

ECO-PRODUCTS DIRECTORY 2006

*For Sustainable
Production & Consumption*



ASIAN PRODUCTIVITY ORGANIZATION

Published by the Asian Productivity Organization
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ISBN: 92-833-2369-6

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Foreword

The Asian Productivity Organization (APO) is an international organization dedicated to socioeconomic development in the Asia-Pacific region through the sharing of experiences and expertise to enhance productivity. Green Productivity (GP) is one of the core areas on which the APO has been concentrating to increase productivity and protect the environment simultaneously. To ensure sustainable development of the world economy, the APO is making every effort to disseminate the concept of environment-friendly products and services in the region. The APO established the GP Advisory Committee (GPAC) in 2003 to seek advice and support on GP-related activities from various Japanese companies that have accumulated experience in environmental management. The GPAC is now comprised of some 50 companies and chaired by Hitachi Ltd. Chairman Etsuhiko Shoyama. Based on recommendations from the GPAC, the APO has been focusing on promoting environmentally friendly products and services, establishing green supply chains, organizing eco-product exhibitions in Asia, and publishing eco-products databases for wider dissemination of environmentally friendly products and services.

This Eco-products Directory 2006 is an updated version of the directories published in 2004 and 2005 in conjunction with the Eco-products International Fairs held in those years in Malaysia and Thailand, respectively. It is our pleasure to publish this updated version on the occasion of the Eco-products International Fair 2006 in Singapore. As the Asian region becomes a production hub in the global market, we can look forward to expanding green markets in Asia. I hope that this publication will contribute to an appreciation and expansion of the eco-product markets in the region.

Finally, our sincere thanks go to Professor Ryoichi Yamamoto, Chairman of the Subcommittee on the Eco-products Database of the GPAC, all members of the committee and working group, and the Society of Non-Traditional Technology for their dedicated efforts and leadership in making this publication possible.

Tokyo
October 2006

Introduction

Achieving a Sustainable Economy through Eco-Innovation and Green Purchasing

It is now clear that if the current world economy continues its present course, environmental destruction and social collapse will be inevitable. The following facts should provide sufficient empirical evidence to support this assertion. For example, over 760 tons of CO₂ are emitted globally every second, and about 50% of this accumulates in our atmosphere and has become the major cause of global warming. Oxygen is being reduced at the rate of 710 tons per second due to excessive consumption, and the exponential increase in the production of materials such as metals inevitably increases the consumption of resources and energy, as well as the discharge of substances that place a burden on the environment. The increased input and output of such substances leads to resource depletion and limited ability of earth's ecosystems to absorb and purify them, causing environmental burdens.

According to the US Department of Commerce, the world population reached 6.5 billion at 09:19 on 26 February 2006. It is increasing at a rate of 2.3 persons per second this year and is estimated to reach 7 billion in 2013 and 9.2 billion in 2050. Meanwhile, the world economy has been growing steadily at the rate of more than 3% per year. In China and India, the economy has been growing at a remarkable rate of more than 8% per year. As a result, the middle class in many parts of Asia (China, Southeast Asia, India, and the Far East excluding Japan) is increasing rapidly. One statistical survey projects an expansion of the middle-class population in Asia from 159 million in 2004 to approximately 400 million in 2009 due to the economic growth of China and India. Rapid economic growth in Asia and other regions will bring benefits and is of course welcome. However, our planet's future could depend on whether this wealthy middle class engages in green purchasing. Sustainable consumption is necessary not only for developed countries but also for developing ones.

A special edition of *Time* (3 April 2006) on global warming described the hugely increased impact from Asia as follows: greenhouse gas emissions in India are estimated to increase by 70% by 2025. The increase in greenhouse gas emissions in China between 2000 and 2030 will equal the sum of increased greenhouse gas emissions in all the other industrialized countries during the same period.

My new book *Climate Change +2°C* introduces the most recent projections of global warming using the supercomputer Earth Simulator at Japan's National Institute of Environmental Studies to show how global warming will progress with rapid economic growth. In 2016, the world's average temperature will exceed the preindustrial level by 1.5°C, in 2028 by 2°C, and in 2052 by 3°C. If this scenario becomes a reality, Greenland's ice sheet will start melting extensively in 2016, the temperature increase will exceed the EU's 2°C climate target and cause a climate crisis in 2028, and then in 2052, a kind of

climatic collapse beyond imagining could occur. We must consider this projection seriously because many positive feedback mechanisms will compensate for the uncertainty in climate projection. The Time article stated, "Climate change isn't some vague future problem-it's already damaging the planet at an alarming pace. Earth is at the tipping point."

To resolve this problem, we need to promote eco-innovations at every level, including technical, policy, management, and individual lifestyle levels, and disseminate such innovations swiftly into society. The goals are clear: reduce materialism, find substitutes for hazardous substances, and decarbonize energy use.

In eco-innovation efforts, it is vital to increase two indicators. One is improving performance per resource input or increasing resource productivity, which indicates the economic value added. The other is eco-efficiency, which involves improved performance per environmental impact or increased economic value added during the product life cycle. Worldwide, active efforts are being made for eco-innovation. In 2000, the EU issued the End-of-Life Vehicles Directive to ban the use of lead, mercury, hexavalent chromium, and cadmium. In 2001, the EU published a Green Paper on Integrated Product Policy. Since 2003, based on the Restriction of Hazardous Substances Directive or Energy Using Product Directive Proposal, businesses have been required to prepare ecological profiles of their products. In addition, the Registration, Evaluation, and Authorization of Chemicals Regulation Proposal is further reinforcing chemical substance management. In 2001, Japan enacted the Law on Promoting Green Purchasing to mandate eco-friendly procurement by national and local governments. Meanwhile, the Asian Productivity Organization is disseminating its Green Productivity concept worldwide. All of these activities will promote eco-innovation, along with the development of eco-materials, eco-products, and eco-services. The International Green Purchasing Network was established in 2005 for the rapid spread of eco-innovations to communities.

This publication is the third in the series of the Eco-products Directory in an attempt to disseminate information on eco-products and eco-services. Just as a small ripple can set off a tidal wave, I am convinced that Asia will soon see markedly accelerating trends in Green Productivity, eco-design, and eco-products. Human beings are currently facing an environmental struggle of life-or-death proportions: Which will be achieved first, environmental destruction and social collapse or the development and dissemination of eco-innovations?

Ryoichi Yamamoto

Professor

Institute of Industrial Science, University of Tokyo

Background of the Eco-products Directory 2006

As mentioned in the Foreword, the first eco-products exhibit in Southeast Asia was the Eco-products International Fair 2004 in Malaysia. On that occasion, the Green Productivity Advisory Committee (GPAC) (List 1) of the Asian Productivity Organization (APO) compiled a database of major eco-materials, eco-components, and eco-products produced in Japan to introduce environment-friendly products to other Asian countries. To launch the database project, the Subcommittee on the Eco-Products Database (chaired by Professor Ryoichi Yamamoto, see List 2) was set up within the GPAC. The subcommittee discussed the methodology for database development, standards to be applied, companies to be included, allocation of tasks, maintenance of the database after publication, etc. The Society of Non-Traditional Technology organized the Database Working Group (list 3) with the collaboration of the University of Tokyo, Tohoku University, Japan's National Institute for Materials Science, and Japan's Green Purchasing Network. The Database Working Group deliberated the framework, format for product data, and other details of this directory.

This Eco-products Directory 2006 is an updated edition following the 2004 and 2005 formats, but including newly incorporated information and more eco-products from companies known for their concern for the global environment not only in Japan, but also in other countries.

Product data for the Eco-products Directory

Based on the Eco-products Directory format determined in 2004 and 2005, the Database Working Group invited both foreign and domestic companies to register their product information. The contents and format of the information listed in the Eco-products Directory 2006 are as illustrated below.

The image shows a sample product entry from the Eco-products Directory 2006. The entry is titled "Eco-components" and "EC - 039". It is categorized under "Industrial plastic products". The product is a "Reverse osmosis membrane element for high quality pure water" by Nitto Denko Corporation. The entry includes the company's name, address (HERBIS OSAKA, 2-5-25, Umeda, Kita-ku, Osaka, 530-0001 Japan), telephone and fax numbers, email address, and website URLs. It also features a diagram of the product's lifecycle (LC Stage) and a photograph of the membrane element. The entry is numbered 1 through 9, corresponding to specific parts of the product data.

1. Eco-components
2. EC - 039
3. Others
4. Reverse osmosis membrane element for high quality pure water
5. Nitto Denko Corporation
HERBIS OSAKA, 2-5-25, Umeda, Kita-ku, Osaka, 530-0001 Japan
Tel 81-6-6452-2101 Fax 81-6-6452-2102
E-mail info@hydranautics.com
URL http://www.nitto.com
http://www.membranes.com
6. Industrial plastic products
7. A5 Resource consumption
B4 Higher quality
B5 Energy saving
B6 Environmental purification
8. This Reverse osmosis membrane is used for producing ultrapure water from river water, or ground water for industrial use, safe drinking water from foul water and agricultural water. It eliminates impurities like salinity contained in water with very fine pores on the membrane surface. The "ESPA series" which is globally supplied under Hydranautics brand can create high quality pure water using around half of the energy required by current products. It was developed to produce ultrapure water vital to manufacture of semiconductors. The membrane has a skin layer of 0.6 micron-meter thick, with a well-developed three-dimensional pleated structure with a depth of 0.4 micron-meter, which increases double the specific surface area. Accordingly, this allows the permeate water to be produced with less pressure than was previously needed. "ESPA4" has a highest productivity & rejection with next-generation performance.
9. Products/Model: ESPA4 from Hydranautics

(1) Product type

One of the four product types below was selected.

- I. Eco-materials and technical usage (EM-000)
- II. Eco-components and technical usage (EC-000)
- III. Eco-products and technical usage (EP-000)
- IV. Eco-services (ES-000)

(2) Product field

One of the product fields below was selected.

(I. Eco-materials and technical usage)

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

(II. Eco-components and technical usage)

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

(III. Eco-products and technical usage)

- 1 Home electric appliances/lighting
- 2 Carriers/automobiles
- 3 OA/IT equipment
- 4 OA furniture
- 5 Apparel/fabric products
- 6 Commodities, outdoor goods, housing kits
- 7 Building and civil engineering
- 8 Machines and equipment
- 9 Others

(IV. Eco-services)

- 1 Product-related services (maintenance, upgrading, repair/renovation, etc.)
- 2 Reuse and recycling services (collection, reuse, etc.)
- 3 Lease, rental, sharing
- 4 Outsourcing services (waste disposal, control of hazardous substances, treatment of chemicals, facility management, etc.)
- 5 Management-related services (consulting, accreditation, analysis, evaluation, etc.)
- 6 Others (insurance, e-commerce, eco-tourism, hotels, information transfer, etc.)

(3) Product/service name with features

The heading is in boldface type (80 characters maximum).

(4) Company contact details

The company name and address (required), telephone number, facsimile number, e-mail address, or homepage address (optional).

(5) Product details

The features of the product/service and how it reduces environmental impact are described (1200 characters maximum).

(6) Product name and related product code

Using the Standard Commodity Classification of Japan, the product code is given, and products are listed based on the order of the code. When the corresponding code was not found in the Standard Commodity Classification, the most appropriate code was selected by the Database Working Group, regardless of whether the company included the product trade name. The product category code consists of a numeral and a name, but only the name element of the product code or the product trade name given by the company or the Database Working Group appears in this space.

(7) Category

Up to six items were selected from the following 18 items (A1 to C6).

A: Items related to environmental impact

- A1 Global warming
- A2 Air pollution
- A3 Hazardous substances
- A4 Waste
- A5 Resource consumption

B: Items related to environmental performance indicators

- B1 Recyclability
- B2 Longevity
- B3 Resource saving
- B4 Higher quality
- B5 Energy saving
- B6 Environmental purification
- B7 Use of recycled materials

C: Items related to life-cycle stage (abbreviation)

- C1 Material extraction (Resource)
- C2 Material and component production (Material)
- C3 Design and material selection (Design)
- C4 Product manufacture (Production)
- C5 Product use, maintenance, and repair (Use/Repair)
- C6 End-of-life disposal (End of Life)

(8) Photograph

One photograph per product is shown.

(9) Explanation of photograph

A brief explanation of the product photograph with the model number is given

The number of environment-friendly products/services contained in the Eco-products Directory 2006 totals 591.

[List 1]

Green Productivity Advisory Committee

(as of 1 October 2006)

Chairperson

Mr. Etsuhiko Shoyama	Chairman Hitachi, Ltd.
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Vice-Chairperson

Mr. Masatoshi Yoda	Corporate Adviser Ebara Corporation
Mr. Hideaki Sekizawa	Representative Director and Executive Vice President Nippon Steel Corporation
Prof. Ryoichi Yamamoto	Professor Institute of Industrial Science & International Research Center for Sustainable Materials University of Tokyo

Adviser

Mr. Yoichi Morishita	Corporate Adviser Matsushita Electric Industrial Co., Ltd.
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Member

Mr. Seiichi Ueyama	General Manager, Corporate Citizenship Department, Aeon Co., Ltd.
Mr. Masayuki Hirata	Corporate Councilor, Environment Department, Ajinomoto Co. Inc.
Mr. Katsuhiko Sugie	General Manager, Business Department, Amita Corporation
Mr. Shigeto Yamashita	Chief Producer, Social Environmental Management, Asahi Breweries, Ltd.
Mr. Masaaki Hikida	Director, Corporate Planning, Division, Biznet Corporation
Mr. Kiyofumi Matsumoto	Manager, Environment Communication Department, Canon Inc.
Mr. Osami Kataoka	General Manager, Global Environment Department, Daikin Industries, Ltd.
Mr. Tsutomu Ishibashi	General Manager, Corporate Environmental Management Office, Ebara Corporation
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Dr. Nobuo Kamehara	Corporate Vice President, Fujitsu Quality Laboratory Ltd.
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Mr. Takuya Kadowaki	Manager, Business Project Planning and Marketing Department JFE Engineering Co., Ltd.
Mr. Toru Nakagawa	General Manager, Environmental Protection & Safety Department Kaneka Corporation
Mr. Tadashi Matsui	Vice President, Headquarter of Environment and Safety Kao Corporation
Mr. Kazuya Kojitani	Department Manager, Group Management Headquarters Kokuyo Business Services Co., Ltd.
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Mr. Shinji Hirano	General Manager for Special Task, Environmental Preservation Division Meidensha Corporation
Mr. Yoshitaka Moriide	Manager, Marketing Department Ministop Co., Ltd.
Mr. Michio Hiruta	General Manager, Corporate Environmental Sustainability Group Mitsubishi Electric Corporation
Mr. Yoshihiko Hara	General Manager, Environment Management Division Mitsubishi Materials Corporation
Mr. Teruo Furuyama	Senior Manager, Technical Group, Environmental Affairs Division Nippon Steel Corporation
Mr. Tetsuo Hasegawa	General Manager, Environmental and Safety Engineering Department Nissan Motor Co., Ltd.
Mr. Harumi Komuro	Deputy General Manager, Environment Management Department Oji Paper Co., Ltd.
Mr. Takao Sato	General Manager, International Environmental Regulations, Corporate Environment Division Ricoh Company, Ltd.
Mr. Shingo Sumi	Chief Manager, Environment Team, Corporate Environment Center, Corporate Innovation Central Unit, Innovation Group Sanyo Electric Co., Ltd.
Mr. Yusuke Saraya	President Saraya Co., Ltd.
Mr. Yasuhito Hirashima	Manager, Global Environmental Policy Department Seiko Epson Corporation
Mr. Satoru Oketani	General Manager, Planning Group Sekisui Chemical Co., Ltd.
Dr. Hiroshi Morimoto	Group General Manager, Environmental Protection Group Sharp Corporation
Mr. Junzo Ohse	Senior Manager, Environment and Occupational Safety Management Department Shimadzu Corporation
Mr. Ryo Sasaki	President Shinagawa Chemical Ind. Co., Ltd.
Mr. Hidemi Tomita	Vice President, Corporate Social & Environmental Affairs/Compliance Office Sony Corporation

Mr. Hiroyuki Tada	General Manager, Management Quality Department Sony EMCS Corporation
Dr. Masamitsu Takaya	Executive General Manager, Environmental Affairs Department Suntory Limited
Mr. Naoki Arai	Teijin Group Executive Officer Deputy CMO for Environment and Energy Teijin Limited
Mr. Kazunari Take	Manager, Society/Environment, Corporate Affairs The Seiyu Ltd.
Mr. Hiroshi Inanaga	Chief Executive Officer Tohmatsu Evaluation and Certification Organization Co., Ltd.
Mr. Yoshihiro Kageyama	General Manager, Environment Department Tokyo Electric Power Co., Ltd.
Mr. Yasunori Takakuwa	General Manager, Environmental Affairs Department Tokyo Gas Co., Ltd.
Mr. Kunio Nishida	Manager, CSR Promotion Division Corporate Affairs Headquarters Tokyu Corporation
Mr. Teizou Okuyama	Manager, Corporate Marketing Planning Department Toray Industries, Inc.
Mr. Kiyoshi Sanehira	Chief Specialist, Corporate Environment Management Division Toshiba Corporation
Mr. Toshiro Taniguchi	General Manager, Product Planning Promotion Department TOTO Ltd.
Mr. Makoto Horiguchi	General Manager, Environment, Material Purchase and Environment Division Toyo Seikan Kaisha, Ltd.
Mr. Toshiroh Ikegami	Chairman Urban Gauss Inc.
Mr. Koichi Yamane	Associate Director/General Manager Environmental Administration Division Victor Company of Japan, Limited

