g., iron and aluminum), waste office automation equipment (e.g., PCs) and automobiles. We are also actively engaged in activities to raise awareness in regard to environmental conservation. These include factory tours upon request for the general public at some of our facilities to publicize the importance of recycling.



SUZUKI SHOKAI Inc.

Nippon Life Insurance Sapporo Bld 10F, 1-1 North3 West4, Chuo-ku, Sapporo-shi, Hokkaido, 060-0003, Japan

Tel +81-11-280-1281 Fax +81-11-280-8900

URL <http://www.suzuki-shokai.co.jp>

Available in: Japan, Asia

Ishikari factory Shredder Plant

ES-2-011

Reuse and recycling
recycling systems

Separate collection of various kinds of metals, plastics and glass contained in shredder dust

Environmental performance

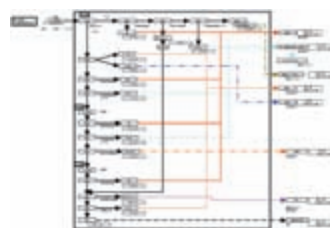
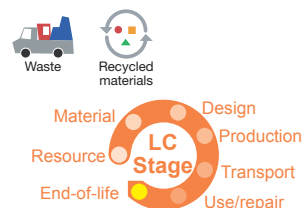
Separating shredder dust generated from waste household appliances and automobiles has conventionally been considered difficult. However, efforts are now made to reduce the amount of waste for final disposal by separately collecting such dust and making effective use of it—metals and glass for material recycling (i.e., to be recycled as raw materials) and plastics for thermal recycling (i.e., energy recovery).

Product performance

The raw material, shredder dust, is sieved and subjected to manual screening, crushing, wind gravity separation, magnetic separation, nonferrous metal separation and fluidized bed gravity separation. In each of these processes, recyclable materials, including those for fuels, are extracted. Although the proportions of these recyclable materials differ depending on the type of raw material, the weight-based percentage is roughly estimated as approximately 35 to 42% for iron, copper, aluminum, other metals and glass, and 25 to 35% for plastics to be used as fuels. The amount of final disposal is approximately 30% of the original amount.

R&E Co., Ltd

223-1 Tomiura-cho, Noboribetsu-shi, Hokkaido, 059-0462, Japan
Tel +81-143-80-2233 Fax +81-143-80-2232
E-mail kankyo@rande.co.jp
URL <http://www.rande.co.jp>



Flowchart of work processes at the shredder dust-recycling factory

ES-3-001

Outsourcing

data deletion management

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 dried, dry-distilled and carbonized in a furnace using nitrogen.
- (2) Data is then erased by heating with an electric heater.
- (3) 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).
- (4) The original materials (e.g., metal) and fuel (carbide) are both recycled.
- (5) External air pollution is prevented through the use of exhaust gas detoxification and deodorization devices.
- (6) Carbon offsets are purchased to compensate for the CO₂ discharged during the operation of this service.
- (7) Carbon offset and work completion certificates are issued.

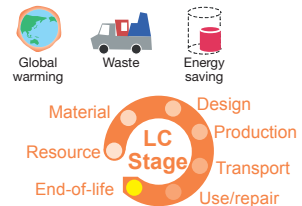
Product performance

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

Forest Hills West Wing 18-16, Minami-Aoyama 4-Chome, Minato-ku, Tokyo, 107-0062, Japan

Available in: Tokyo metropolitan area in JAPAN *Please inquire of us about the service areas other than the above area.



Truck put on the equipment & Carbonized cartridge

ES-3-002

Outsourcing

pipe flushing services

Water-saving flushing system for newly built hot and cold water pipes

Environmental performance

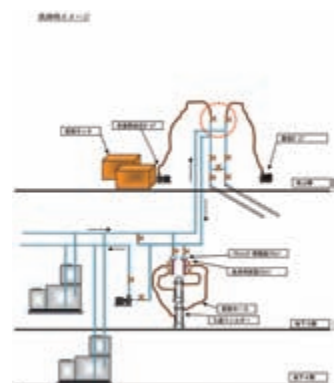
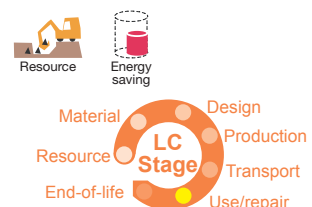
The flushing method for hot and cold water pipes conserves resources by significantly reducing the volume of wash water used as well as the number of working hours involved.

Product 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. Ex.) 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. The technique is expected to be used in cogeneration systems for district cooling and heating and for pipes to cool large-sized machinery.

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>



ES-3-003

Outsourcing

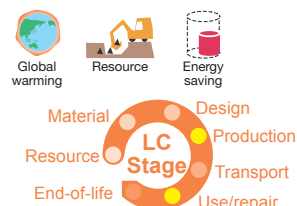
energy management services

Energy Management Service

Environmental performance

UGL Premas is a leading total asset management company in Asia. Headquartered in Singapore, with staff strength of 2000, we provide facilities management and engineering services for various types of facilities across Asia and Middle East regions.

Our Energy Centre, the first accredited ESCO, specialises in energy management solutions and procurement services. It has helped building owners identify savings of more than S\$10 million annually in total.



United Premas Limited

Block 750 Oasis, Chai Chee Road Technopark @ Chai Chee #01-01, 469000, Singapore
Tel +65-6876-0088 Fax +65-6538-8146
E-mail info@ugl-premas.com
URL www.ugl-premas.com



ES-3-004

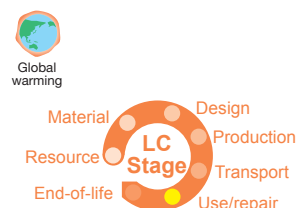
Outsourcing

landfill gas collection volume evaluation

Landfill Gas Collection Volume Evaluation Method

Product performance

For successful landfill gas (LFG) collection and/or power generation projects or CDM projects, accurate evaluation of LFG emission and collection volume is crucial. Through a number of actual project experiences in Southeast Asia, Kajima developed a step-wise evaluation methodology comprising a preliminary study (Surface Methane Flux/Concentration Study), diagnosis study (Passive Gas-Well Test) and detailed study (Pumping Gas-Well Test). The preliminary study that measures methane concentration and methane flux on the landfill surface provides economical and quick assessment for further studies, the diagnosis study that measures the volume and composition of the LFG being emitted through a few small observation wells and conducts chemical analysis on waste samples provides approximate estimation of project costs, and the detailed study that pumps LFG from a few actual production wells and studies the relation between pumping power and methane concentration provides accurate LFG collection volume data and operational data.