APO GP Advisory Committee

Members of the Sub-committee for Establishment of Eco Products Database

Members List

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Prof. Ryoichi Yamamoto	Professor, Institute of Industrial Science & International Research Center for Sustainable Materials University of Tokyo
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MEMBER

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Mr. Tadashi Matsui	Vice President, Headquater of Environment and Safety Kao Corporation
Mr. Kazuya Kojitani	Department Manager, Group Management Headquarters Kokuyo Business Services Co., Ltd.
Dr. Narito Shibaike	Councilor, Corporate Environmental Affairs Division Matsushita Electric Industrial Co., Ltd.
Mr. Teruo Furuyama	Senior Manager, Technical Group, Environmental Affairs Division Nippon Steel Corporation
Mr. Tetsuo Hasegawa	General Manager, Environmental and Safety Engineering Department Nissan Motor Co., Ltd.
Mr. Harumi Komuro	Deputy General Manager, Environment Management Department Oji Paper Co., Ltd.
Mr. Takao Sato	General Manager, International Environmental Regulations Corporate Environment Division Ricoh Company, Ltd.
Dr. Hiroshi Morimoto	Group General Manager, Environmental Protection Group Sharp Corporation
Mr. Hiroshi Inanaga	Chief Executive Officer, Tohmatsu Evaluation and Certification, Co., Ltd
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Mr. Michio Hiruta	General Manager, Corporate Environmental Sustainability Group Mitsubishi Electric Corporation

Database Working Group

Members List

Hiroyuki Sato	Green Purchasing Network (GPN)
Gakuji Fukatsu	Green Purchasing Network (GPN)
Katsutoshi Yamada	National Institute for Materials Science
Hong Nguyen Xuan	Institute of Industrial Science, University of Tokyo
Miki Chihara	Institute of Industrial Science, University of Tokyo
Kenichi Nakajima	Graduate School of Environmental Studies, Tohoku University
Shoko Tsuda	Society of Non-Traditional Technology
Wakako Suetsugu	Society of Non-Traditional Technology
Minako Hara	Society of Non-Traditional Technology

What Are Eco-materials, Eco-components, Eco-products, and Eco-services?

The prefix “eco,” meaning habitat or environment, comes from “ecology,” the branch of science concerned with the interrelationships between organisms and their environments. Eco has long been used in such compound forms as ecosystem and ecocide. More recently, this prefix has been used in combination with “materials,” “products,” or “services” to indicate that they take into account environmental impacts through the entire life cycle.

1. What are Eco-materials?

The term “eco-materials” was first introduced in Japan by Professor Ryoichi Yamamoto and colleagues at the University of Tokyo in 1991 as a proactive measure in response to the sustainable development movement. Eco-materials are defined as those that can improve the environment throughout their life cycle, with accountable performance. Eco-materials encompass one or more of the following six factors:

1. avoiding and/or reducing the use of nonrenewable or scarce resources;
2. enhancing the material closed loop by recycling and reusing waste;
3. increasing resource efficiency including that of energy and materials;
4. using more durable materials with fewer maintenance requirements;
5. promoting the use of renewable resources and energy; and
6. minimizing adverse impacts on biodiversity and ecosystems.

In other words, eco-materials form a key concept in material science and technology to minimize environmental impacts, enhance the recyclability of materials, and increase energy and material efficiency. Eco-materials also contribute to the development of eco-products and promote the green procurement movement in Japan and elsewhere.

Eco-materials have relatively better ecological, economic, and efficiency features and are currently classified into groups based on similar properties, similar processing routes, and similar applications. Therefore, this databook classifies them into seven categories: metals, polymers, natural materials, foams, ceramics and glass, composites, and others.

2. What are Eco-components?

The term “eco-components” in this publication refers to those used as components or parts of eco-products. Eco-components can be essential, functioning parts of a subsystem or equipment, or a combination of parts, assemblies, attachments, or accessories of an eco-product. They are sometimes called semi-products and used as inputs in eco-product manufacturing.

Similar to eco-materials, eco-components are produced taking into account their environmental impacts through the entire life cycle. As a result, the six factors involved in eco-materials can also be applied to eco-components. Eco-design or life-cycle design concepts, methodologies, and tools are used in the production of eco-components. In addition, eco-components can contribute to the manufacture of eco-products through eco-design for disassembly, design for upgradability, and design for waste prevention. Similar to eco-materials, eco-components are produced taking into account their environmental impacts through the entire life cycle. As a result, the six factors involved in eco-materials can also be applied to eco-components. Eco-design or life-cycle design concepts, methodologies, and tools are used in the production of eco-components. In addition, eco-components can contribute to the manufacture of eco-products through eco-design for disassembly, design for upgradability, and design for waste prevention.

While eco-components are defined as components or parts of eco-products, they are naturally related to the industrial sectors making them. Based on the major product categories, eco-components can be classified into seven groups: construction components, electrical and electronic components, semiconductor manufacturing devices, machine parts, automobile parts, packaging, and others.

3. What are Eco-products?

Eco-products are designed according to eco-design concepts and principles to have environmentally friendly features. Life-cycle concepts and engineering play a very important role during the development phase of eco-products. Eco-products are made from improved raw materials, including recycled or biomass materials. In addition, during the production process, minimal energy and water resources are used with less waste and fewer pollutants. In the consumption phase, the use of eco-products can lead to energy and water savings, minimal emissions, and reduced waste and subsequent need for waste treatment. Eco-products are also designed to ensure the ability to recycle and recover materials and components.

In Japan, eco-products generally bear eco-labels, which are type I, type II, or type III according to ISO14020 standards. In addition, those products listed in the database of the Green Purchasing Network are also considered to be eco-products.

In this databook, eco-products are classified into nine groups following the conventional industrial product categories. Among commercial products on the Japanese market, these are home electric applications/lighting, carriers/automobiles, OA/IT equipment, office furniture, apparel/fabric products, commodity/outdoor goods/housing kits, building and civil engineering equipment, machines and equipment, and some other eco-products not relevant to the above eight groups of eco-products.

4. What are Eco-services ?

Eco-services are defined as those designed to shift traditional business from designing and selling products as physical objects into designing and selling product or service functions to meet the needs of customers. This new business is based on the life-cycle concept to ensure consideration of environmental issues. The use of eco-services can enhance the eco-efficiency of customer activities. A number of similar concepts have been proposed, such as product service systems, sustainable service systems, and eco-efficient services in Europe, and “servicizing” in the USA. Although these concepts have their own distinguishing features, the main purpose of shifting traditional business to new, sustainable business in eco-services is common to all.

While the economy is shifting from goods production toward service provision, eco-products can be transformed into services to improve resource productivity and eco-efficiency. Eco-services have great potential to bring about huge changes in production and consumption patterns that will accelerate the shift toward a more sustainable society.

Eco-services are generally classified based on actual business scenarios. The great diversity of eco-services has led to varying classifications, and no single standard yet exists. Based on examples in the Japanese market, eco-services are classified into six categories:

1. product-related services, including maintenance, upgrading, repair, reform, etc.;
2. reuse and recycling-related services;
3. user services, such as consumer leasing, rental, or product sharing;
4. outsourcing services, such as those provided by some professional companies in the form of pay-per-service waste treatment, hazard control, chemical handling, or facility management;
5. management-related services, such as consulting, certification, diagnosis, assessment; and
6. other services outside the above categories.

These six categories may cover most eco-services, from traditional industrial services to new services and businesses.

In this databook, we modified the classification of eco-services into four groups: 1) product-related services, 2) reuse and recycling-related services, 3) management-related services, and 4) others.

Classification of Categories

Recently, many eco-products have been developed in Japan. Eco-labelling (types I to III) has been introduced to standardize or evaluate these products. The classification of available eco-products into categories and the compilation of a databook on such products should aid both consumers and companies in using and developing eco-products easily and appropriately. Based on this objective, information collected on eco-products was categorized from three perspectives: A) environmental load; B) environmental performance index; and C) life cycle stage. These categories are considered useful for investigating the effects that eco-products have on which environmental loads, with what level of eco-performance, and at which stage.

For category A, products were categorized according to the environmental impact reduction with the use of eco-products. Among various environmental problems currently observed, products were grouped according to their impact on the following five: global warming as a global environmental problem; air pollution as a local environmental problem; the issue of hazardous substances; management of waste due to landfill site limitations; and the consumption of resources due to Japan's dependence on other countries for most. Details of the classification are as follows:

A1. Global warming: Products effective for reducing greenhouse gases such as CO₂ which cause global warming. The category includes products with energy-saving effects and those that contribute to decreasing deforestation, in addition to products that directly reduce the discharge of greenhouse gases.

A2. Air pollution: Products that reduce the discharge of air pollutants such as nitrogen oxides, sulfur oxides, and suspended particulate matter, discharge of which is restricted by the Air Pollution Control Law and other governmental regulations. The category also includes products with properties promoting air cleaning.

A3. Hazardous substances: Products with actions to reduce the discharge of substances affecting the human body and ecology such as substances subject to the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management (PRTR Law) and material safety datasheet. The category includes products that use hazardous substances in lesser amounts or which use no hazardous substances at all, as well as certain products composed of hazardous substances which can be reused/recycled.

A4. Waste: Products that reduce the final disposal amount. They include those with reduced volume or weight and those supported by reuse/recycling systems.

A5. Resource consumption: Products that reduce the consumption of resources such as minerals, wood, water, etc. They include those using few resources in the product itself or in the manufacturing process and those that can be reused/recycled efficiently.

In category B, products were categorized based on the environmental performance required for resolving the environmental problems in "A" above. The following seven environmental performance indices were selected:

B1. Recyclability: Index of the ease of recycling. The category includes products that are easy to disassemble and classify for reuse and recycling and those designed so that recycling can be carried out efficiently.

B2. Longevity: Index of longer life for conventional products. The category includes products designed for longer-term use and those of which the use can be extended by repair.

B3. Resource saving: Index of resource saving for conventional products. The category includes products designed to save resources by reducing product weight or enhancing product design efficiency.

B4. Higher quality: Index of enhanced quality for conventional products. The category includes those effective for improving the environment due to enhanced quality and services (environmental efficiency) achieved for the same environmental loads.

B5. Energy saving: Index of energy saving for conventional products. The category includes those made under an efficient process design, those that have been made lightweight, or those designed to reduce energy consumption during use.

B6. Environmental purification: Index of products with the function of cleaning the environment. The use of these products should detoxify hazardous substances or waste in the environment and recycling systems.

B7. Usage of recycled material: Index of the enhancement of the rate of use of recycled resources for conventional products. The category includes products that use recycled resources in the products themselves or during the manufacturing process.

Furthermore, as it is preferable that measures for environmental problems be implemented in the entire product lifecycle, for category C products were distinguished by lifecycle stage as measured using the lifecycle assessment method. The following six life cycle stages were selected:

C1. Material extraction: Stage for mining resources used for products in mine sites. The category includes facilities for reducing environmental impact in this stage.

C2. Material and component production: Manufacturing stage of half-finished products in general, such as primary products and parts serving as the material for products. Products in this category include half-finished products and products designed to reduce the environmental load in the manufacturing process.

C3. Design and material selection: Stage in which parts and materials are selected and products are designed. The category includes those made of parts and materials that are eco-friendly or designed taking the environment into consideration, and eco-products based on design.

C4. Product manufacture: Stage in which products are manufactured using parts and materials. The category includes products reducing the environmental load during the manufacturing process.

C5. Product use, maintenance, and repair: Stage in which manufactured products are used by consumers, including prolonged use due to repair. The category includes products with a reduced environmental load during use such as energy-saving products, products cleaning the environment during use, products of which the life can be prolonged by repair, and long-life products.

C6. End-of-life: Stage in which products are disposed of/recycled after use. The category includes products with low final disposal amounts, those easy to break down, those with high reusability/ recyclability, and products with recycling systems.

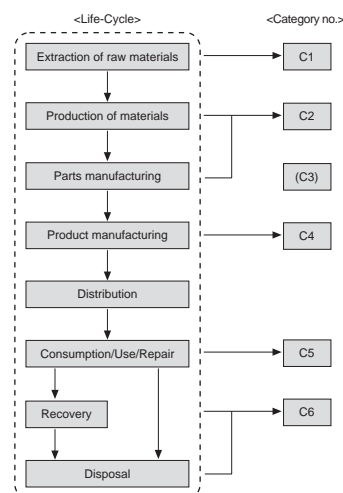


Figure: Conceptual outline of a product's life-cycle stages.

Eco-design and eco-products in the Asia-Pacific region

Hong Xuan Nguyen and Ryoichi Yamamoto

Introduction

Eco-design has a long history dating from the 1960s. The concept, methodologies, and tools of eco-design can be classified as either product oriented or system oriented, as shown in Figure 1. The publication of *Silent Spring* by Rachel Carson in 1962 initiated a new movement for environmental protection and sustainable development. Since then, various organizations and governments have introduced principles, methodologies, programs, laws, and regulations related to eco-design and sustainable development.

The last decade of the 20th century saw a blossoming in the development of eco-design concepts, methodologies, and tools. Following the introduction of the pollution prevention concept in the USA, several other concepts such as cleaner production, Green Productivity, zero emissions, and inverse manufacturing were initiated in Europe and Asia in 1994. In the period from 1996 to 1999, various system-oriented concepts were proposed, such as the ISO14000 series, functional economy, product-service system, servitizing, integrated product policy, sustainable service system, and the triple bottom line. Eco-design trends are shifting from products to services and from the old industrial economy to the new service economy. The importance of system-oriented approaches and concepts has increasingly been emphasized in the later phases of development.

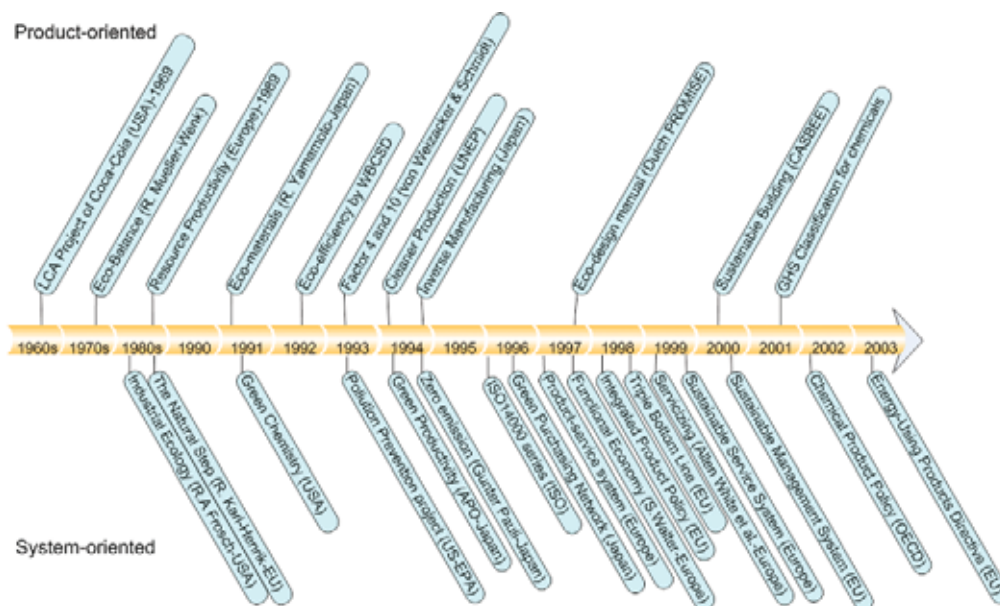


Figure . Milestones in Eco-design

The development of eco-design and its application to eco-product manufacturing have received great attention in the Asian region, especially in technologically advanced countries such as Japan, the Republic of Korea, and Republic of China. This paper briefly reviews the current status of eco-design and the eco-product movement in the Asian region along with the development of Green Productivity.

1 Japan

Japan is the leading country in the eco-design and eco-product movement. The eco-design concept has been used as a basic methodology in the development of eco-materials, eco-products, and eco-services. Japanese eco-design mainly focuses on incremental changes in new products based on advances in technology. Initially,

eco-design in Japan focused primarily on the “end of life” and “design for energy efficiency.” After the home appliances recycling law (HARL) was enacted in 2001, the focus of design shifted to product design and technology as a preventive approach.

1.1 Development of eco-materials, eco-products, and eco-services

The development of eco-materials, eco-products, and eco-services in Japan was extensively reviewed in the previous two volumes of the *Eco-products Directory* published in 2004 and 2005 (Nguyen et al., 2004 and 2005). More than 440 eco-materials were commercialized in 2004 and 2005, while the number of eco-products more than doubled (to nearly 900 eco-components and eco-products). The actual number of eco-materials and eco-products in Japan is greater than reported in the *Eco-products Directory*. The number of eco-products and services registered in the database of the Japan Green Purchasing Network (GPN) had reached 28,000 as of January 2006. The metal sector was the leading industry in the development of eco-materials (accounting for 52% of total eco-materials reported), while the ceramic and polymer sectors followed (accounting for 13% and 10%, respectively). The main focuses of eco-material development are hazardous substance-free items, easy recycling, high performance, and renewable materials.

Unlike eco-materials, the development of eco-products in Japan has been contributed to equally by many sectors. The three leading sectors are machinery, home appliances, and office furniture (20%, 17%, and 14%, respectively). Laws and regulations focused industries on eco-product development. With the introduction of the Basic Law for Promoting the Creation of a Recycling-Oriented Society, the Law for Promotion of Effective Utilization of Resources, and HARL, Japanese industries have shifted the focus to four main aspects of eco-design: eliminating hazardous substances, recycling, energy efficiency, and renewable resources.

Eco-services, on the other hand, have been more recently developed and promoted. Even though the *Eco-products Directory 2005* reported only 16 eco-services in Japan, the number is actually much greater. A recent study by Yamamoto et al. (2006) reported that about 300 different eco-services were available in Japan based on information obtained from company homepages and annual environmental reports. Numerous eco-services are related to recycling, such as take-back services or recycle processing.

1.2 Eco-design tools

The three main eco-design tools used by Japanese industries for the development of eco-materials and eco-products are eco-efficiency (or factor X), life cycle impact assessment (LCIA), and environmental quality function deployment (QFDE). Factor X is implemented at product and company levels. At the product level, a national project on eco-efficiency on factor X has been carried out by the Japan Environment Management Association for Industry (JEMAI) since 2001. The two main focuses in the Factor X Program are resource productivity and environmental efficiency. Many large Japanese companies participate in this project, including Mitsubishi Electric, Matsushita Electric Group, Hitachi Ltd., Canon Corporation, Ricoh Corporation, Japan NTT, Fujitsu, and other electronics companies. At the company level, many Japanese companies such as Sony, NEC, Ricoh, and Fuji Xerox have been effectively using eco-efficiency indicators in their environmental management and performance efforts. The most effective eco-efficiency indicators used are sales revenue and environmental impact (Nguyen et al., 2004).

The second main eco-design tool is QFDE, developed by JEMAI, which uses the same basic concept as quality function deployment in quality management. This eco-design tool has been used by several companies such as Shinko Electric Industries Co., Ltd. and Iiyama Corporation during the design phase of electronic products.

The third important tool for eco-design is the LCIA method and life cycle inventory (LCI) data. Two newly developed LCIA methods are the LCIA method based on endpoint modeling (normally called LIME), and JEPIX (or eco-indicator Japan). In addition to the development of methodology, LCI data are collected. Transparent, reliable LCI data on approximately 250 industrial product categories were voluntarily obtained from 56 industrial associations in Japan in the LIME project.

Many Japanese companies have started to use one of these two methods for their evaluation of products or services. According to a survey conducted at the Eco-products Exhibition 2004, only 6% of participating companies questioned thought that LCA was not necessary in eco-product development, while 34% believed that it was necessary. Among the survey respondents, 40.2% of companies had implemented LCA for their eco-products either in all or part of companies and products. In addition, more than 50% of implementing companies had used LCA for eco-product environmental accounting as well as for developing new eco-products (JEMAI, 2005).

1.3 Eco-labeling

The use of environmental labeling (or eco-labeling) to provide information on the environmental performance of products and services has become popular in recent years. In Japan, three types of eco-labeling (I, II, and III) are now used. Among 14 different type I eco-labels, the most popular is the Eco-Mark introduced by the Japan Environment Association. The Eco-leaf is the only type III eco-label, while numerous type II eco-labels are on the market. The Eco-mark (type I eco-label) was started in 1989 with only seven product categories. Since then, the Japan Environment Association has expanded the number of product categories, and Eco-marks had been awarded to 4,959 certified products in 47 product categories as of June 2006 (JEA, 2006). In addition to type I eco-labeling, various Japanese companies have established their own eco-labels. By 2002, more than 30 Japanese companies had information on their Web sites on eco-labeling program and symbols (Nguyen et al., 2004).

The Eco-leaf program (type III eco-label) was started by JEMAI. The first trial phase of this program was launched in May 1999, and the Eco-leaf was launched in 2002. Twenty-six different product categories and nearly 200 product environmental declaration sheets have been published on the JEMAI Web site, which can be accessed by the public (JEMAI, 2006).

2 Republic of Korea

As in Japan, the eco-design and eco-product movements in the Republic of Korea have received great attention from both governmental organizations and the private sector. The country aims to increase its share in export goods, especially electrical and electronic appliances. At the government level, the Ministry of Environment and the Ministry of Commerce, Industry and Energy advocate eco-design activities by providing a supportive legal basis and financial aid programs. Eco-design guidelines and software tools containing environmental quality assessment tools are distributed to all industrial sectors in the Republic of Korea. In addition, various eco-design programs such as environmental labeling programs, certification of green buildings, green purchasing programs, eco-efficiency, and LCI database programs have been put in place to enhance the development of eco-design and eco-products. In the private sector, several large companies such as LG Electronics and Samsung Electronics have developed their own eco-design software used for eco-product development (Im and Heo, 2004).

In terms of eco-product development, eco-label-certified products can be regarded as eco-products. The number of eco-products certified by the Korea Eco-products Institute (KOEKO), a third-party certification body, has increased dramatically. In 1998, the number of certified products was only 125. Nine years later, this number was over 3,000 (an increase of approximately 25-fold). This dramatic increase was due to the efforts of KOECO and introduction of the Act on Promotion of the Purchase of Environmentally Friendly Products in 2005.

3 Republic of China

Eco-design was first formally introduced in the Republic of China in 1994 (Chen et al., 2005). However, eco-design activities were limited to academic and research institutions through awareness promotion in workshops, forums, conferences, and eco-design tool development. Two main national eco-design projects have been conducted since 2001. These two projects are to research and develop eco-design tools such as LCIA, green quality function deployment (G-QFD), and simple LCA methods using the neural networks technique for the electronics industry. A recent report by Chen et al. (2005) indicated that most Taiwanese companies were aware of the eco-design concept and carried out eco-design projects to comply with environmental laws and regulations. In addition to these projects, the GPN and Green Design Network were set up to promote eco-

design and eco-products in the Republic of China. The GPN was launched in 2003, not long after the introduction of the Green Procurement Law in 1999. The development of eco-products is also driven by an eco-labeling program. The Green Mark, a type I eco-label, had been awarded to about 1,800 different product items from more than 400 companies as of August 2003 (Yu, 2003). These eco-products have contributed nearly US\$900 million to the economy. These movements in eco-design and eco-products share a similar pattern with those in Japan. Japanese companies appear to have a great influence on green procurement activities in the Republic of China (Charter, 2004).

4 Other countries

Eco-design has been introduced in most member countries of the Asian Productivity Organization (APO), such as India, Malaysia, Singapore, Thailand, and Vietnam. lists some eco-design activities in China and APO member countries. A green purchasing or similar law has been introduced and enacted only in Japan, the Republic of Korea, and Republic of China. PR China and the Philippines are in the process of introducing similar laws on green procurement. GPNs have been established in several countries, such as Japan, the Republic of China, Republic of Korea, and Malaysia. Thailand may set up a GPN soon, because it already has eco-labeling programs. With the launch of the International Green Purchasing Network (IGPN) in April 2005, GPNs in other developing countries will hopefully be in place soon. Even though a GPN has not been established, eco-labeling programs are in operation Singapore, Thailand, Indonesia, and the Philippines. In these countries, eco-labeling type I and III is normally implemented together as a third-party certification. Eco-labeling type II programs are only implemented by large companies in advanced countries, such as Japan, the Republic of China, and Republic of Korea. Those countries implementing eco-labeling programs, except for the Philippines, hold eco-product exhibitions. Eco-design activity related to environmental management systems complying with ISO14001 is the only activity carried out in all Asian countries. Japan and PR China are in the first and second positions, respectively, worldwide and in the Asian region in terms of number of organizations with ISO14001 certification. The Republic of Korea, republic of China, India, Thailand, and Singapore have numerous certified organizations.

Table . Eco-design activities in PR China and APO member countries.

COUNTRY	GP LAW	GPN	Eco-labelling		Eco-product exhibition	EMS or ISO14001*
			Type I	Type III		
Bangladesh	×	×	×	×	×	○ (7)
Republic of China	○	○	○	○	○	○ (1494)
Fiji	×	×	×	×	×	○ (1)
India	×	□	○	○	○	○ (1500)
Indonesia	×	□	○	×	×	○ (369)
Iran	×	×	×	×	×	○ (400)
Japan	○	○	○	○	○	○ (19477)
Republic of Korea	○	○	○	○	○	○ (4955)
Malaysia	×	○	×	×	○	○ (566)
Nepal	×	×	○	×	×	○ (2)
Pakistan	×	×	×	×	×	○ (38)
Philippines	□	□	○	○	×	○ (361)
Singapore	×	×	○	○	○	○ (658)
Sri Lanka	×	×	×	×	×	○ (21)
Thailand	×	□	○	○	○	○ (1513)
Vietnam	×	□	×	×	□	○ (113)**
PR China	□	□	○	○	□	○ (12683)

Source: *ISO world [http://www.isoworld.net/] as of January 2006.

**VPC () as of July 2006.

○ : implementing or has similar activity

□ : not yet, but under consideration

×

1 Eco-products exhibitions

Various annual eco-products exhibitions have been held extensively in Japan and other Asian countries. The first Japanese eco-products exhibition was organized in 1999. The number of visitors and participating companies have increased dramatically since then. In 1999, nearly 50,000 people visited the Japanese exhibition, which had 288 exhibitors. In 2005, this number increased by nearly three-fold (140,000 visitors), while the number of exhibitors increased two-fold (from more than 250 to 500 organizations). This year, numbers of visitors and participating companies are expected to be even higher.

Learning from Japanese eco-products exhibition, the APO and partners in member countries has been organizing similar events since 2004. The first eco-products exhibition was held in Malaysia in 2004, which attracted more than 10,000 visitors and 77 exhibitors. The second was organized in Bangkok, Thailand, in 2005, attracting more than 22,000 visitors and 226 exhibitors. This year, the third exhibition will be in Singapore. The number of visitors and exhibitors is expected to be about 40,000 and about 100, respectively. In addition to eco-product exhibitions in Japan and APO member countries, the Republic of Korea organized its first eco-products exhibition in 2005, with 117 companies participating and 420 display booths. The exhibition attracted more than 17,000 visitors including those from governmental organizations (21.6%), manufacturing (20.6%), trade and commerce (7%), students (17%), and consumers (22%). In November 2006, the second eco-products exhibition will be held in Seoul, organized by KOECO and the Korea Green Foundation. In addition, PR China may organize a similar eco-products exhibition in Shanghai in 2007. These eco-products exhibitions attract people not only from industries, but also from academic institutions, NGOs, research institutes, and schools.

2 Green purchasing networks

GPNs have been established in several Asian countries, including Japan, the Republic of Korea, Republic of China, and Malaysia. Japan is a leader in this activity. Members of the Japan GPN had reached 2,860 as of January 2006, comprising 2,261 manufacturing companies, 317 municipal authorities, and 282 NGOs (GPN, 2006). The number of eco-products and eco-services listed in the GPN database totals 28,000 in 19 different categories. According to a survey by the Japan GPN in 2002, more than half of responding companies had introduced green purchasing policies, and 36% had adopted green policies for material and component procurement. The Japanese domestic market for eco-products was estimated to be about US\$320 billion. The Republic of China and Republic of Korea follow close behind Japan in GPN activities, thanks to the enactment of green procurement laws. The GP Law enacted in 2002 in the Republic of China requires that one-half of all products purchased by government agencies be eco-products. The listed database of eco-products in the Republic of China contains more than 2,600 products in 45 categories, while that in the Republic of Korea contains about 2,400 in 25 categories (IGPN, 2006).

The IGPN was founded in April 2005 to promote green purchasing activities around the world. The IGPN consists of national GPNs from Japan, the Republic of Korea, Republic of China, PR China, Malaysia, Australia, and Sweden. The main activities of this organization are to promote eco-product and eco-service development, share information and know-how, and harmonize international efforts for the development of green purchasing activities and eco-products.

3 Conclusion

Eco-design activities are underway in several countries in the Asian region. In developed countries such as Japan, the Republic of Korea, and Republic of China, these activities are in the mature stage and continue to develop further. In other countries, eco-design is still in the developing phase, and more work needs to be done. These countries need support from advanced countries to undertake eco-design activities as well as to develop eco-products. The publication of this databook is one activity to promote eco-design and eco-products globally and regionally.

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Related Organizations List

National Institute for Materials Science (NIMS)

1-2-1 Sengen, Tsukuba, Ibaraki 305-0047, JAPAN
Tel: +81-29-859-2026 Fax: +81-29-859-2017

Ecomaterials Forum, The Society of Non-Traditional Technology (SNTT)

Sakura Bldg. 9F, 2-5-5 Toranomom, Minato-ku, Tokyo105-0001 JAPAN
Phone:+81-3-3503-4681 FAX:+81-3-3597-0535
E-mail:ecomat@sntt.or.jp

Green Purchasing Network (GPN)

Cosmos Aoyama, 5-53-67, Jingumae, Shibuya-ku, Tokyo 150-0001 JAPAN
Tel: +81-3-3406-5155 Fax: +81-3-3406-5190
E-mail:hv6h-stu@asahi-net.or.jp

Special Project on Eco Efficiency and Eco Design (SPEED)

Fe-209, 4-6-1, Komaba, Meguro-ku, Tokyo 153-8904 JAPAN
Tel: +81-3-5452-6098 (ext. 57780) Fax: +81-3-5452-6305
E-mail:speed17@iis.u-tokyo.ac.jp

1

Eco-materials

- I Metals
- II Polymers
- III Natural Materials
- IV Foams
- V Ceramics and Glass
- VI Composites
- VII Others

Eco-materials

EM - 001

Metals

Carbon black

Tow Sheet Maintenance and reinforcement material for concrete

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel; 81-3-3275-5144 Fax; 81-3-3275-5979

E-mail; kankyo@hq.nsc.co.jp

URL; <http://www0.nec.co.jp/kankyou/index.html>

A4 Waste

A5 Resource consumption

B3 Resource saving



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".



Eco-materials

EM - 002

Metals

Water synthetic resin paints

Thermal Screening Water-based Paint "Histar shatarou"

Hitachi Chemical Industrial Materials Co., Ltd.

5-12-15, Namekawahonchou, Hitachi-shi, Ibaraki-ken, 317-0051 Japan

Tel; 81-294-22-1313 Fax; 81-294-22-1782

E-mail;

URL; <http://www.hc-kozai.co.jp/toryo2.html>

A1. Global Warming

B5. Energy Saving



The air-conditioning expense is decreased by suppressing the invasion of heat in the building by reflecting the sun light that falls on the building (roof and wall) in summer, and lowering the surface temperature.



Histar shatarou

Eco-materials

EM - 003

Metals

Polymers, Plastics, Plastic products

High-performance Acoustic Material for Traffic noise "FIBLIGHT"

Bridgestone Corporation

10-1, Kyobashi 1-chome Chuo-ku, Tokyo,

104-8340 Japan

Tel 81-45-825-7538 Fax

E-mail

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

B1 Recyclability

B4 Higher quality

B7 Use of recycled materials



FIBLIGHT is a high-performance acoustic material consist of polyester staples binded by special fibers(low-melting point polyester). It is used for noise barriers on highway or railway.

- 1) "FIBLIGHT" has good sound absorption characteristics.
- 2) "FIBLIGHT" has good durability and weatherability for outdoor use. It shows stable performance for long time.
- 3) "FIBLIGHT" has good water-repellent efficiency by using special water-repellent treatment. It shows stable performance at all weather condition.
- 4) Using recycle polyester fiber. Reduce environmental effect at disposing. Acquired an Eco mark in Japan.



FIBLIGHT(Sound insulating wall of expressway)

Eco-materials

EM - 004

Metals

Concrete blocks for construction

Environment-conscious porous concrete

Kajima Cooperation

3-7-1, Nishi-Sinjuku, Sinjuku-ku, Tokyo, Japan

Tel 81-3-5321-7322 Fax 81-3-5321-7328

E-mail env-act@ml.kajima.com

URL <http://www.kajima.co.jp/prof/environment/index.html>

B6 Environmental purification



Environment conscious construction method is recently required for bank protection work. Porous concrete has been developed to be a material for bank protection to content both strengthening and environmental functions.

The void size of this environment-conscious porous concrete (maximum diameter size of inscribed circle: 14mm) is about double of that of conventional porous concrete, which enables various plants and animals to live and cheap soil filling materials to be used. In spite of its large void size, its compressive strength keeps 10N/mm², which is necessary condition for porous concrete bank.