Kajima Corporation

6-5-11, Akasaka, Minato-ku, Tokyo, 107-8348, Japan
Tel +81-3-5544-0734 Fax +81-3-5544-1733
E-mail env-act@ml.kajima.com
URL http://www.kajima.co.jp/tech/g_warming/index.html



Pumping Gas-Well Test

ES-4-001

Management-related
package software

Agricultural Information Management System: GeoMation Farm

Environmental performance

- 1) By analyzing the relation between fertilizer and quality/quantity of a crop, farmers can judge the suitable amount of fertilizer. This leads to low environmental load.
- 2) By plotting scattering of the outbreak of disease or harmful insects on the farmland map, farmers can prevent and exterminate these pests with low agricultural chemicals.

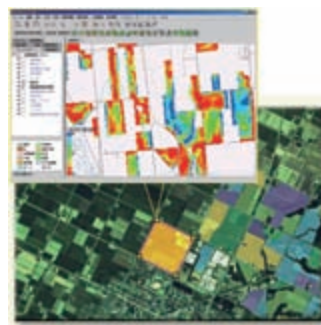
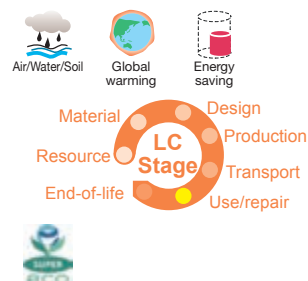
Product performance

Remote sensing technology can judge the percentage of dryness of ears of wheat. By using this information, farmers can harvest only dry wheat and this leads to energy-saving drying. According to the evaluation result by SI-LCA index, CO₂ emissions for drying wheat can be reduced 33% by using "GeoMation Farm".

Hitachi Software Engineering Co., Ltd.

4-12-7 Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Tel +81-3-5780-2111
URL <http://www.hitachi-sk.co.jp/english/index.html>
URL <http://hitachisoft.jp/geomation/farm>
URL <http://hitachisoft.jp/csr/index.html>

Available in: Worldwide



Agricultural Information Mgmt: GeoMation Farm

ES-4-002

Management-related
package software

Bioinformatics Software for DNA/RNA/Amino Acid Sequence Analysis

Environmental performance

DNASIS Pro reduces man-hours by 88% by adding the function which coordinates with the reagent order site, and contributes to energy saving. The amount of CO₂ reduction for one year is 182.7kg.

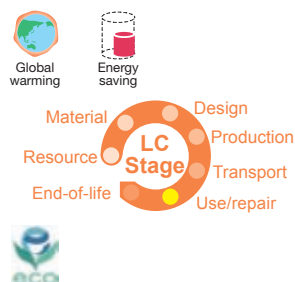
Product performance

Life science research is making great advances in broad applications such 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" enables 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 their life science research.

Hitachi Software Engineering Co., Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Tel +81-3-5780-2111
URL <http://hitachisoft.jp/products/lifescience/>
URL <http://hitachisoft.jp/products/lifescience/lineup/dnasis/DNASISPro/>
URL <http://www.miraibio.com/dnasis-max/dnasis-max-overview.html>

Available in: Japan



DNASIS Pro

ES-4-003

Management-related
environmental management

Information Collecting and Analyzing Tool Supporting Environmental Management

Environmental performance

- The system is a WEB-base scheme that is yielded from actual business needs and has an enough record about being used.
- In one platform (server), installed are three sub-systems for collecting and analyzing the information, for controlling waste with the administration of agents, and for monitoring chemical substances. "ECO Rates" is a total package in which each sub-system is connected each other.
- We offer "version up" service every year to conform to the latest law and acts.
- "Add on" operation and customization of the function can be arranged so as to meet the customer's business uses. In addition, we support the customers on the whole from the introduction of system to the practical use policy and operative rules.

Product performance

"ECO Rates" supports, as a real managing system, the information management that is the base of the environment management.

Mitsubishi Electric Corporation

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

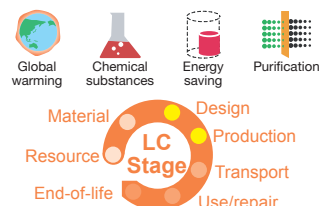
Tel +81-3-3218-9024 Fax +81-3-3218-2465

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

ECO Rates Integrated Environmental Information system

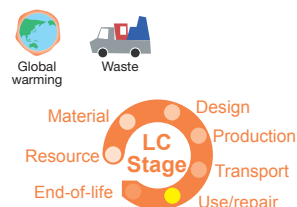
ES-4-004

Management-related
environmental education content

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-4-005

Management-related

LCA software

LCA software "JEMAI-LCA Pro"

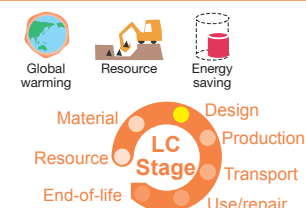
Environmental performance

JEMAI-LCA Pro is LCA software developed by the National Institute of Advanced Industrial Science and Technology (AIST) and Japan Environmental Management Association for Industry (JEMAI). The JEMAI-LCA series has been available since 2000, and over 1000 copies have been sold, occupying the largest share in Japan's LCA software market. Now, an English version is available. 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 Japanese and European methods. -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.jemai.or.jp/CACHE/lca_details_lcaobj198.cfm

Available in: Worldwide



JEMAI-LCA Pro

ES-4-006

Management-related

LCA software

Life Cycle Assessment Software "Easy-LCA"

Environmental performance

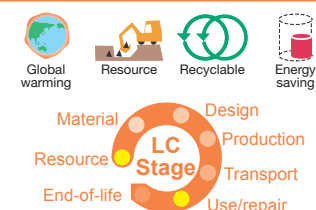
Easy-LCA is a supporting tool to conduct life cycle assessment (LCA) effectively. It evaluates quantitatively the influence of the product on the environment at the stage of design, and combines scientifically the results with the analysis and improvement of the product.