This product can be made from aggregate (5~40 mm) from crushed concrete. Its construction cost is reduced by operating main process within construction site.

Machines, admixture and method for quality control specially provided for porous concrete realized efficient and large-scale construction.



Environment-conscious porous concrete

Eco-materials

EM - 005

Metals

Steel pipe materials

High-temperature, High-strength Boiler Steel Tube

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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



In the view point of improvement of the global environment, high temperature and high pressure power generation boilers (Ultra Super Critical boilers) have been developed in the world due to increase the heat efficiency of boilers and then to reduce CO₂ emission. High strength and high corrosion resistant steel tubes and pipe are required for these USC (Ultra Super Critical) boilers. SUPER304H, the austenitic stainless steel tube with superior high-temperature strength for power generation boilers developed by Sumitomo Metals, has superior steam oxidation resistance and twice strength at high temperatures of conventional Type 347H stainless steel due to the optimum addition of copper, niobium, nitrogen and other alloying elements and the developed thermo-mechanical tube production method.

SUPER304H鋼管の経済性		
圧力: 24.1 MPa, 温度: 650℃, 外径: 50.8mm で試験		
項目	SUPER304H	SUS347HTB
許容引張応力 (650℃, MPa)	80	41
管寸法	φ50.8×16.6	φ50.8×110.8
重量比	68	100

Super304H

Eco-materials

EM - 006

Metals

Small bar steel

Lead-free free-cutting steel (steel bars)

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nec.co.jp/kankyou/index.html>



The shapes of crankshafts used in automobiles, among others, are very complicated. Manufactures 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.



Eco-materials

EM - 007

Metals

Sheet steel

High-tensile Steel Plate with Superior Fatigue-resistance

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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

A5 Resource consumption

B2 Longevity

B4 Higher quality



The high-tensile steel plate (FCA steel plate) with superior fatigue-resistance properties developed by Sumitomo Metals has now for the first time been selected as the material for the bottom floor-plate of the 35,000m³ LPG carrier in construction at the Nagasaki shipyards of Mitsubishi Heavy Industries, Ltd. FCA steel is the first material in the world to provide the function of improving the fatigue-resistant properties of hull steel plate. It is a path-breaking development in the materials field, and the use of FCA steel brings dramatic safety and reliability improvements to ship hull fatigue.



Fatigue Crack Arrest Steel Plate

Eco-materials

EM - 008

Metals

Sheet steel

The New S-TEN1, a steel material, saw the level of corrosion rise

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail: kankyo@hq.nsc.co.jp

URL <http://www0.nsc.co.jp/kankyou/index.html>

A4 Waste

A5 Resource consumption

B2 Longevity

B6 Environmental purification



Demand for steel material with outstanding anti-corrosive properties is growing rapidly, especially from waste incinerating facilities exposed to corrosive hydrochloric 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.



Eco-materials

EM - 009

Metals

Sheet steel

HTUFF (Super High HAZ(Heat-affected zone) Toughness Technology)

Nippon Steel Corporation

2-6-3, Otemachi, chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nec.co.jp/kankyuu/index.html>

A5 Resource consumption

B2 Longevity



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 needed for repeated welding, since Nippon Steel radically reduced the size of metal particles in the welding-induced heat-affected areas of the HTUFF steel sheet through nanotechnology. Such miniaturization suppresses the deterioration of HTUFF's toughness, even when exposed to extreme temperatures 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.



Eco-materials

EM - 010

Metals

Sheet steel

Tailored Blanking

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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

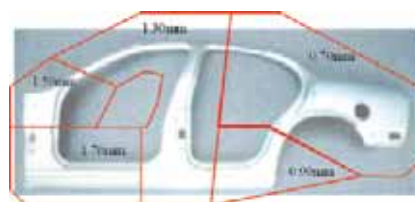
A1 Global warming

B3 Resource saving

B5 Energy saving



In tailored welded blanks technology, many kinds of steel sheet are joined together like a patchwork and supplied to press-forming and are applied to car body. In normal way, thickness of stamped parts is same in whole panel. Therefore, in some portion of part, the thickness is thicker than required by strength design. However by this technology, the thickness can be minimized from portion to portion, thus automotive body weight can be reduced; Sumitomo Metals is implementing new tailored welded blank technologies that allow welding along curves and diagonals in addition to perpendiculars and expanding the range of its applications.



Tailored Blanking

Eco-materials

EM - 011

Metals

Sheet steel

High-strength Steel Sheet

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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



In 1979 Sumitomo Metals developed the world's first bake-hardenable high-strength steel sheet for automotive application. Bake-hardenable steel sheet harden through paint-baking process at 180°C, exhibits excellent dent-resistance and is applied to automotive panel, door and hood. We have continued to develop various high-strength steel sheet, and are contributing to reduce vehicle weight by developing Sumident Super with larger bake-hardenability and Ultra High-strength Steel Sheet.



Sumi-dent Super

Eco-materials

EM - 012

Metals

Sheet steel

Three-layer Clad Steel Sheet

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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



Sumitomo Metals (Naoetsu) Ltd. has succeeded in developing a production process for thermo-sensitive clad steel using an alloy whose temperature does not rise above a given level in electromagnetic induction heating and has begun supplying it as the dedicated base material for thermo-sensitive frying pans and deep fryers. The company has also developed a three-layer clad steel of copper, stainless steel and aluminum layers for induction heating thermoses and brought it to mass production. Not only is this three-layer clad steel superior to two-layer clad steel in terms of induction heating efficiency and heat transfer properties, it is also more lightweight.



Copper/Stainless/Aluminium Clad Sheet

Eco-materials

EM - 013

Metals

High-heat-emission Steel Sheet

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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

Sheet steel

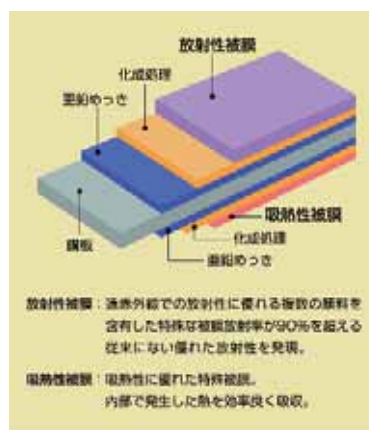
A5 Resource consumption

B2 Longevity

B4 Higher quality



Sumitomo Metals started work on high-emission steel sheet well in advance of other steelmakers, since ten years ago we have been supplying Sumitomo High-emission Pre-painted steel sheet for the cover of the stabilizers of fluorescent lamps as a measure to cope with the heat emission of fluorescent lamps. Sumitomo High-emission Pre-painted Steel Sheet is applied special paint on cold-rolled steel sheet or galvanized steel sheet and it's emissivity is 94%. Also it can restrain the temperature rise in the simulated cabinet less than 60°C while the regular zinc coated steel increase 73°C in the same cabinet.



Sumitomo High Coat(High-heat-emission type)

Eco-materials

EM - 014

Metals

High-efficiency Electric Steel Sheet

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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

Sheet steel

A1 Global warming

A5 Resource consumption

B4 Higher quality

B5 Energy saving



In order to improve energy efficiency of motors, Sumitomo Metals has been developed non-oriented electric steel sheet with good machinability and high-efficiency. This steel has been applied to compressor motors in air conditioners. We are now strongly proposing to automotive companies to adopt our 27SX series of electric steel sheet for high-efficiency motors that delivers both high permeability and low iron loss in high frequency application. This adoption will result in improvement in automotive fuel economy and compliance with exhaust regulations.



T27X series

Eco-materials

EM - 015

Metals

Sheet steel

Chromium-free Coated Steel Sheet

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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

A3 Hazardous substances

A4 Waste

B1 Recyclability

B6 Environmental purification



The development of chromium-free treatment on various coated steel sheet become essential in recent years in order to comply with regulations for toxic substances. We have developed all kinds of chromium-free treatment on coated steel sheet.



Tough-zinc Hyper NEO/Sumi-zinc NEO coat T1

Eco-materials

EM - 016

Metals

Sheet steel

NFG®, Ultrafine grained steel sheets

Nakayama Steel Works, Ltd.

1-1-66, Funamachi, Taisho-ku, Osaka, Japan

Tel 81-6-6555-3106 Fax 81-6-6555-4026

E-mail

URL <http://www.nakayama-steel.co.jp>

A1 Global warming

A5 Resource consumption

B1 Recyclability

B2 Longevity



Reducing the grain size of steel increases the strength. Ultrafine grained steel has a fine grain of 1-5microns. The steel has less rare earth alloy, and is expected to have the characteristics of low temperature toughness, high fatigue strength and good workability. This material is expected to contribute greatly to realization of the social demands such as energy saving, resource saving and environment conservation. We developed facilities and constructed an actual hot strip mill introducing new concepts. We succeeded in producing ultrafine grained steel sheets of 2-5microns industrially.

Comparison of grain size

Grain size of NFG is 1/3 smaller compared to Conventional steel.

NFG



Conventional steel



Eco-materials

EM - 017

Metals

Sheet steel

The GA-TRIP hot -dip galvanized sheet boasts the high strength

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nec.co.jp/kankyou/index.html>



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.



Eco-materials

EM - 018

Metals

Sheet steel

High-endothermic steel sheet

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nec.co.jp/kankyou/index.html>



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.



Eco-materials

EM - 019

Metals

Sheet steel

JFE-SX1

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3597-3734 Fax 81-3-3597-3035

E-mail

URL <http://www.jfe-steel.co.jp>

A3 Hazardous substances

B1 Recyclability



JFE Steel is a leader in R&D on ferritic stainless steels for fuel tanks, where this material offers excellent corrosion resistance and recyclability, and developed "JFE-SX1" with high formability and corrosion resistance. The performance of this product has also been confirmed in the common corrosion resistance test for North America by the SASFT. JFE-SX1 also possesses sufficient corrosion resistance for high concentration biomass alcohol fuels. Because heavy painting for corrosion resistance is not necessary, it also contributes to reducing environmental loads and improving the working environment in the tank manufacturing process.

Where formability is concerned, JFE-SX1 is the world's first ferritic stainless steel to achieve an extremely high Lankford value (r-value)*3 of 2.6 and has demonstrated satisfactory ultra-deep drawability.



Fuel tank using stainless steel.

Eco-materials

EM - 020

Metals

Sheet steel

Steel sheet useful for body weight reduction of automobile

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3597-3734 Fax 81-3-3597-3035

E-mail

URL <http://www.jfe-steel.co.jp>

A1 Global warming

B3 Resource saving

B5 Energy saving



High tensile strength steel makes the thickness of the plate thinner, because it is strong. As the steel plate for the automobile, it ensures the safety of the car body, and contributes to the prevention of the global warming through the improvement in the fuel consumption by the lightening of the car body. In order to receive using the high tensile strength steel plate, JFE Steel Co. assorted various materials for all grades which is excellent in stamping performance, weldability, fatigue characteristics and adhesion of the plating.



Eco-materials

EM - 021

Metals

Sheet steel

Non-lead Free-cutting Steel

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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

A3 Hazardous substances

A4 Waste

B1 Recyclability

B3 Resource saving



Lead containing free-cutting steel was developed for the usage of the crankshafts and other strong members of automobiles and motorcycles. However the environmental awareness of recent years has raised the need of lead-free free-cutting steel. Sumitomo Metals and Sumitomo Metals (Kokura) Co., Ltd. have therefore developed the technology of controlling the shape of sulfides and have provided a series of lead-free free-cutting steel products.



Sumi Green S,T,X

Eco-materials

EM - 022

Metals

Sheet steel

Non-oriented / Grain-oriented Electrical Steel Sheets

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3597-3734 Fax 81-3-3597-3035

E-mail

URL <http://www.jfe-steel.co.jp>

A1 Global warming

A5 Resource consumption

B4 Higher quality

B5 Energy saving



JFE Steel has developed and is producing "Non-oriented Electrical Steel Sheets for High Efficiency Motors," which were developed to achieve low iron loss in motors, and thereby reduce power loss, particularly by reducing high frequency iron loss. JFE Steel developed and is producing "Grain-oriented Electrical Steel Sheets for High Efficiency Transformers." With excellent magnetic properties, these products achieve energy savings while reducing transformer noise by increasing magnetic flux density and suppressing the magnetostriction.



Non-oriented electrical steel sheets

Eco-materials

EM - 023

Metals

Sheet steel

Flat rolled magnetic steel sheet/strip for high-efficiency motors

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nsc.co.jp/kankyou/index.html>

A1 Global warming

A5 Resource consumption

B4 Higher quality

B5 Energy saving



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.



Eco-materials

EM - 024

Metals

Coated steel

Chromate-free Coated Steel Sheet

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3597-3734 Fax 81-3-3597-3035

E-mail

URL <http://www.jfe-steel.co.jp>

A3 Hazardous substances

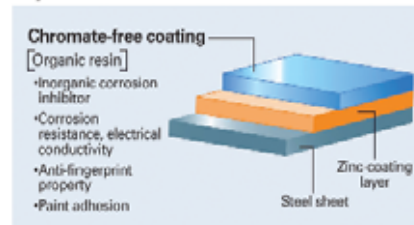
B2 Longevity

B6 Environmental purification



The EU has set a deadline of July 2006 for replacing hexavalent chrome, lead, mercury, and cadmium with substitutes. Because exported appliances must meet this requirement and similar regulations are expected in Japan in the near future, JFE developed a coated steel sheet which contains no chrome (VI) but still offers excellent corrosion resistance, surface conductivity, paintability, anti-fingerprint property, and lubricity. This product is now used in internal panels of appliances and vending machines, internal components of OA equipment and copiers, chassis of televisions, VTRs, and audio equipment, and other parts, and an expanded range of applications is expected.

Layers of Chromate-free Coated Steel Sheets



Eco-materials

EM - 025

Metals

Sheet steel

Weathering Steel

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3597-3734 Fax 81-3-3597-3035

E-mail

URL <http://www.jfe-steel.co.jp>

A3 Hazardous substances

B2 Longevity

B3 Resource saving

B4 Higher quality



Weathering steels, which use rust to prevent rust to possess good corrosion resistance without painting because the steel is designed to form a protective rust film. Widely used in civil engineering and construction, and particularly in bridges, weathering steels extend the life of steel structures to 50-100 years without painting. JFE has also developed Ni added high performance weather steels for use in environments with high airborne salt concentrations, which was impossible with conventional weathering steels, expanding the range of applications and contributing to global environmental preservation.



Non-oriented electrical steel sheets

Eco-materials

EM - 026

Metals

Coated steel

Universal Brite

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3597-3734 Fax 81-3-3597-3035

E-mail

URL <http://www.jfe-steel.co.jp>

A1 Global warming

A3 Hazardous substances

B3 Resource saving



"Universal Brite" is an epoch-making laminated steel sheet for food cans which was developed based on proprietary JFE Steel technologies. Using a base homo-PET film with a unique molecular structure, a special additive which proves the meat release property (easy removal of the contents) is added to the film surface layer, making it possible to omit the painting/baking processes while securing excellent formability, adhesion, corrosion resistance, and a meat release property equal to or better than those of existing paints.



Example of canmaking (half-pound food can)

Eco-materials

EM - 027

Metals

Coated steel

Lead-free steel sheet for car fuel tank

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nsc.co.jp/kankyou/index.html>

A3 Hazardous substances

B6 Environmental purification



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.



Eco-materials

EM - 028

Metals

Coated steel

Steel sheet coated with chromate-free film

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nsc.co.jp/kankyou/index.html>

A3 Hazardous substances

B6 Environmental purification



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.



Eco-materials

EM - 029

Metals

Coated steel

Pre-coated steel sheet; to eliminate the painting process

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nsc.co.jp/kankyoku/index.html>

▲ A3 Hazardous substances

▲ A5 Resource consumption

▲ B3 Resource saving

▼ B6 Environmental purification



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.



Eco-materials

EM - 030

Metals

Coated steel

Alloy Steel Powder for Sinter-hardening

JFE Steel Corporation

2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3597-3734 Fax 81-3-3597-3035

E-mail

URL <http://www.jfe-steel.co.jp>

▲ A1 Global warming

▲ B5 Energy saving



JFE Steel developed "Alloy Steel Powder for Sinter hardening", which realizes high strength without carburizing. Because the microstructure is strengthened in the cooling process after sintering, tensile strength exceeding 900 MPa and surface hardness exceeding 30 HRC can be obtained. These mechanical properties are superior to those of conventional alloy steel powders with carburizing. The product has been adopted in power tools gears and similar applications.



Power tool part

Eco-materials

EM - 031

Metals

Non-ferrous metals by primary smelting and refining

Polycrystalline Silicon (Materials for solar power systems)

Mitsubishi Materials Polycrystalline Silicon Corporation

5, Mita-cho, Yokkaichi-shi, Mie, 510-0841 Japan
Tel 81-593-45-5191 Fax 81-593-46-5815
E-mail
URL

A1 Global warming

A5 Resource consumption

B5 Energy saving



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 cell is a major raw material for photovoltaic industry and the energy generated from solar cell 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.