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-4-007

Management-related
library systems

A library system "Livre"

Environmental performance

We can reduce CO₂ of 66.6% by using "Livre".

Product performance

Livre is library system, which Hitachi Systems & Services, Ltd. offers.

The characteristics of "Livre" are as follows.

- Enables easy operation for the loan and the return of the library book.
- Enables quick search for books.
- Provides variety of statistics associated with the library operation.



Hitachi Systems & Services, 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-system.co.jp
URL <http://www.hitachi-system.co.jp/lvr/>

Main Menu of "Livre"

ES-4-008

Management-related
document solutions

Document Solution "LIBINITY"

Environmental performance

LIBINITY is a unified brand of the document solution of Hitachi Systems & Services, Ltd.

It reduces the consumption of 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 conventional paper with information sharing on the WWW.

Product performance

LIBINITY ECM is characterized by "SCALABILITY" changing a system scale by step-by-step expansion depending on the number of the documents / the users. It can enable all customers' document systems to realize "COMPLIANCE", "SECURITY", "RELIABILITY" easily. "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 Systems & Services, Ltd.

JR Shinagawa East Building, 2-18-1 Konan, Minato-ku, Tokyo, 108-8250, Japan
Tel +81-3-3763-3264 Fax +81-3-3763-3291
E-mail libinity@hitachi-system.co.jp
URL <http://www.hitachi-system.co.jp/libinity/>

Screen image of "LIBINITY Millemasse"

ES-4-009

**Management-related
energy saving solutions**

Office HVAC for Comfort and Energy Saving

Environmental performance

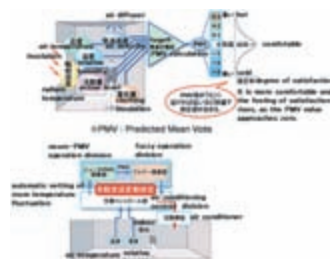
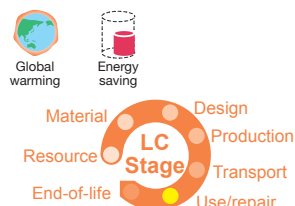
- Mitigation of climate change: 10-20% reduction of energy consumption by the reduced consumption of cool water, hot water and fan power and the prevention of excessive cooling and heating.
- Efficient use of resources: Control is executed by software. Minimization of hardware means resource saving in the manufacturing phase.

Product performance

- Comfortable environment: Air-conditioning control based on Predicted Mean Vote (PMV) to maintain a comfortable indoor environment.

TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
Tel +81-3-3457-4368 Fax +81-3-5444-9280
URL <http://www.toshiba.co.jp/index.htm>
URL <http://www.toshiba.co.jp/env/en/report/index.htm>



Neuro-PMV Control

ES-4-010

Management-related

consulting services for geothermal and hydraulic power generation

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.

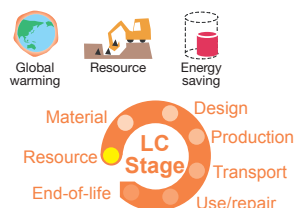
We have six hydroelectric power plants (approx. 17MW total) and two geothermal power plants (59.5MW total) in Japan. Geothermal power generation utilizes steam energy extracted from underground by drilling wells as deep as 2,000 meters.

It requires specialized techniques and technology to utilize effectively this kind of high temperature-underground resources in all stages of site survey, drilling, and maintenance of output power.

We have acquired the necessary techniques and technology through our direct involvement in developing and operating our two geothermal power plants. With this experience, we are actively participating in geothermal area surveys and technological development projects at home and abroad.

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>



Ohnuma Geothermal Power Plant (9.5MW)

Available in: Global

ES-4-011

**Management-related
energy services**

ESCO (Energy Service Company)

Environmental performance

In projects undertaken between 2000 and 2007, we have achieved an aggregated reduction of approximately 220,000 tons per year of CO₂ emissions.

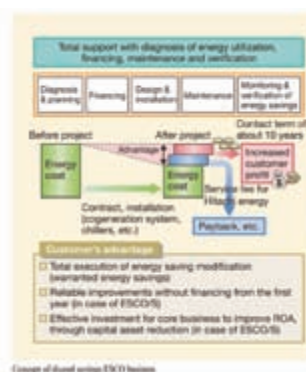
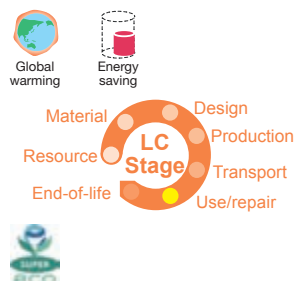
Product performance

The ESCO business forms a new business scheme that offers comprehensive services for energy saving to customers, and covers the cost required for repairing relevant equipment with a budget saved by energy saving. The service includes energy saving diagnosis, energy saving proposal, equipment installation, finance, and maintenance. The project aims to substantially reduce energy consumption and CO₂ emissions. Taking advantage of the Group's collective strengths, Hitachi has already achieved remarkable successes in a wide variety of sites, including factories, hospitals, office buildings, and research facilities.

Hitachi, Ltd., Urban Planning and Development Systems

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>

Available in: Japan, Philippines, Thailand, Singapore



ESCO (Energy Service Company)

ES-4-012

**Management-related
wastewater management**

Wastewater Treatment Technology—MSABP™, HiPOx™ and ELCAT™

Environmental performance

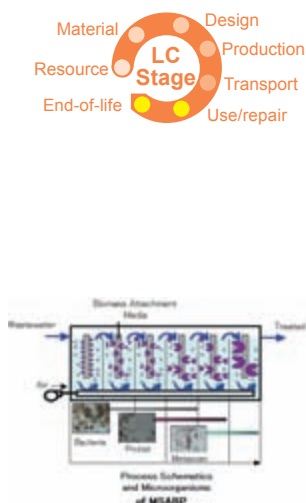
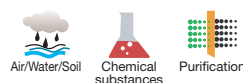
We deliver a total solution for water recycle/reuse through our environment-friendly technologies.

Product performance

- 1) MSABP: Multi-stage bioprocess utilizing micro-organism food chain
 - * No waste sludge, small foot print and low operating cost (less energy and CO₂)
 - * System performance is consistent under large load fluctuations
 - * Likely applicable to food/petroleum/chemical/pharmaceutical industries
- 2) HiPOx™: Innovative Advanced Oxidation Process (AOP) using hydrogen peroxide and multiple ozone injection
 - * Decomposes 1,4-Dioxane, PPCPs and EDCs, etc.
- 3) ELCAT™: Electro-catalytic wastewater treatment process
 - * High treatment capability for toxic, non-biodegradable materials
- 4) Carbon Fiber (CF) for wastewater treatment
 - * CF naturally attracts living organisms and cleans up waste water

Teijin Limited

2-1, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo, 100-8585, Japan
Tel +81-3-3506-4593
E-mail to.nishikawa@teijin.co.jp
URL <http://www.teijin.co.jp/english/index.html>



ES-5-001

Others

LCA system integration

System Integration Life Cycle Assessment "SI-LCA"

Environmental performance

Quantitative evaluation methodology on the environmental load of system & service products has become increasingly important. Hitachi has developed "SI-LCA" (System Integration - Life Cycle Assessment) which is an environmental impact assessment methodology and a software program for the purpose of evaluating the effects on CO₂ emission of SI products and service over the entire life cycle.

Product performance

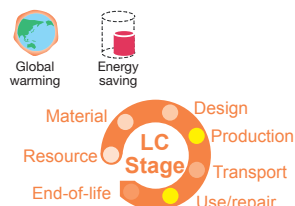
SI-LCA (System Integration - Life Cycle Assessment) has three features:

- (1) SI-LCA evaluates 10 lifecycle stages: procurement, design, shipment, transportation, installation, field operation, usage, maintenance, collection and recycling.
- (2) SI-LCA evaluates the environmental impact of hardware, software and services.
- (3) SI-LCA evaluates quantitatively both positive effect such as a reduction in the movement of people/mass and negative effects such as energy consumption during operation.

Hitachi, Ltd.

Hitachi Omori 2nd Bldg., 27-18, Minami Oi 6-chome, Shinagawa-ku, Tokyo,
140-8572, Japan
Tel +81-3-5471-2745 Fax +81-3-5471-2746

Available in: Japan



SI-LCA target stages

ES-5-002

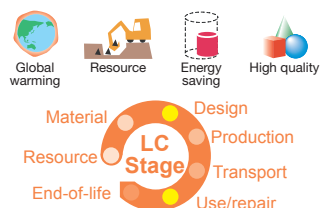
Others

railway cars

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.



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: Tohoku, Jouetsu, Nagano Shinkansen

E2-series for Asama and Hayate Shinkansen trains

ES-5-003

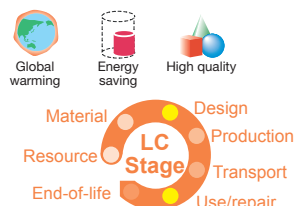
Others

rail transportation services

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: Tokaido and Sanyo Shinkansen

Series N700

ES-5-004

Others

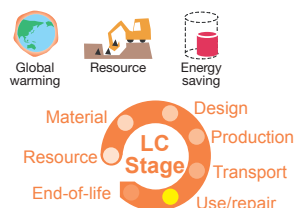
rail transportation services

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%.



East Japan Railway Company

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Tel +81-3-5334-1122
URL <http://www.jreast.co.jp/eco/>



Available in: Koumi Line

The world's first diesel hybrid railcar Kiha E200 Type

ES-5-005

Others

rail transportation services

Environmentally Friendly E231 Series

Environmental performance

The E231 series reduces operational energy consumption by 50% compared to that of the 103 series, 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.



East Japan Railway Company

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Tel +81-3-5334-1122
E-mail eco@jreast.co.jp
URL <http://www.jreast.co.jp/eco/>



Available in: Metropolitan areas

E231 series run on the Utsunomiya Line

ES-5-006

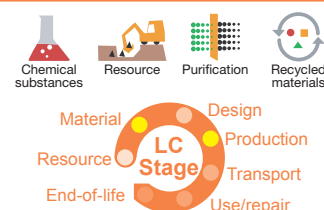
Others

new year's cards

Eco Green New Year's Cards (name-printing service available)

Environmental 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. In 2008, we initiated a carbon offset business through afforestation and launched Green Eco New Year's Cards as part of the business. We also offer a name-printing service (for promotional products) on the Cardbox website and at retail stores nationwide. 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 the autumn of 2009.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan



Available in: Japan

Green Eco New Year's Cards

ES-5-007

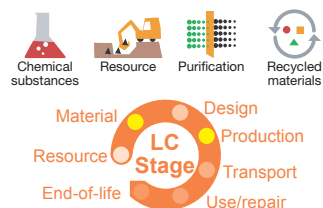
Others

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 5,000 kg of CO₂ by the autumn of 2009.