Polycrystalline silicon for solar cell

Eco-materials

EM - 032

Metals

Rolled and drawn brass products

ECO BRASS(High performance Lead-free Copper Alloy)

Sambo Copper Alloy Co., LTD

374, 8-cho, Sambo-cho, Sakai-ku, Sakai-shi, Osaka, 590-0906, Japan
Tel 81-72-233-1161 Fax 81-72-227-6590
E-mail tech@sambo.co.jp
URL <http://www.sambo.co.jp>

A3 Hazardous substances

B1 Recyclability

B4 Higher quality

B6 Environmental purification



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 environmentally friendly brass material
- 2) High strength equivalent to stainless steel
- 3) Good machinability nearly equal to brass rod containing 1% lead
- 4) Excellent machined surface
- 5) Excellent de-zincification corrosion resistance
- 6) Excellent stress corrosion cracking resistance
- 7) Excellent warm brittleness cracking resistance
- 8) Excellent hot forgeability
- 9) Easily accepts soldering and brazing
- 10) 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, screw, bearings
- 3) Electrical parts and connectors
- 4) Automobile parts: lead-free requirements
- 5) Medical devices



Machined Products using ECO BRASS rods

Eco-materials

EM - 033

Metals

FINEMET® EMC COMPONENTS

Hitachi Metals Singapore Pte. Ltd.

12 Gul Avenue, Singapore

Tel 65-6861-7711 Fax 65-6861-9554

E-mail

URL

EMC Noise Reduction Products.

As IT and electronics devices improve in its performance, EMC regulations for those devices tends to be tighten. It requires higher performance in noise suppression for electric components and parts. Hitachi Metals provides a series of excellent EMC components using FINEMET®, the first nanocrystalline soft magnetic material in the world, to meet EMC requirement. FINEMET® EMC components allow superior technical solution (e.g. excellent electromagnetic noise suppression performance and size reduction) and low energy loss for your application.

Non-ferrous metal products



FINEMET® EMC COMPONENTS

Eco-materials

EM - 034

Metals

Hybrid PVD coating Tribec series

Hitachi Metals, Ltd.

1-2-1, SHibaura, Minato-ku, Tokyo, 105-8614 Japan

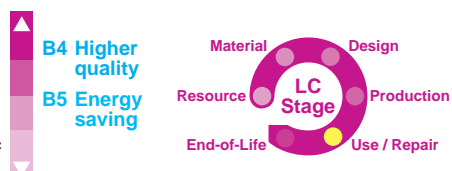
Tel 81-3-5765-4000 Fax 81-3-5765-8311

E-mail

URL http://www.hitachi-metals.co.jp/rad/pdf/2006/vol22_s10.pdf

An efficient surface treatment that not is has been achieved so far by compound PVD coating technology.

Treatment of metal surface



Hybrid PVD coating Tribec series

Eco-materials

EM - 035

Metals

Chemical machinery and its equipment

High-density Ozone Resist Removal Equipment for LCD manufacturing

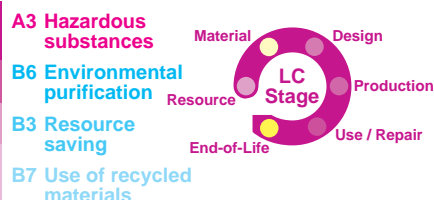
Mitsubishi Electric Corporation

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

Tel 81-3-3218-2238 Fax 81-3-3218-2465

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

URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>



The amount of special chemicals utilized to clean and remove the resist (photosensitive resin) from components in semiconductor and liquid-crystal display (LCD) manufacturing processes has been markedly reduced. A new system that utilizes hydrolysis to remove resist, sprays a saturated high-density ozone gas to clean the substrate in the LCD manufacturing process. Substitution of the chemical solution has reduced negative environmental impact to less than 1/10 that of the previous method, and also resulted in lower processing cost (one-fifth) and a reduction in production line floor space as tasks following the cleaning process have been simplified.



High-density Ozone Resist Removal Equipment

Eco-materials

EM - 036

Metals

Electronic parts

Anisotropic Conductive Film ANISOLM

Hitachi Chemical Co., Ltd.

2-chome, Shinjuku-ku, Tokyo 163-0449, Japan

Tel 81-3-3346-3111 Fax 81-3-3346-2977

E-mail

URL <http://www.hitachi-chem.co.jp/english/index.html>

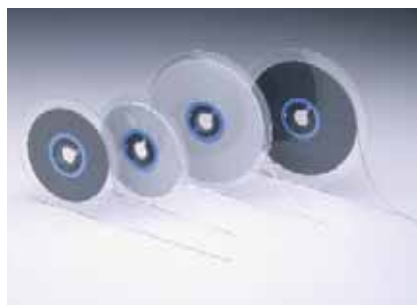


Description of Products

This adhesive consists of scattered conductive particles that can connect many fine electrodes, maintaining the conductivity and nonconductivity.

Development Concept

The amount of CO₂ to be discharged during operation is reduced to enable low-temperature adhesion and improve productivity, so that the efficiency of energy consumption per unit time can be greatly improved.



Anisotropic Conductive Film ANISOLM

Eco-materials

EM - 037

Metals

Bio Tube System

JFE Engineering Corporation

1-1-2, Marunouchi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3217-3912 Fax 81-3-3214-9650

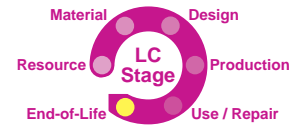
E-mail

URL <http://www.jfe-eng.co.jp>

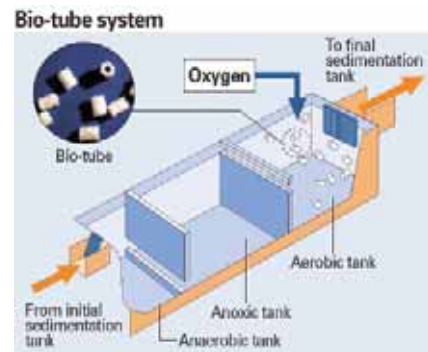
Sewage Treatment Equipment Bio-Tube System

A4 Waste

B4 Higher quality



JFE Engineering developed a practical advanced sewerage treatment system called the "Bio-Tube System," which greatly increases the N and P treatment capacity while saving space and reducing costs. Because it is possible to fix a large quantity of nitrification bacteria and other useful bacteria which have the slow reproduction rates indispensable for N removal on the carrier surface, a high concentration of effective bacteria can be maintained in the reaction tank by using Bio-Tubes in the reaction tank as a microorganism fixing carrier. This makes it possible to reduce the capacity of the reaction tank by approximately half in comparison with conventional advanced sewerage treatment systems.



Eco-materials

EM - 038

Metals

Residential buildings

Construction method using thin-sheet steel for extra durability

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nsc.co.jp/kankyou/index.html>

A1 Global warming

A4 Waste

B2 Longevity

B3 Resource saving



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.



Eco-materials

EM - 039

Metals

Rooftop Greening Pallet

Easy to handle pallets for rooftop greening

Nippon Steel Corporation

2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan

Tel 81-3-3275-5144 Fax 81-3-3275-5979

E-mail kankyo@hq.nsc.co.jp

URL <http://www0.nsc.co.jp/kankyou/index.html>

A4 Waste

A5 Resource consumption

B5 Energy saving

B6 Environmental purification



Unlike conventional rooftop greening methods in which earth is spread on the roof surface, this pallet method uses pre-planted greening pallets linked with joints. The pallets themselves are made of recyclable polypropylene and although they are lightweight, they are designed to be wind-proof. Limited maintenance is required and they provide a good heat-insulating effect in summer and heat-retention effect in winter. In addition to energy savings, they help to alleviate heat island phenomenon.



Eco-materials

EM - 040

Polymers

Coating Material

SUMIRESIN EXCEL® CRC wafer coating material

Sumitomo Bakelite Co., Ltd.

Tennosu Parkside Bldg., 2-5-8, Higashishinagawa,

Shinagawa-ku, Tokyo, Japan

Tel 81-3-5462-3472 Fax

E-mail

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

A3 Hazardous substances

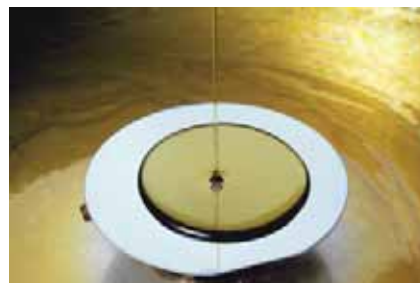
B3 Resource saving

B5 Energy saving

A1 Global warming



Due to the rapid increase in semiconductor memory capacity and demand for high-speed compatibility, circuit widths have narrowed and demands for reliability have become ever more exacting. To meet these demands, Sumitomo Bakelite has developed the CRC-8000 series of positive-type photosensitive wafer coating resins. This new series enables the use of alkaline aqueous solution as developing fluid and pure water as rinse fluid, eliminating the need for semiconductor manufacturers' use of special solutions. Furthermore, a new use for the series has been developed as an alternative to the traditional plastic sealing of certain wafer-level packages, thus enabling energy conservation by reducing the number of semiconductor manufacturing processes.



Eco-materials

EM - 041

Polymers

Epoxy resin molding material

SUMIKON® EME epoxy molding compound for semiconductors

Sumitomo Bakelite Co., Ltd.

Tennosu Parkside Bldg., 2-5-8, Higashishinagawa,
Shinagawa-ku, Tokyo, Japan

Tel 81-3-5462-3472 Fax

E-mail

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

A3 Hazardous
substances

B4 Higher quality

A1 Global warming



Sumitomo Bakelite has developed an epoxy resin forming material for semiconductor sealing that uses no bromine- or antimony-based flame retardants with substantial impact on the environment and is compatible with lead-free solder mounting. Using a newly developed epoxy resin with superior combustion resistance, Sumitomo Bakelite has developed and begun marketing the SUMIKON® EME-G700 series for high-reliability applications as well as the SUMIKON® EME-G600 and EME-G500 series for general-purpose packaging. Moreover, we have launched the SUMIKON® EME-E series of products specially designed for discrete applications. Leveraging our material design technologies for environmental impact reduction, we strive to reduce the burden on the environment by offering a green product range that covers leading-edge semiconductor packaging through general-purpose packaging.



Eco-materials

EM - 042

Polymers

Miscellaneous plastic

Environmentally Friendly Biodegradable Plastic - Bionolle

Showa Denko Singapore Pte. Ltd.

4 Shenton Way #16-01 SGX Centre 2 Singapore

Tel 65-6223-1889 Fax 65-6223-6007

E-mail gkyeo@sds.com.sg

URL <http://www.sds.com.sg>

B6 Environmental
purification

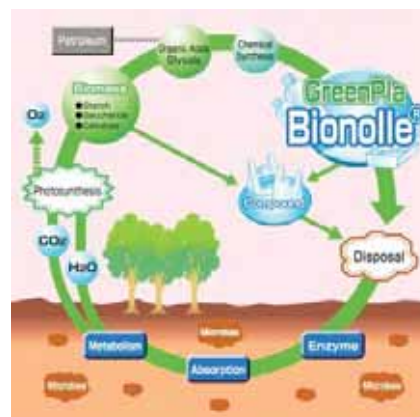
A4 Waste



"Bionelle" is a thermoplastic aliphatic polyester which is biodegradable in wet soil, compost, fresh water, seawater and activated sludge where microorganisms are present, just like cellulose and paper. It can be incinerated with combustion heat at 1/2 and carbon dioxide generation at 2/3 that of conventional plastics. It is therefore a highly environmentally-friendly GREEN alternative to conventional plastics.

Bionelle can be used in various types of plastic production: Film, Lamination, Extrusion, Monofilament, Fiber, Injection Molding, Foam Sheet, Blow Molding.

Recently, we have succeeded in polymerization of Bionolle from Bio-base Succinic Acid, which is fermented from starch. This leads to our expansion into Starch-Bionolle compounds. Bionolle is manufactured by Showa Highpolymer Co. Ltd. in Japan. For sales inquiries, please contact Showa Denko Singapore.



Eco-materials

EM - 043

Polymers

Polymers, Plastics, Plastic products

The RuBA® -R AR series

Takayasu Co.,Ltd.

3-47,Murasame-cho,Sohara,Kakamigahara-shi,
Gifu,504-0828 Japan

Tel 058-382-2231 Fax 058-380-1121

E-mail kuzuya@takayasu-rf.co.jp

URL <http://www.takayasu-rf.co.jp/>

B4 Higher quality
B7 Use of recycled
materials



The RuBA® -R AR series is our company's fiber-reinforced composite material (the patent application: finished), which is made from the fibers for reinforcing and the thermoplastic resin by the particular method. An example is a resin of master batch to which reinforcing fibers were blended in a high-density. This resin was developed by use of aramid fiber KEVLAR® and thermoplastic resin, and the product is excellent in wear-resistance (sliding ability) and tracking resistance. For instance, if biodegradable fibers and so forth are applied to this manufacturing technology, it comes to be possible to provide the eco-friendly composite materials that could not be obtained by the conventional method.

*1 RuBA® is a trademark of the goods by joint development of TAKAYASU Co. Ltd, TORAY-DuPont Co. Ltd, and ICHIMURA SANGYO Co. Ltd.

*2 KEVLAR® is a trademark of the goods of DuPont Co. Ltd.



RuBA® -R AR (KEVLAR®/PA6)

Eco-materials

EM - 044

Polymers

Polymers, Plastics, Plastic products

S-Lec Solar Control Film / S-Lec Sound & Solar Film

Sekisui Chemical Co., Ltd.

2-3-17, Toranomom, Minato-ku, Tokyo, Japan

Tel Fax

E-mail kankyo@sekisui.jp

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

A1 Global warming
B5 Energy saving



This product(SCF) is used by being sandwiched with 2 sheets of glass pane to become laminated glass. Laminated glass has nice performances like penetration resistance performance, UV ray cut-off performance and so on. Thanks to these excellent performances, laminated glass has been used on both automotive application(windscreen, sidelite, backlite and roofite) and building application(window and partition) for safety, security and comfort purpose in the world. Infrared ray cut-off fine particles are finely dispersed in this product. Thanks to this IR cut-off fine particle, laminated glass with SCF can effectively prevent undesirable heat ray(IR ray) from entering inside. In case of automotive application for instance, steering temperature inside the vehicle cabin with SCF windscreen is around 10degree Celsius lower than that with normal windscreen during summer time parking. This temperature reduction can contribute to lowering air conditioning load and improving fuel consumption efficiency. Brother product of SCF is S-LecR Sound & Solar Film(SSF). Addition to the heat energy cut-off performance of SCF, noise reduction performance can be enjoyed with SSF laminated glass.



Eco-materials

EM - 045

Natural Materials

Organic fertilizers

BioChips® Premium Organic Compost

Meng Guan Landscape & Construction Pte Ltd

Blk 1 Joo Chiat Road, #05-1001 Joo Chiat Complex ,
Singapore 420001

Tel +65 6744 3206 Fax +65 6748 7482

E-mail mengguan@pacific.net.sg

URL www.mengguan.com.sg

B3 Resource saving

B5 Energy saving

B6 Environmental
purification

B7 Use of recycled
materials

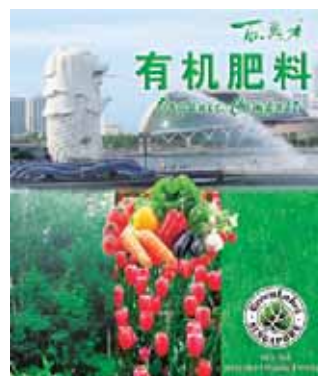


A 100% natural organic soil amendment. Produced from grass clippings, leaves, and ground wood.

Use for:

New/Established Lawns, Golf tufts, Flowers and Vegetables Gardens, Trees and Shrubs, and Potted Plants. BioChips® is sold by bag 25kg or in bulk (loose) form.

We export to overseas.



Organic Compost made from recycled Organic waste

Eco-materials

EM - 046

Natural Materials

Pure worsted yarn

ECO-WASH :Eco-friendly shrink-resistant wool

KURABO INDUSTRIES LTD.

4-31,2-CHOME,KYUTARO-MACHI CHUOKU,
OSAKA,541-8581, Japan

Tel 81-6-6266-5084 Fax 81-6-6266-5369

E-mail Takashi_Kanda@kurabo.co.jp

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

A3 Hazardous
substances

B4 Higher quality



Conventional chlorination treatment applied for shrink-proofing of wool fiber causes an environmental contamination. Because, the residual chlorine in the industrial waste water drained into rivers reacts with organic matters and turns into carcinogen (AOX = Absorbable Organic 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, fluffless
- Natural stretchability
- Excellent shrink-resistance
- Water repellency is retained

(together with moisture releasing property of wool makes ECO-WASH comfortable)



Eco-materials

EM - 047

Natural Materials

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

KURABO INDUSTRIES LTD.