Green Eco New Year's Cards

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan

Available in: Japan

ES-5-008

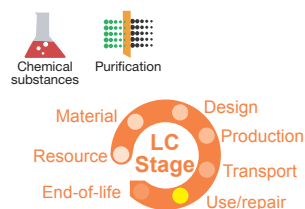
Others

printing services

Waterless printing

Environmental performance

Pripress Center Corporation promotes environmentally friendly eco printing methods, and recommends waterless printing as part of these efforts. Unlike the conventional method of offset printing, no dampening solution is used in this process. This enables printing without waste water and the adverse environmental effects associated with it.



Butterfly mark

Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan

Available in: Japan

ES-5-009

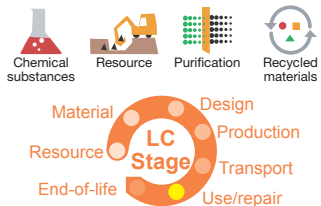
Others

printing services

Soy ink

Environmental performance

Pripress Center Corporation promotes the provision of environmentally friendly products and services, and recommends printing with soy ink as part of these efforts. Soy ink is produced by replacing some of the petroleum solvents contained in conventional ink with a natural material extracted from soybeans. As it contains very low levels of volatile organic compounds (VOCs), it helps to prevent air pollution and improve work environments.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan



Available in: Japan

Soy sticker

ES-5-010

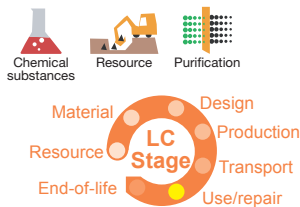
Others

printing services

Non-VOC ink

Environmental performance

Pripress Center Corporation promotes environmentally friendly products and services, and recommends printing with non-VOC ink as part of these efforts. Non-VOC ink exerts a lower burden on the environment, as all petroleum solvents contained in conventional ink are replaced with vegetable-derived alternatives.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan



Available in: Japan

Publications printed using non-VOC ink

Eco-materials

Eco-components

Eco-products

Eco-services // Others

1
2
3
4
5

ES-5-011

Others

printing services

Use of environmentally friendly printing paper

Environmental performance

Pripress Center Corporation promotes environmentally friendly products and services, and recommends printing on paper certified by the Forest Stewardship Council (FSC) or paper produced from thinned wood as part of these efforts.

It is also important in terms of effective resource management to use paper containing materials from forests certified by the FSC as being properly managed for environmental conservation and paper produced from thinned wood, which is generated as a result of thinning out stumpage that grows densely in the course of forest development.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan



Available in: Japan

Publications printed using paper produced from thinned wood

ES-5-012

Others

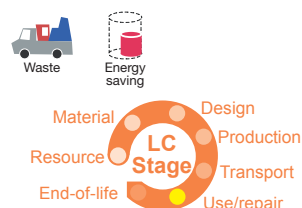
printing services

On-demand printing

Environmental performance

Pripress Center Corporation promotes environmentally friendly products and services, and on-demand printing is one aspect of these efforts.

Unlike conventional offset printing, on-demand printing uses no printing plates, and the process is carried out directly onto the paper. Elimination of the need to make plates means lower energy consumption and higher material conservation. In addition, it is also possible to perform various types of printing in small lots (a process that is inefficient in offset printing), making the technique economically effective too.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan



Available in: Japan

Examples of products printed using on-demand printing

ES-5-013

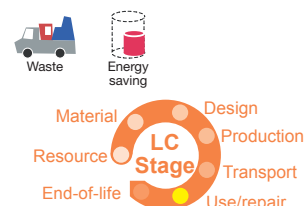
Others

website constructing services

KANTANET

Environmental performance

Pripress Center Corporation promotes environmentally friendly products and services, and the KANTANET business blog is part of these efforts. Printed materials are a familiar and easy-to-read medium, and represent an effective and indispensable tool for disseminating information. However, page space is limited, and the resources consumed increase as the amount of information rises. The company recommends that websites also be used in the interests of resource conservation for situations in which printed materials are not absolutely necessary.



Pripress Center Corporation

2-3, North2 West14, Chuo-ku, Sapporo, Hokkaido, 060-0002, Japan



Available in: Japan

KANTANET

Eco-materials

Eco-components

Eco-products

Eco-services // Others

1

2

3

4

5

Classified index of goods and services

Classified index of goods and services

■ Eco-materials

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adhesive products	EM-6-002
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Others

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columnar-crystal large-diameter silicon	EM-7-002
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■ Eco-components

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electric contacts	EC-2-007
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nickel metal hydride batteries	EC-2-014, EC-2-015
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beverage filling systems	EC-6-014
biodegradable containers	EC-6-015
biodegradable foam	EC-6-016
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paper trays	EC-6-018
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Others

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■ Eco-products

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blu-ray disc recorders	EP-1-059
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DVD recorders.....	EP-1-062
IC recorders.....	EP-1-063
audio players	EP-1-064
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amalgam lamps	EP-1-096
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Mitsubishi Materials C.M.I. Corporation	EC-2-007
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Panasonic Corporation, Home Appliances Company	EC-3-009, EP-1-002, EP-1-005, EP-1-009, EP-1-013, EP-1-023, EP-1-026, EP-1-034, EP-1-041, EP-6-018, EP-6-044, EP-8-029

Panasonic Corporation, Lighting Company	EP-1-082, EP-1-084
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Panasonic Ecology Systems Co., Ltd	EP-1-071
Panasonic Electric Works Co., Ltd.	EC-3-012, EP-1-043, EP-1-073, EP-1-094, EP-1-104, EP-4-023, EP-6-022, EP-8-073, EP-8-074, EP-8-075, EP-8-086
Panasonic Electronic Devices Co.,Ltd.....	EC-3-010, EC-4-004
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(as of 1 February 2009)

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APO Green Productivity Advisory Committee for Establishment of Eco Products Database

(as of 1 February 2009)

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Eco-products Directory 2009 Working Group

(as of 1 February 2009)

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Ms. Shoko Tsuda	General Manager Society of Non-Traditional Technology (SNTT)

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(as of 1 February 2009)

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E-mail: ecomark@japan.email.ne.jp
<http://www.ecomark.jp/english/index.html>

■ Ecomaterials Forum, The Society of Non-Traditional Technology (SNTT)

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<http://www.sntt.or.jp/Eng.html>

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<http://www.gpn.jp/English/index.html>

■ Japan Environmental Management Association for Industry (JEMAI)

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■ National Institute of Advanced Industrial Science and Technology (AIST)

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■ Special Project on Eco Efficiency and Eco Design (SPEED)

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E-mail: speed17@iis.u-tokyo.ac.jp
<http://www.speed.org/index.htm>

■ The Institute of Life Cycle Assessment, Japan (ILCAJ)

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PR space for environmental programs



Mitsubishi Electric Co., Ltd.