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

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

E-mail uniform_sect@kurabo.co.jp

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

Wide cotton fabrics

A4 Waste

B1 Recyclability

B3 Resource saving

B7 Use of recycled materials



Fabric blended with excellent flameproof acrylic-based fiber, with unused cotton generated during spinning process accounting for 10% of total material.

- Having brilliant anti-flaming property, and being equipped with self-extinguishing function. LOI (limiting oxygen index) 29 to 32.
- Hard-to-dissolve, compared to general 100% synthetic fiber.
- Excellent in antistatic property.
- Refreshing and easy-to-wear, due to its excellent sweat absorption.
- Almost lint-free.
- Good coloring, hard-to-fade-out.
- Product that has acquired "eco-mark", only one environmental label in Japan.



combustion test

Eco-materials

EM - 048

Natural Materials

BioNature: Eco-oriented soil-returnable fabric

KURABO INDUSTRIES LTD.

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

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

E-mail uniform_sect@kurabo.co.jp

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

Wide cotton fabrics

A1 Global warming

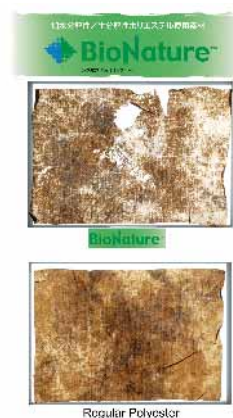
A4 Waste

B5 Energy saving



A brand-new polyester and cotton mixed fabric using hydrolyzable, biodegradable polyester of DUPONT's "Biomax". When BioNature is left for long time in a water-rich environment with appropriate temperature and lots of microorganism, 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 the animal or plant.

The amount of carbon dioxide emitted from burning this fabric is less, compared to the emitted amount when burning general fabrics, and combustion calorie is 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 ten months

Eco-materials

EM - 049

Natural Materials

Fabrics

GREENPET:PET bottle-based polyester & plant fiber combined fabric

KURABO INDUSTRIES LTD.

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

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

E-mail uniform_sect@kurabo.co.jp

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

B1 Recyclability

A4 Waste

B7 Use of recycled materials



Combined fabric comprising natural fiber carded with Kurabo's unique technologies, GETTOU(a kind of ginger), bamboo, kenaf, hemp, and polyester, re-using plastic bottles. Product that has acquired "eco-mark", only one environmental label in Japan.



logo

Eco-materials

EM - 050

Natural Materials

Waste paper

WASTE PAPER

Altwater Jakob Pte Ltd

17 Tuas Ave 12, 639037 Singapore

Tel +65 6863 5230 Fax +65 6862 5488

E-mail enquiry@sulo.com.sg

URL www.sulo.com.sg

B1 Recyclability

B3 Resource saving

B6 Environmental purification

B7 Use of recycled materials



Altwater Jakob Pte Ltd, a member of the SULO group, is a leading public waste collector in Singapore. Besides providing refuse collection services, waste paper recovery business is also our forte. The paper recovery business focuses on acquiring of waste papers from various sources, minimize contamination of the waste papers and baling the recovered paper to export to paper mills from all over the world. Some of the waste papers that Altwater Jakob procures and acquires are: OCC, ONP, OMG, SWL, PWC and etc. The methods of acquisition of waste papers are extensive in Altwater Jakob. Altwater Jakob is actively procuring waste paper from the international market, local purchases from rags and bones sellers and direct business deals from commercial organization and manufacturers in Singapore.

The acquired waste papers are then sorted accordingly to its various product grade and contamination level. The recovered papers are then baled and stored in Altwater's owned sheltered warehouse while waiting to be exported to paper mills in Asia and other regions.



Eco-materials

EM - 051

Natural Materials

Food container

Microwavable Disposable Food Container

Microwave Packaging (S) Pte Ltd

196 Pandan Loop, #07-24 Pantech Industrial Complex, 128384 Singapore
Tel; +65 6779 0891 Fax; +65 6775 2719
E-mail; leonard@microwave-packaging.com
URL; www.microwave-packaging.com

B2 Longevity
B3 Resource saving
B4 Higher quality
B7 Use of recycled materials



Raw Material "paper" are grown from trees that are planted on re-cycled land known as reforestation in the US and Europe under ISO 14002 and Forest Resource management A.F and P.A's AFIS' 2002 (Environment Management as well as Sustainable Forest Initiative) Diminishing from cutting trees from nature forests to obtain the raw material to make paper boards. Disposable Food containers made from specially grown trees harvested from recycling and reusing the land that planted them. Achieving Reusing land resources, Reducing depleting nature resources (petrol), and Recycling the paper to other pulp mould products.



Microwave Reheating Food Container for Ready Meals

Eco-materials

EM - 052

Natural Materials

Bio-degradable PSM

PlaStarch Material - PSM

Wuhan Huali Environment Protection Science & Technology Co., Ltd

No. 2 Huashiyuan Northern Road, East Lake High-tech Development Zone, Wuhan China 430223 China
Tel; +86-27-8792 6666 Fax; +86-27-8792 5999
E-mail;
URL; www.psm.com.cn

A1 Global warming
A3 Hazardous substances
A4 Waste
B5 Energy saving



PSM is a bio-degradable material that can be used in many fields such as packaging, pharmaceutical and medical, household appliance, disposable products etc. The characteristics of PSM are as follows:

- Resourceful and reproducible- Plant starch, extract from corn or potato flour, which contains the major raw material of PSM. Such plant starch are known to be rich in nature, regenerative, degradable and it is with low production cost
- No waste water, effluent gas or waste residue discharge in processing which is environmental friendly
- It is oil proof, water proof, non-toxic and with heat and cold resistant (below 20 degrees Celsius and up to 130 degrees Celsius). The PSM based products such as utensils, plates, cups etc are microwaveable.
- Wastes degradable- PSM wastes and PSM products are fully degradable. It can be easily disposed off by buried under ground or by burning with no smog or Chlorofluorocarbons (CFCs) that contributes to global warming.



PSM-Sheet

PSM - Granular

Eco-materials

EM - 053

Natural Materials

Raw Material - Natural Material

AgroResin™ Bonding with Nature

Grenidea Technologies Pte Ltd

67 Ayer Rajah Crescent, #02-07/08/09, Singapore 139950

Tel; +65 6872 0020 Fax; +65 6872 0460

E-mail; info@grenidea.com

URL; www.grenidea.com

A4 Waste

B1 Recyclability

B6 Environmental purification



Grenidea Technologies Pte Ltd is a sustainable material company that transforms agricultural biomass waste to sustainable products whose lifecycle end as healthy composts that nourish lands. AgroResin™ is the agroinnovation of Grenidea. It is compatible to molded pulp manufacturing process and makes strong, lightweight and flexible packaging that protects, presents and promotes products. It is gas permeable yet water resistant. A truly sustainable material, AgroResin™ is 100% renewable, 100% biodegradable, 100% non-GMO. AgroResin™ products meet compostable, biodegradable and home-compostable requirement of EU, Belgium and USA. AgroResin™ complies to FDA & EU food contact standards. Its industry applications are as wide as marketers' creativity and manufacturers' innovation.



Eco-materials

EM - 054

Foams

Polymers, Plastics, Plastic products

Freon-gas-free sophisticated phenolic foam insulation

ASAHI KASEI CONSTRUCTION MATERIALS CORPORATION

2-12-7, Higashi-Shinbashi, Minato-ku, Tokyo, 105-0021, Japan

Tel; 81-3-5473-5321 Fax; 81-3-5473-5285

E-mail;

URL; http://www.asahikasei-kenzai.com

A1 Global warming

B3 Resource saving

B4 Higher quality

B5 Energy saving



The foaming technology was accomplished by the use of combustible hydrocarbon system gas securing the flame resistance of the product. Due to no use of Freon gas as a foaming gas at all, thus it contributes to prevention of destruction of ozone layer and global warming. 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 adiabaticity, significantly administering to high athermalize (energy-saving) of the structures.



NEOMA® FOAM

Eco-materials

EM - 055

Ceramics and Glass

Optical glass materials

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

NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku,
Tokyo, Japan
Tel; 81-3-3214-5311 Fax;
E-mail;
URL; <https://www.nikon.co.jp>

A3 Hazardous substances

A4 Waste

B4 Higher quality

A2 Air pollution



There are more than 100 types of optical glass and, in the past, NIKON used huge amounts of lead as a primary ingredient for about half of these optical glasses, while a small amount of arsenic was used in most types. These two elements have highest risk of damaging to the environment among all of ingredients used for optical glass.

However, we have now developed almost full types of optical glass, being referred to Eco-glass, without using these two elements. We have secured optical performance solely with Eco-glass for most optical apparatus through appropriate optical design.



Lenses and prisms made with Eco-glass

Eco-materials

EM - 056

Ceramics and Glass

Building brick

Crystal Clay CLB-series : ceramic quality blocks

CRYSTAL CLAY CORP.

4-11-4, Roppongi, Minato-ku, Tokyo, Japan
Tel; 81-3-5775-0021 Fax; 81-3-5775-0024
E-mail; sokato@crystalclay.co.jp
URL; <http://www.crystalclay.co.jp/>

A1 Global warming

B3 Resource saving

B5 Energy saving

B7 Use of recycled materials



Environment-friendly

- The product is resource-saving goods, in which the amount of clay was suppressed by the use of 70% of the waste glass.
- By using the waste glass as the raw material, the baking at a low temperature is realized, and thereby, the CO₂ discharge can be reduced in the manufacturing process.

Performance

- On account of its high strength, the blocks are usable at the car-passing zone.
- Because of the property of burned products, the discoloration is small for a long period, and the changes in other properties are also small.
- A large sliding friction makes it hard to slip down.



Crystal Clay CLB-series

Eco-materials

EM - 057

Ceramics and Glass

Building brick

Crystal Cray CT2-series: water- permeable / -retentive blocks

CRYSTAL CLAY CORP.

4-11-4, Roppongi, Minato-ku, Tokyo, Japan

Tel; 81-3-5775-0021 Fax; 81-3-5775-0024

E-mail; sokato@crystalclay.co.jp

URL; <http://www.crystalclay.co.jp/>

A1 Global warming

A3 Hazardous substances

B5 Energy saving

B7 Use of recycled materials



Environment-friendly

- The product is resource-saving goods that suppressed the amount of clay by using the mixture of the glass waste (30%) and the ceramic waste (65%).
- By using the waste glass as the raw material, the baking at a low temperature is realized, and thereby, the CO₂ discharge can be reduced in the manufacturing process.

Performance

- The product is excellent in the following properties: water-permeability, water-retention, lowering of the surface temperature of the road, sound absorption, and heat insulation.
- On account of its high strength, the blocks are usable at the car-passing zone.
- Because of the property of burned products, the discoloration is small for a long period, and the changes in other properties are also small.
- A large sliding friction makes it hard to slip down.



Crystalclay CT2 Series

Eco-materials

EM - 058

Ceramics and Glass

Tile

Crystal Clay FT-series: stoneware quality tiles

CRYSTAL CLAY CORP.

4-11-4, Roppongi, Minato-ku, Tokyo, Japan

Tel; 81-3-5775-0021 Fax; 81-3-5775-0024

E-mail; sokato@crystalclay.co.jp

URL; <http://www.crystalclay.co.jp/>

A1 Global warming

B3 Resource saving

B5 Energy saving

B7 Use of recycled materials

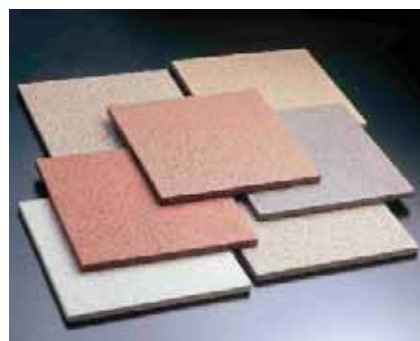


Environment-friendly

- The product is resource-saving goods, in which the amount of clay was suppressed by the use of 60% of the waste glass.
- By using the waste glass as the raw material, the baking at a low temperature is realized, and thereby, the CO₂ discharge can be reduced by 32% in the manufacturing process.

Performance

- The goods are excellent in the durability.
- A large sliding friction makes it hard to slip down.
- Because of the property of burned products, the discoloration is small for a long period, and the changes in other properties are also small.



Crystalclay FT Series

Eco-materials

EM - 059

Ceramics and Glass

Tile

Crystal Clay FP-series : porcelain quality tiles

CRYSTAL CLAY CORP.

4-11-4, Roppongi, Minato-ku, Tokyo, Japan

Tel 81-3-5775-0021 Fax 81-3-5775-0024

E-mail sokato@crystalclay.co.jp

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

A1 Global warming

B3 Resource saving

B5 Energy saving

B7 Use of recycled materials

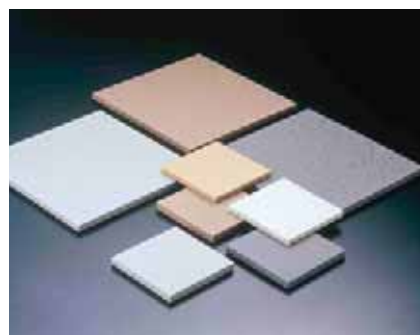


Environment-friendly

- The product is resource-saving goods, in which the amount of clay was suppressed by the use of 60% of the waste glass.
- By using the waste glass as the raw material, the baking at a low temperature is realized, and thereby, the CO₂ discharge can be reduced in the manufacturing process.

Performance

- The goods are excellent in the durability.
- A large sliding friction makes it hard to slip down.
- Because of the property of burned products, the discoloration is small for a long period, and the changes in other properties are also small.



Crystalclay FP Series

Eco-materials

EM - 060

Ceramics and Glass

Artificial lightweight aggregate

Substitution of aggregate made from coal ash for natural aggregate

Kajima Corporation

2-7, Motoakasaka 1-chome, Minato-ku, Tokyo, Japan

Tel; 03-3404-3311 Fax; 03-3470-1444

E-mail;

URL; <http://www.kajima.co.jp/>

A4 Waste

A5 Resource consumption

B3 Resource saving

B4 Higher quality



Technologies to deal with coal ash discharged from thermal power plants are important. Jlite was developed as an artificial aggregate using shale powder, which melts at approximately 1100°C (requiring less energy) and coal ash, making use of the lightweight characteristic of the aggregate in concrete. As a result, the development of a concrete aggregate using coal ash in large quantity realized the expectation of manufacturing capability of the artificial aggregate on existing artificial lightweight aggregate manufacturing plant. Jlite was comparable to JIS A 5002 specifications on the artificial lightweight aggregate.



Jlite

Eco-materials

EM - 061

Ceramics and Glass

Soil conditioner

KATATUMURI The foundation improvement material

BAIO WORTH Co.,Ltd.

350, Sodai, Mino-shi, Gifu, Japan

Tel; 81-575-33-2714 Fax; 81-575-33-2612

E-mail; s-ogawa@ogawakenzai-mino.co.jp

URL;

A4 Waste

B1 Recyclability

B6 Environmental purification

B7 Use of recycled materials



The object for the character of the improvement--it burries and they are an object for return, and the improvement material with it covers and which it used for hardening. It is improvement material for carrying out effective use of the muddy soil, which comes out of pond, river, lake, construction site, etc.,. The weak soil, and surplus soil. It solidifies enough in the amount of addition of ten to about twenty percent of the soil. Moreover, incineration ashes, coal ashes, recycling gypsum, etc., of paper manufacture sludge are the main ingredient of this product of this itself is a recycled product. And 6 chromium is not included as a feature of this product. -PH also becomes neutrality immediately again. (non-cement)



This is a bag of 4Kg, others 10kg, 20kg, 1t.

Eco-materials

EM - 062

Composites

Paper for printing

OPER Premier

Nippon Paper Industries Co, Ltd.

1-12-1, Yurakuchou, Chiyodaku, Tokyo 100-0006 Japan

Tel Fax

E-mail

URL

A4 Waste

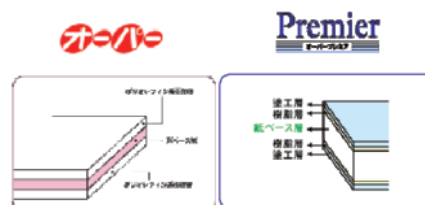
B3 Resource saving

A1 Global warming

B5 Energy saving



OPER Premier has a coating on top of the resin layer that exhibits water resistance. This slashes ink drying time, facilitating printing on both sides. In addition, the paper is compatible with soy ink as well as ordinary ink



Eco-materials

EM - 063

Composites

Eslon Neo-Lumber FFU

Sekisui Chemical Co., Ltd.

2-3-17, Toranomom, Minato-ku, Tokyo, Japan

Tel; Fax;

E-mail; kankyo@sekisui.jp

URL; <http://www.sekisui.co.jp/>

Eslon Neo Lumber FFU (Fiber-reinforced Foamed Urethane) is an anti-corrosive and light-weight material that is made with formed urethane reinforced by long glass fiber strand. It is a very durable, excellent workability just like the wood, and great water resistance with much less maintenance. Therefore, Eslon Neo Lumber has been gaining a great amount of attention as to replace many conventional materials such as railroad sleepers.