**Nano-ionics Materials Group,
Fuel Cell Materials Center,
National Institute for Materials Science**

Saraya Co., Ltd.



Nihon Mizusyori Kougyou Co., Ltd.

Pripress Center Co., Ltd.

Nikken Sekkei Ltd.



Hitachi Co., Ltd.



Mitsubishi Electric Group

Environmental Vision 2021

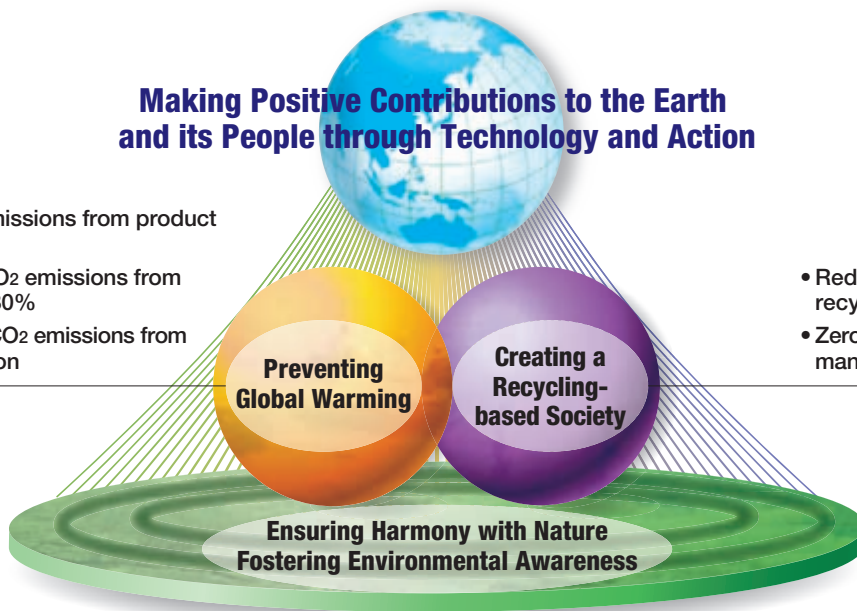


Environmental Vision 2021 is the long-term environmental management vision of the Mitsubishi Electric Group. It establishes a framework for realizing a sustainable planet, and defines long-term initiatives to prevent global warming and to create a recycling-based society

Making Positive Contributions to the Earth and its People through Technology and Action

- Reduce CO₂ emissions from product usage by 30%
- Reduce total CO₂ emissions from production by 30%
- Aim to reduce CO₂ emissions from power generation

- Reduce, reuse and recycle products (3Rs)
- Zero emissions from manufacturing



Vision Progress

Preventing Global Warming

The Mitsubishi Electric Group intends to expand its global warming prevention-related business to achieve sales of 1,300 billion yen in fiscal 2016 (ending March 31, 2016) and reduce over 5.1 million tons of annual carbon dioxide (CO₂) emissions.

• Photovoltaic Power Generation System Business

Achieve global sales of 250 billion yen in fiscal 2016 from a 50 billion-yen sales in fiscal 2008 (ended March 31, 2008), and to reduce 350,000 tons¹ of annual CO₂ emissions.



Photovoltaic Modules
(PV-TD190MF5)

• Heat Pump-related Business

Reduce 750,000 tons² of annual CO₂ emissions in fiscal 2016.

• Power Device Business

Reduce 4,000,000 tons³ of annual CO₂ emissions in fiscal 2016.

¹ The amount of CO₂ reduction is calculated from annual electricity generated by PV cells expected to be sold in fiscal 2016.

² The amount of CO₂ reduction is based on the estimated total number of heat pump related products sold in fiscal 2016.

³ The amount of CO₂ reduction is based on the estimated total number of power devices sold in fiscal 2016.

Creating a Recycling-based Society

Autumn 2009 will see a large-scale, high-purity, recycling of mixed plastics from used home appliances and the three main plastics through Mitsubishi Electric's "closed-loop recycling system." (Japan only)



Environmental Awareness

Mitsubishi Electric is promoting outdoor classroom, woodland preservation, and forest nurturing activities among children in Japan.



Mitsubishi Electric
Outdoor Classroom



Woodland Preservation
Activities



Mt. Fuji Afforestation
Activities

Nano-structured electrolytes and electrodes

Key Word : Fuel cell, micro-analysis, nano-ionics materials



独立行政法人 物質・材料研究機構

Background

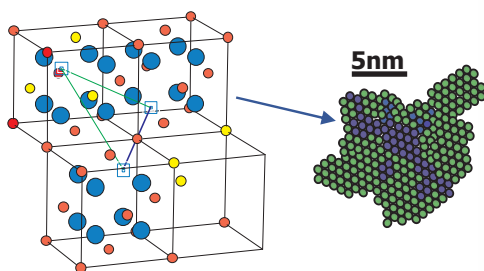
Fuel cells have been developed as a clean and efficient power source for generating electricity from a variety of fuels. Solid electrolytes and electrodes are key materials in fuel cell devices. High quality electrolytes and electrodes have to be designed for development of our sustainable society.

Current Issues

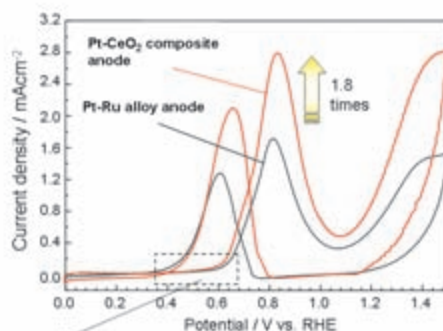
To use fuel cells in our society, the quality and stability of fuel cell materials should be improved. For a design of high quality fuel cell materials, the nano-structural feature in fuel cell materials has to be designed at atomic scale.

Advanced Research Topics

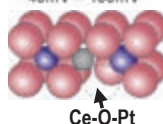
Electrolyte and electrode performance was conspicuously improved by a design of micro-structure of electrolytes and interfacial layer of electrodes at atomic scale.



We successfully improved the conductivity and reduction resistance of doped CeO_2 solid electrolytes by a design of nano-domain structures.



A lowering of on-set potential of methanol oxidation:
40mV – 100mV



The electrode performance was improved by a formation of Ce-O-Pt clusters into the interfacial layer of electrodes.

Publications

- Ou D R, Mori T, Ye F, Zou J, and Drennan J, Physical Review B 77, (2008).
- Takahashi M, Mori T, Ye F, Vinu A, Kobayashi H, and Drennan J, J.Am.Ceram.Soc., Vol.90(4), pp.1291-1294 (2007).
- Australia Academy of Science Award (August.1999)
- Ministry of Education, Culture, Sports, Science and Technology (MEXT) Award, Prospective patent, 2001

Awards

Summary

- Nano-domain structure design of electrolytes
- Nano-cluster interface design of electrodes
- Long time durability vs. nano-structure change
- Combination of processing route design and microanalysis

Research outcome

- A design of high quality doped CeO_2 solid electrolytes
- A design of nano-structured electrodes



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SARAYA is working to create the Green Corridor to connect divided habitats and save the local wildlife from extinction along the Kinabatangan River in Malaysia on the island of Borneo, an area that provides SARAYA with raw ingredients.

Protecting the Environments of Our Supply Centers

Saraya donates 1% of Yashinomi Detergent sales to the Borneo Conservation Trust

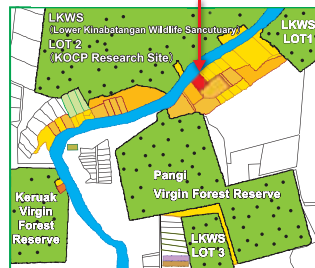
In Borneo, the expansion of oil palm plantations has led to the loss of precious rainforest that supports the livelihood of many unique and threatened species.

It is here, where Saraya acquires palm oil to make the popular Yashinomi Detergent, we exercise environmental conservation efforts.



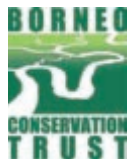
Oil Palm Fruit

Kinabatangan River along the first Green Corridor lands (5.3 acres)



Virgin Forest Reserve

The Borneo Conservation Trust is the official trust authorized by Sabah, Malaysia which focuses on creating a Green Corridor by obtaining the rights to precious land along the rivers and protecting them from plantation development so wild animals can migrate freely across the island.

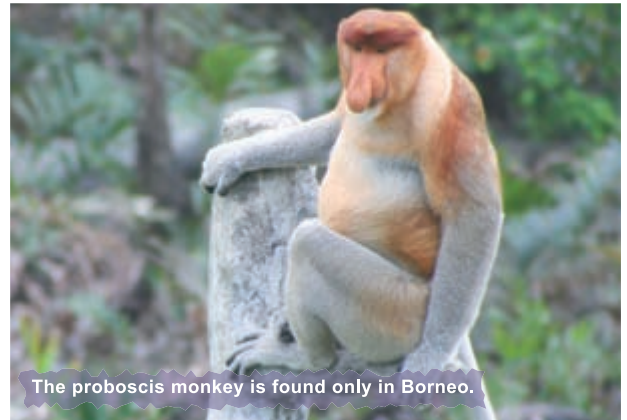


Wildlife of Borneo Island on the IUCN Red List of Endangered Species

※ International Union for Conservation of Nature and Natural Resources



Deforestation leaves many orangutans orphaned. This rescued orangutan will be released to the wild after maturing.



The proboscis monkey is found only in Borneo.