Ecological aspects;

- Help preserving forest.
- LCC (Life Cycle Cost) can be reduced because of less maintenance and its excellent durability.
- Can be reused by repair.
- Can be recycled from grinding-up granules.
- Environmental impact is much less because of no termite repellents and preservatives.

Applications;

- Railroad sleepers.
- Deodorizing lids for water treatment facility.
- Anchor walls for civil engineering.
- Water mills.
- Balconies.
- Flooring boards.
- Supporter for floor.
- Bulkheads.
- Track beds.

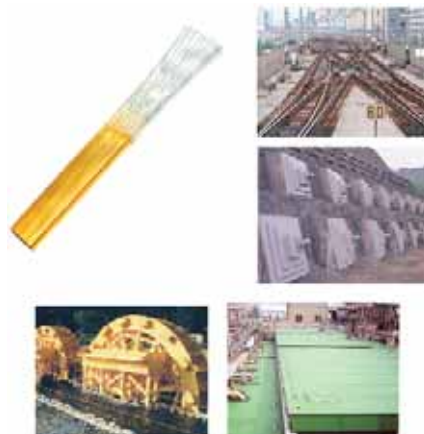
Eslon Neo-Lumber FFU

A3 Hazardous substances

A5 Resource consumption

B2 Longevity

B3 Resource saving



Eco-materials

EM - 064

Composites

Adhesives

Water-based Emulsion adhesive products

Bridgestone Corporation

10-1, Kyobashi 1-chome Chuo-ku, Tokyo, 104-8340 Japan

Tel; 81-45-825-7585 Fax;

E-mail;

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

A2 Air pollution

A3 Hazardous substances

A4 Waste

B3 Resource saving



These are pressure-sensitive adhesive (PSA) products which have no organic solvent. Conventional PSA has organic solvent, which is the half weight of undiluted solution of adhesive. 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 old one. It is very easy on the environment and human being. New PSA is applicable to various products. For example, the polyurethane foam, polyethylene foam, and EPDM foam.



Eco-materials

EM - 065

Composites

Weather Act Treatment

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chikyu-kan@sumitomometals.co.jp

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

Coated steel

A4 Waste

A5 Resource consumption

B2 Longevity

B3 Resource saving



Weather Act treatment is a surface treatment technology that generates an early layer of rust with protective properties against atmospheric corrosion on the weather-resistant steel surfaces used in land-based steel structures. The application of this technology contributes to the minimization of maintenance by generating an early protective layer of rust that inhibits corrosion, inhibiting loose scale and flaky rust, improving halotolerance, resolving problems observed when weather-resistant steel is used exposed and expanding the usable range of weather-resistant steel.



Weather-act Surface Treatment

Eco-materials

EM - 066

Composites

Halogen-free CEM-3

Matsushita Electric Works, Ltd.

1048, Kadoma, Osaka, 571-8686, Japan

Tel 81-6-6908-1131 Fax

E-mail

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

Accessories of household electric appliances

A1 Global warming

A5 Resource consumption

A3 Hazardous substances



Matsushita's new CEM-3 is an environmentally-conscious Copper Clad Laminate, and is produced with epoch-making epoxy resin system without any use of organic solvent and unparalleled continuous molding process. It also doesn't need any hot press process. This unique production process exhausts neither organic solvents nor solvent gases. Moreover, this process consumes only 1/4 in energy and discharges only 1/4 in CO₂ in the atmosphere in comparison with the conventional processes. Halogen-free material; Non-Use of Specific Chemical Substances*

(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Halogen-free CEM-3 R-1586S

Eco-materials

EM - 067

Others

Textile mill products

Features and application technology of RuBA®-S

TAKAYASU CO.,LTD

3-47,MURASAME-CHO,SOHARA, KAKAMIGAHARA,
GIFU, 504-0828 JAPAN Japan

Tel Fax

E-mail

URL

A1 Global warming

A3 Hazardous
substances

B1 Recyclability

B5 Energy saving



RuBA®-S is a sound absorbing material with the property of heat insulation or heat resistance, which is made by use of KEVLAR®. This sound-absorbing material has an originally developed coat, which consists of the laminate of non-woven fabric that was made of the fiber-shaped resin. It shows an enough effect even in volume and weight which are less than usual, and contributes to energy saving. This fiber composite contributes to the reduction of environmental load as a substitute for glass wool. And, it serves to improve the environmental performance of sound absorbing material and heat insulating material through the weight reduction. There are instances in which RuBA®-S was already used as a heat-insulating material for clean room and as a sound-absorbing material for automobile.

*1 RuBA®-S is a trademark of the goods by joint development of TAKAYASU Co. Ltd, TORAY-DuPont Co. Ltd, and ICHIMURA SANGYO Co. Ltd.

*2 KEVLAR® is a trademark of the goods of DuPont Co. Ltd.



Eco-materials

EM - 068

Others

Alternative Fuel

SlurMix®:Eco-friendly, designed for steel and cement industry

AMITA CORPORATION

28, Sanban-cho, Chiyoda-ku, Tokyo, Japan

Tel 81-3-5215-8255 Fax 81-3-5215-8256

E-mail info@amita-net.co.jp

URL http://www.amita-net.co.jp

A1 Global warming

A4 Waste

A5 Resource
consumption

B1 Recyclability



AMITA has developed an easy-to-handle auxiliary fuel called SlurMix for the steel and cement industry, made by compounding and homogenizing certain types of waste oils, oil-containing sludge and waste solvents, all by-products which previously could only be disposed through incineration. The residue remaining after combustion of SlurMix can be used as a raw material in manufacturing cement. SlurMix has about 4,500kcal/kg of calorific value so that it could be an alternative fuel of coal which leads reduction of green house gas emission and saving natural resources. This means that SlurMix ultimately results in zero waste product-it realizes 100% recyclability.



SlurMix®

Eco-materials

EM - 069

Others

Polymers, Plastics, Plastic products

SCF(Super Clean Foam), sealing material for electronics

Nitto Denko Corporation

HERBIS OSAKA, 2-5-25, Umeda, Kita-ku, Osaka,
530-0001 Japan
Tel 81-6-6452-2101 Fax 81-6-6452-2102
E-mail
URL <http://www.nitto.co.jp>

A3 Hazardous substances

B6 Environmental purification

B7 Use of recycled materials



This is a halogen-free, phosphorous-free foam sealing material for electronics. Foam sealing material is what is put the gap for dust-proof, impingement protection, vibration isolation. Previously, halogen group flame retardants were used where high flame resistance(UL94HF-1) is required. SCF offers high flame resistance(UL94HF-1) without the use of harmful substances and also uses thermoplastic resin of high purity. The bubble diameter is as short as 80 micrometer, providing a downsized/weight-saving approach.



SCF(Super Clean Foam)

Eco-materials

EM - 070

Others

Attachments and accessories of machines

PURETECT Cloth-Coating Agent To Reduce Odor And VOC

HANITSU TRADE Co., Ltd.

Morikawa Bldg. 2F, 1-30-6, Nishigotanda,
Shinagawa-ku, Tokyo, Japan
Tel 81-3-5437-6721 Fax 81-3-5437-6722
E-mail
URL

A2 Air pollution

A3 Hazardous substances

A4 Waste

B5 Energy saving



PURETECT decomposes and removes all kinds of odor in daily life including smells of smoke, pets and toilet. It can also deter the growth of mold and mites, thus creating comfortable living space. In newly-built houses and other buildings, VOCs (volatile organic compounds) emitted from petrochemical building materials, paints and adhesives sometimes cause such symptoms as headache, nausea, and allergy. PURETECT decomposes those VOCs and reduces their concentration. All you have to do is apply PURETECT coating to the wallcloth. Once applied, the coating effect will last for about 5 years in the kitchen and 10 years in the bedroom. You can feel safe in using PURETECT, as it's free of chemicals and other substances hazardous to the human body.



PURETECT

Eco-materials

EM - 071

Composites

Particle board, Glued laminated timber

New timber made from architectural waste of woods

Sekisui Chemical Co., Ltd.

2-3-17, Toranomom, Minato-ku, Tokyo 105-8450 Japan

Tel Fax

E-mail karukaya001@sekisui.jp

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

A4 Waste

B1 Recyclability



This product is a timber for pillars and beams made from architectural waste of woods. The current waste recycling rate is about 40%, which means that about 60% of the waste is burned or used for landfill. Using this timber could increase the recycling rate of architectural waste of woods.



Eco Value Wood

2

Eco-components

- I Construction Components
- II Electrical and Electronic Components
- III Semiconductor Manufacturing Devices
- IV Machine Parts
- V Automobile Parts
- VI Packaging
- VII Others

Eco-components

EC - 001

Construction Components

Interior and exterior building materials

Interior/exterior materials from reproduced Al /discarded glass

Obayashi Corporation, Technical
Research Institute
640, Shimokiyoto 4-chome, Kiyoshe-shi,
Tokyo, Japan
Tel 81-424-95-1265 Fax 81-424-95-0908
E-mail mitani.hitofusa@obayashi.co.jp
URL <http://www.obayashi.co.jp/>

- ▲ A4 Waste
- B1 Recyclability
- B3 Resource saving
- ▼ B7 Use of recycled materials



Alcelite is an interior and exterior finishing material that uses a glass balloon as the primary material. It is made from reproduced aluminum and discarded glass. Its raw materials include recycled products and, in addition, aluminum can be extracted through fusion by heating after use, allowing it to be re-used.



ALCELITE G type

Eco-components

EC - 002

Construction Components

X-ray Tube Assembly

Oil-free X-ray tube with consideration for resources and the environment

TOSHIBA ELECTRON TUBE & DEVICE CO.LTD
1385, Simoishigami, Otawara-Shi, Tochigi 324-8550,
Japan
Tel 81-287-26-6557 Fax 81-287-26-6060
E-mail
URL <http://www.toshiba-tetd.co.jp>

- ▲ A3 Hazardous substances
- B4 Higher quality



Conventional rotary-anode type X-ray tube uses insulation oil as its coolant. By changing the oil to an aqueous coolant, we have developed an X-ray tube that has a remarkably high cooling rate. This is world's first oil-free technology for X-ray tube. Moreover, by use of the dynamic-pressure slide bearing, which uses liquid-metal lubrication and world's first both-ends-support, the high-speed rotation of 10,000 rounds per minutes has become possible in a stabilized condition. The size of X-ray focus has also become smaller than the conventional size. Consequently, enhanced high-performance, miniaturization, and decrease in weight were achieved on X-ray tube. Since the aqueous coolant is much more biodegradable than insulation oil, the environmental risk in unusual case should be reduced. The cooling performance and the focus size of the developed X-ray tube were respectively 2 and 4/5 in comparison with those of the conventional style. And, the factor was evaluated to be 2.16. The factor is given as a ratio of environmental efficiency of the product to the efficiency of the standard product.



CSRX-9266HE-H

Eco-components

EC - 003

Construction Components

Recycling plant

Recycling waste for Construction Industry; recycled aggregates supplier.

Samgreen Pte Ltd
51 Kranji Crescent, 728661 Singapore
Tel +65 6367 2377 Fax +65 6365 0512
E-mail
URL

- ▲ A4 Waste
- B1 Recyclability
- B3 Resource saving
- ▼ B7 Use of recycled materials



SamGreen provides collection service for all types of cementitious and bituminous based Construction and Demolition waste. These products are sent to our yard in Kranji for screening and filtering of un-recyclable wastes, followed by crushing and sorting into various sized aggregate products. We supply and deliver recycled aggregates ranging from 5mm up to 20mm according to our client's requirement. Our aggregates are being used by Clients in non-structural concrete components, road base and applications in various road levels. SamGreen also have our very own in-house testing and research capabilities. This allows us to constantly improve our formulation and develop innovative usages for new recycled material. We are constantly seeking to value-add to the existing range of products in accordance to the market needs and demands. By recycling the construction wastes, we have effectively reduced the need for landfill in land scarce Singapore. The innovative use of recycled aggregates has also reduced our dependency on imported aggregate materials from neighboring country, in turn conserving the limited resources of granite aggregate and bituminous products.



Eco-components

EC - 004

Electrical and Electronic Components

Miniature motors

Brushless Motor with internal drive; B1-G,B3-G series

Matsushita Electric Industrial Co.,LTD.
Motor Company
7-1-1 Morofuku, Daito City, Osaka, 574-0044 Japan
Tel 81-120-70-3799 Fax 81-72-870-3120
E-mail
URL <http://industrial.panasonic.com/>

- ▲ A1 Global warming
- B4 Higher quality
- B5 Energy saving



It is a high efficiency DC brushless motor of drive circuit integrating type which is widely used for the industry. The equipment development makes easy to compose at the conventional induction motor and in the identical shape, to replace a motor only and to become energy saving. The loss is reduced to about a half. The downing with 23% of volume and 28% of mass compared with the conventional induction motor + inverter is achieved. Position control is available and the speed control range is becoming more than 10 times. It is used for conveyors and automatic doors and so on. Non-Use of Specific Chemical Substances *
(*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Drive circuit integrate type motor (MBMC5A2AXB) and the setting receptacle of the option

Eco-components

EC - 005

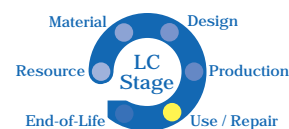
Electrical and Electronic Components

Monitor and control equipment

Compact Programmable Display GT11

Matsushita Electric Works, Ltd.
1048, Kadoma, Kadoma-shi, Osaka, 571-8686 Japan
Tel 81-6-6908-5329 Fax 81-6-6906-1061
E-mail
URL <http://www.nais-e.com/>

- ▲ B5 Energy saving
- ▲ A1 Global warming
- ▲ B3 Resource saving
- ▼ B4 Higher quality



- By adopting LED in the LCD backlight
 1. life is lengthened and the lamp replacement is reduced,
 2. low power consumption of 1/2 compared with the conventional "Cold Cathode Fluorescent Lamp model" (2.4W or less) is achieved.
- The number of components is reduced by 40% and the volume is also reduced by 16% compared with the conventional product "GT10".
- Non-Use of Specific Chemical Substances*
(*Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS)



AGT2030H

Eco-components

EC - 006

Electrical and Electronic Components

Secondary batteries

NAS battery systems

Tokyo Electric Power Company
1-1-3, Uchisaiwai-cho, Chiyoda-ku, Tokyo, 100-8560, Japan
Tel 81-3-4216-1111 Fax 81-3-4216-6338
E-mail kobayashi.kiminori@tepco.co.jp
URL <http://www.tepco.co.jp/en/index-e.html>

- ▲ A1 Global warming
- ▲ B3 Resource saving



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 lead-acid battery. This technology is primarily being introduced into factories, office buildings and sewage treatment facilities that wishing to economize their energy cost through load leveling, and into semiconductor plants and customers that need high-quality and highly reliable electric power.



NAS battery system

Eco-components

EC - 007

Electrical and Electronic Components

Semiconductor devices

Single Chip Inverter IC

Hitachi, Ltd.

6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-8280 Japan

Tel Fax

E-mail

URL <http://www.pi.hitachi.co.jp/ps/images/pdf/icapj2.pdf>



Hitachi intelligent power IC.

Making of the logic element and the power switching element to the single-chip is possible, and there is no mutual interference between elements, the element, and the substrate. The Hitachi high resisting pressure monolithic IC is intelligent power IC to develop by an original dielectric substance separation (DI) technology. Even if a high resisting pressure and the large current output circuit exist together to the logic circuit, it is possible to make it to IC with between elements and the element because of the structure of there is no latch-up between substrates. It is possible to miniaturize it compared with the past, discrete composition substrate hybrid integrated circuit.



Single Chip Inverter IC

Eco-components

EC - 008

Electrical and Electronic Components

Liquid crystal elements, module

Medium-size TFT

Hitachi Displays, Ltd

6-2 Kanda Neribeicho 3, Chiyoda-ku,

Tokyo, 101-0022 Japan

Tel 81-3-4554-5000 Fax

E-mail

URL <http://www.hitachi-displays.com/en/>



Description of Products

B5-size product optimal to high-luminance TFT display for industrial or entertainment purpose.

Development Concept

Energy and resources per intensity are saved through the improved intensity performance.



TX26D01VM1

Eco-components

EC - 009

Electrical and Electronic Components

Liquid crystal elements, module

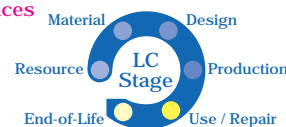
Low-temperature poly-silicon liquid-crystal display not using mercury

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
URL http://www.tmdisplay.com/tm_dsp/jp/index.html

▲ A3 Hazardous substances

B3 Resource saving

B5 Energy saving



This product is a liquid-crystal display that is 11.1-type and wide-size (16:9). We used LED as the light-source of backlight and realized "mercury-less". By the help of thin-glass technology, a display of thin thickness and light weight was produced; the thickness is 2.75 mm, a half of the previous product and the weight is 146 g, 65% of the previous one. Mass production of low temperature poly-silicon TFT-LCD is our company's core technology. By making it progress further, we realized ultimate thin thickness, light weight and power saving. Flat structure of the display is made by placing a driving-circuit board on the same surface as that of liquid crystal. Optical performance of the same level as that of the previous cathode-ray tube is being kept by the combination of the thin LED backlight and the glass-polishing technique.