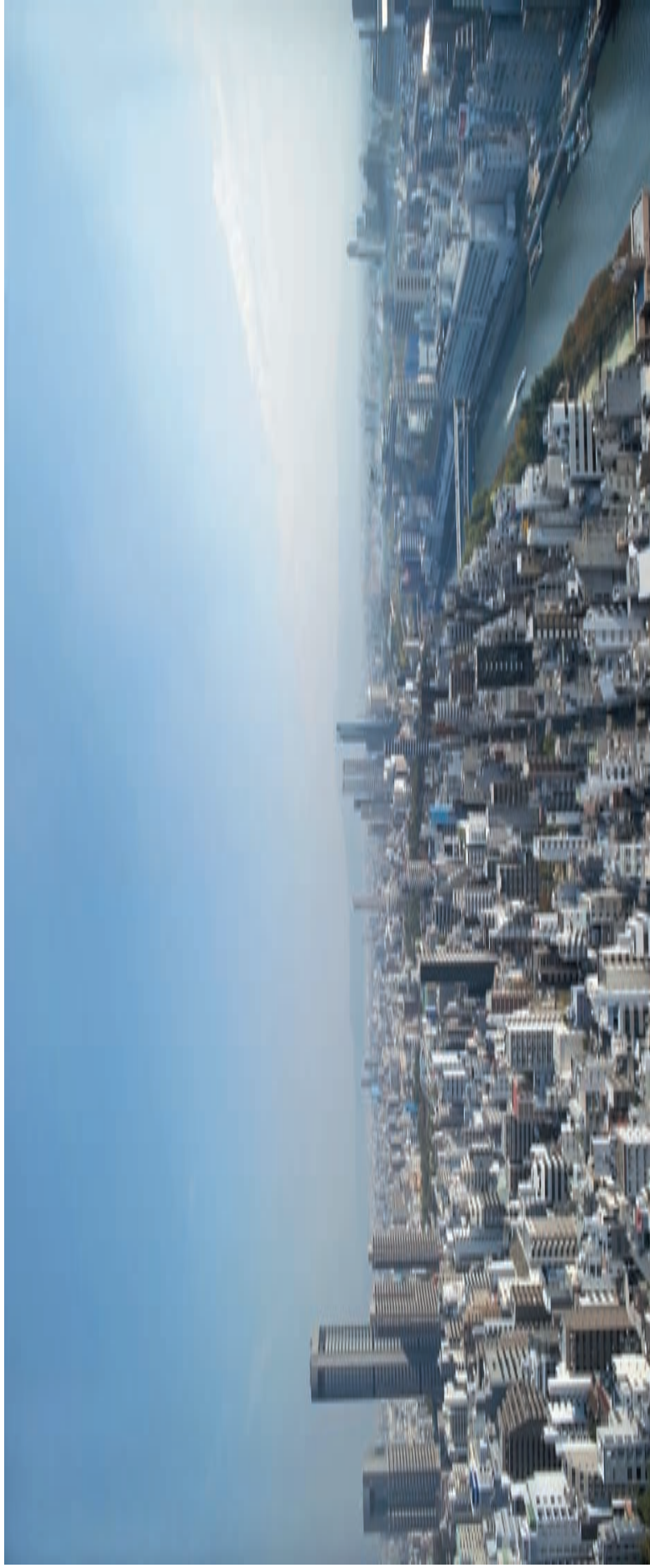
The Borneo elephant is an affectionate animal and has strong family bonds. They would surround their young to protect them from any sign of danger.

SARAYA <http://www.saraya.com/>



Borneo Conservation Trust

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Sciencing Services

To be a company serving to our community by seeking into air and water scientifically... Water and Air bring us a plenty of blessings and profits. Through unique activities of our business, "General Maintenance of Air and Water" of various facilities, we, Nihon Mizu-shori Kougyou, are committed to contribute to make working and living environment clean and comfortable for people in our society.

"General Maintenance of Air and Water"
NIHON MIZU-SHORI KOUGYOU CO., LTD.
 日本水処理工業株式会社
<http://www.mizu-shori.com/>

Compatibility between environmental conservation and economic development

1. Halving CO₂ emissions

We are committed to working together with our customers, employees, their families and other stakeholders toward halving CO₂ emissions by 2020 to help fight global warming.

2. Paper - a finite resource

As a printing company, we provide our customers with large amounts of paper. To offset this, we also engage in philanthropic activities such as forest development and paper recycling to help reduce the burden on society as a whole.

3. Compatibility between environmental conservation and economic development

As a supplier, we aspire to provide reasonably priced products at low cost while maintaining appropriate profit levels by manufacturing the best possible products using environmentally friendly manufacturing methods.

Environmentally friendly printing

Pripress Center Corporation promotes environmentally friendly eco printing.



Waterless printing

Unlike the conventional method of offset printing, no dampening solution is used in this process. This enables printing without waste water and the adverse environmental effects associated with it.



Soy ink

Soy ink is produced by replacing 20% or more of the petroleum solvents contained in conventional ink with a natural material extracted from soybeans.



VOC-free ink

Non-VOC ink exerts a lower burden on the environment, as all petroleum solvents that evaporate into the air are replaced with vegetable-derived alternatives.



Use of thinned wood

Identification marking for products made using thinned wood is performed for goods certified as contributing to the effective utilization of this material.



Use of thinned wood generated in Hokkaido

Efforts to protect forests in Hokkaido are promoted by using products that carry the mark for thinned wood generated in Hokkaido.



Green Purchasing Network printing services

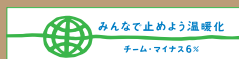
Systematic activities are underway based on the Purchasing Guidelines for Offset Printing Service established by the Green Purchasing Network (GPN).

Pripress Center Corporation was awarded Forest Stewardship Council (FSC) Certification in January 2009.

■Inquiries

PRIPRESS CENTER

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GREEN



Our aim is to ensure user comfort and achieve net-zero energy consumption for a sustainable future.

ICONIC



We create iconic designs that in the course of time become scenic landmarks. It's a timeless architecture.

HIGH-TECH



We pursue the creation of attractive architectural spaces through innovative technologies.

INTEGRATIVE



In our exploration of design potential, we create new values through the active integration of diverse concepts.

NIKKEN
SEKKEI

Nikken Sekkei is a Japan-based comprehensive consulting firm providing city and urban planning, architectural design, structural engineering, mechanical & electrical engineering and landscape design as well as peer review services.

- One stop services
- Approximately 2,300 specialist staff
- Established in 1900
- 109 years in business
- Accomplishment of over 20,000 projects
- Global activities in more than 40 countries

<http://www.nikken.co.jp>

For the future of our irreplaceable planet,
the Hitachi Group established a long-term plan, "Environmental Vision 2025,"
to contribute to an annual reduction in CO₂ emissions of
100 million tons through Hitachi products and services by FY2025.

The Hitachi Group promotes environmental management based on
the Vision featuring three important pillars,
"Prevention of Global Warming," "Resource Recycling," and
"Ecosystem Conservation," to realize an environmentally
sound and sustainable society.



The Hitachi tree, which grows big by freely expanding its branches, is a symbol of the collective strength, growth and power of the Hitachi Group. It has been used in Japanese TV commercials since the 1970s.

「The Hitachi Tree」

Type / Monkey Pod Tree Botanical name / SAMANEA SAMAN

Location / Moanalua Garden Park, Oahu, Hawaii