LCD module with LED-based Backlight System

Eco-components

EC - 010

Electrical and Electronic Components

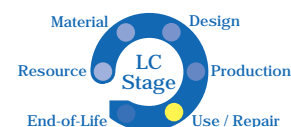
Electronic parts

Neodymium base Rare-earth Permanent Magnets "NEOMAX"

NEOMAX, Ltd.
Shinjuku Park Tower 9F, 3-7-1 Nishishinjuku,
Shinjuku-ku, Tokyo, 163-1009 Japan
Tel 81-3-5326-270 Fax 81-3-5326-2744
E-mail
URL http://www.neomax.co.jp/english/magu_e.html

▲ B4 Higher quality

B5 Energy saving



NEOMAX magnets, comprised primarily of iron, boron, and rare earth elements (principally neodymium), are the worlds strongest and highest-performance permanent magnets. NEOMAX has made possible smaller and more advanced electronic devices than everbefore. The company was a pioneer in the field of magnet technology, and has continuously met industry's needs for advanced materials and technology, including reliable surface processing techniques. With NEOMAX, we created a new class of mass-produced magnet.



NEOMAX

Eco-components

EC - 011

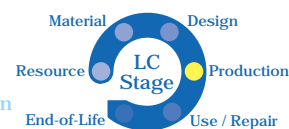
Electrical and Electronic Components

Solar Modules

Harnessing Energy From the Sun with Sunseap Solar Modules

SUNSEAP ENTERPRISES PTE LTD
Blk 3 Alexandra Distripark, #09-09
Pasir Panjang Road, 118483 Singapore
Tel +65 6271 6631 Fax +65 6272 5033
E-mail enquiries@sunseap.com
URL www.sunseap.com

- ▲ B3 Resource saving
- B4 Higher quality
- B5 Energy saving
- ▼ B6 Environmental purification



Sunseap solar panels achieve higher power output because single-crystalline silicon technology, that offers better efficiency than multi-crystalline or amorphous silicon and other thin film technologies, is preferred.

The silicon cells are wired together in two strings and are each protected by a bypass diode against damage through hot spots. The module protects the solar cells from moisture, gives UV stability and allows for thermal expansion. The front covering is made of top quality tempered solar glazing. The solar glazing and the solar cell laminate are joined together into a unit and mounted in a torsion resistant frame, made of aluminum. Solar panels are manufactured in Singapore in adherence to stringent quality standards.



Sunseap Monocrystalline Modules

Eco-components

EC - 012

Semiconductor Manufacturing Devices

Semiconductor and IC measuring instruments

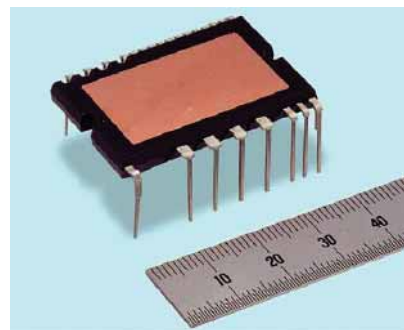
Intelligent Power Module

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL
<http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

- ▲ B5 Energy saving
- A3 Hazardous substances
- A5 Resource consumption
- ▼ B4 Higher quality



1. Intelligent Power Modules are the very key devices for energy saving of almost all kinds of electric appliances or machines and have been delivered around the world.
2. New insulation package technology with high heat dissipation allows about 60% super-miniaturization compared to previous designs.
3. Uses completely lead-free solder for chip connections and terminal plating inside product.



Dual-in-line Package Intelligent Power Module

Eco-components

EC - 013

Semiconductor Manufacturing Devices

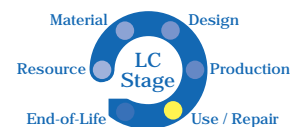
Light emitting diode

High bright lighting source, 'LED Line Lighting Sources'

Panasonic Semiconductor Opto Devices Co.,Ltd.
1786-6 Tokushige, Ijuin-cho, Hioki-city, Kagoshima,
899-2595 Japan
Tel 81-99-273-2222 Fax 81-99-246-5238
E-mail
URL <http://panasonic.co.jp/semicon/pscod/>

▲ B5 Energy saving

▲ A3 Hazardous substances



High efficiency light source of all-in-one structure which utilizes a packaging technology for exclusive use in backlight modules. It achieves 30% down of power consumption compared with regular products.

-Features-

- 1)It can realize a high brightness and thin backlight module.
- 2)High display quality due to wide light distribution.
- 3)Easy built-in into backlight module due to one-body structure.



PRODUCT NUMBER : LNR0L4702

Eco-components

EC - 014

Semiconductor Manufacturing Devices

Semiconductor devices

CCD Image-sensor that realized miniaturization

Matsushita Electric Industrial Co.,Ltd.,
Semiconductor Company
1 Kotari-yakemachi, Nagaokakyo City, Kyoto,
617-8520 Japan
Tel 81-75-956-9347 Fax 81-75-957-3682
E-mail
URL <http://panasonic.co.jp/semicon/>

▲ B3 Resource saving

▲ B4 Higher quality

▲ B5 Energy saving



This CCD Image-sensor is equipped with the following characteristics of miniaturization such as the smallest 1/2.5 inch chip-size of 6.0M-pixels CCD Image-sensor for DSC that enables miniaturization of a high-pixel camera set.



1/2.5 inch 6.0M-pixel CCD Image-sensor

Eco-components

EC - 015

Semiconductor Manufacturing Devices

Metal oxide semiconductor IC

Low power System LSI for DVD/HDD Recorder

Matsushita Electronic Industrial Co., Ltd.

1 Kotari-yakemachi, Nagaokakyo City, Kyoto,

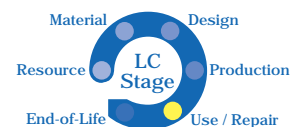
617-8520 Japan

Tel 81-75-951-8151 Fax

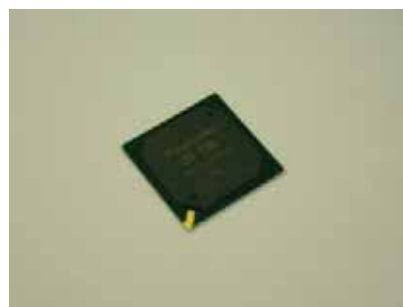
E-mail

URL <http://www.panasonic.com/industrial/semi/>

▲ A1 Global warming
A3 Hazardous substances
B5 Energy saving



- 1 The world's first 65nm ultra fine mass-production process i adopted.
- 1 The number of memories mounted in DVD recorders is reduced by using the Unified Architecture.
- ✧ Reduction of electricity consumption
- ✧ Non-Use of Specific Chemical Substances*
(*Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Products/Model: System LSI (MN2DS0015)

Eco-components

EC - 016

Semiconductor Manufacturing Devices

Printed circuit boards

Printed Wiring Board

Hitachi Chemical Company, Ltd.

2-1-1, Nishisinnjyuku, Shinnjyuku-ku, Tokyo,

163-0449 Japan

Tel Fax

E-mail

URL <http://www.hitachi-chem.co.jp/japanese/index.html>

▲ B4 Higher quality
B5 Energy saving



The low elasticity resin system can bend it.
It is excellent in the size stability by the adoption of the ultra thin glass crossing. Moreover, it is possible to correspond to the process of past RIDGID PWB. It is possible to excel in heat, and to correspond also to free Cou of lead degree.



Printed Wiring Board

Eco-components

EC - 017

Machine Parts

Thermo-fin

Hitachi Cable., Ltd.
9-7, Ikenohata 2-chome, Taito-ku, Tokyo, Japan
Tel 81-29-826-7429 Fax
E-mail
URL <http://www.hitachi-cable.co.jp/>

Rolled and drawn copper products

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B5 Energy saving



Making about 30% efficient is achieved because of the processing of the ditch in the copper pipe.
The surface area on the inside is increased because a detailed ditch is processed in the copper pipe, and making about 30% efficient is achieved by the effect of the refrigerative of the condensation promotion.
Only the copper that can be recycled by 100.



Thermo-fin

Eco-components

EC - 018

Machine Parts

Two-Stage Rotary CO₂ Compressor

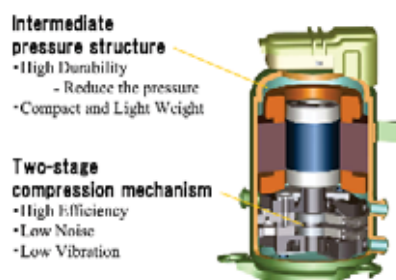
SANYO Electric Co.,Ltd.
1-1,Sanyo-cho,Daito City,Osaka 574-8534, Japan
Tel 81-72-870-7142 Fax 81-72-870-7491
E-mail hira074299@sanyo.co.jp
URL <http://www.sanyo.co.jp/>

Compressor

- ▲ A1 Global warming
- ▲ B3 Resource saving
- ▲ B4 Higher quality
- ▲ B5 Energy saving



Sanyo two-stage rotary CO₂ compressor is designed to work with natural refrigerant CO₂, which has properties of ODP=0 and GWP=1.
The Sanyo's unique two-stage compression mechanism and internal intermediate pressure structure achieved high-efficiency and compact, light weight design.



Sanyo Two-stage rotary CO₂ compressor

Eco-components

EC - 019

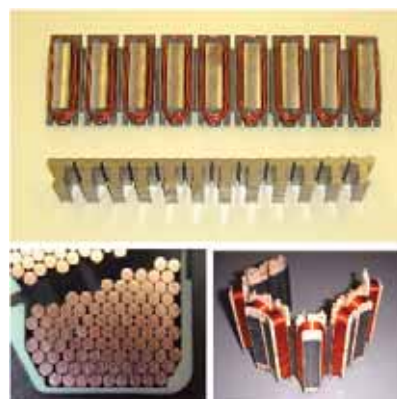
Machine Parts

Eco-friendly motor with High efficiency and reduced size

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

Motors account for about 50% of electrical consumption in Japan. The Poki Poki Motor® (= name in Japan) is based on a production technology that was developed in 1995 to boost both performance and manufacturing productivity. This motor is produced by unique method developed by Mitsubishi Electric of winding the coils around the stator core and then bending it into a round shape, allowing for high-speed winding during production. The higher coil density makes these motors more efficient and compact. These motors are being used in many products today, from air conditioners and other home appliances to elevators.

Small motors



Poki Poki Motor ®

Eco-components

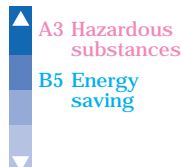
EC - 020

Machine Parts

Motor vehicle parts and accessories

Power cable Harness for Hybrid Vehicles

Hitachi-Cable,Ltd. Electronic & Automotive Products Group
1-6-1, Otemachi, Chiyoda-ku, Tokyo, Japan
Tel 81-3-5252-3438 Fax 81-3-3215-1630
E-mail kondo.yasuhiro@hitachi-cable.co.jp
URL <http://www.hitachi-cable.co.jp/> (Japanese)

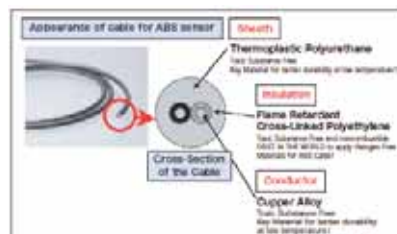


Ecological Cable with Fine Durability for Vibration and Bending at Low Temperature.

Halogen Free Ecological Cable (Halogen cause toxic substance in combustion.) Keep outstanding durability for bending and vibration under -40~-30°C(-22~-62°F)

Use of fine materials for small diameter cable corresponded to small Active ABS sensor¹⁾

¹⁾A Generic term for sensors using semiconductor device such as Hall IC



Power cable Harness

Eco-components

EC - 021

Machine Parts

Brake hoses

Hitachi Cable., Ltd.
1-6-1, Otemachi, Chiyoda-ku, Tokyo, Japan
Tel Fax
E-mail
URL <http://www.hitachi-cable.co.jp/>

Motor vehicle parts and accessories



New surface treatment metal fittings that do not use hexavalent chromium.
Low expansiveness and long life when pressurizing it by material development and reviewing material composition.
The energy saving is achieved by developing a precise, cold, forged manufacturing method of metal fittings.



Brake hoses

Eco-components

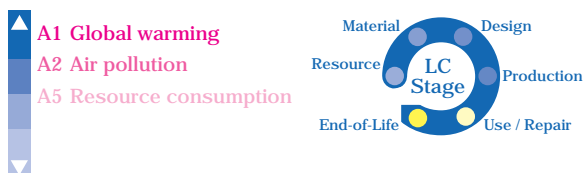
EC - 022

Automobile Parts

Tire for Super Single Drive Axle GREATEC

Bridgestone Corporation
10-1, Kyobashi 1-chome Chuo-ku,
Tokyo, 104-8340 Japan
Tel 81-3-3563-6972 Fax 81-3-3563-1165
E-mail
URL <http://www.bridgestone.co.jp/english/index.html>

Tires for trucks and buses



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 495/45R225 for Truck

Eco-components

EC - 023

Automobile Parts

Tires for trucks and buses

Fuel economy Truck and Bus Tires ECOPIA

Bridgestone Corporation
10-1, Kyobashi 1-chome Chuo-ku,
Tokyo, 104-8340 Japan
Tel 81-3-3563-6972 Fax 81-3-3563-1165

E-mail

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

- ▲ A1 Global warming
- ▲ A2 Air pollution
- ▲ A5 Resource consumption
- ▼ B5 Energy saving



It is necessary to develop the new generation tire for fuel saving and preserving environment of the earth. Especially, it is useful for truck and bus which are gas-guzzling cars to reduce the rolling resistance of its tires.

Bridgestone corporation has developed the low rolling resistance truck and bus tires, and has already launched to the market, dubbed ECOPIA line. ECOPIA has superior low rolling resistance for a long haul users keeping basic tire performances.



ECOPIA 11R225 for Truck

Eco-components

EC - 024

Automobile Parts

Tires for passenger car

SSR (Self Supporting Runflat Tire)

Bridgestone Corporation
10-1, Kyobashi 1-chome Chuo-ku,
Tokyo, 104-8340 Japan
Tel 81-3-3563-6972 Fax 81-3-3563-1165

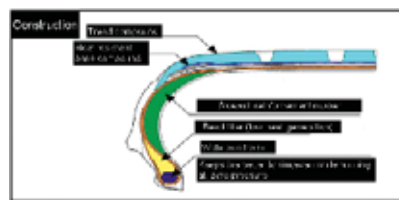
E-mail

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

- ▲ A4 Waste
- ▲ A5 Resource consumption
- ▼ B3 Resource saving
- ▼ B5 Energy saving



They can keep a tire functioning to drive a car safely at a specified speed for a specified distance after a loss of tire pressure. Resources can be saved by eliminating the need for a spare tire with a wheel, which are often discarded even in mint condition. (90% of spare tires have been discarded in mint condition.)



Eco-components

EC - 025

Automobile Parts

Constant Velocity Joints, E-series

Constant velocity joints for drive shaft : Lightweight, compact, high efficiency

NTN Corporation

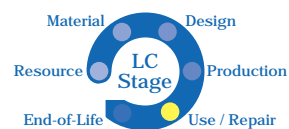
1-3-17, Kyomachibori, Nishi-ku, Osaka-shi, Osaka,
550-0003, Japan

Tel 81-6-6443-5001 Fax

E-mail

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

▲ A5 Resource consumption
B3 Resource saving



Constant velocity joints are used to smoothly transmit engine torque to tires. We developed E-series constant velocity joints to be highly efficient while smaller and lighter. Traditionally, six balls were used for the joints, but this system uses eight balls. These products provide high levels of functionality and environmental solutions by offering reduced weight, compactness, and high transmission efficiency. And also to reduce environmental impact, lead-free grease is used



Constant Velocity Joints, E-series

Eco-components

EC - 026

Automobile Parts

Diesel engines for motor vehicles

Low fuel consumption common rail diesel engine

Toyota Motor Corporation

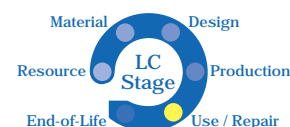
1, Toyota-cho, Toyota-shi, Aichi, Japan

Tel 81-565-23-1341 Fax 81-565-23-5754

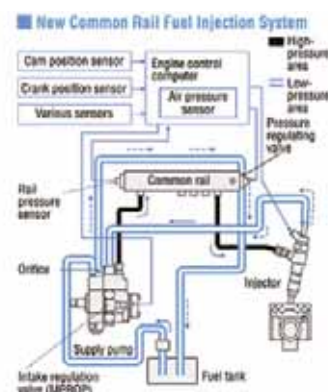
E-mail satoshi_aida@mail.toyota.co.jp

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

▲ A1 Global warming
B5 Energy saving



The common rail fuel injection system ensures stable fuel injection pressure even at low gear without any effect on the engine. This is due to the storage of high pressure fuel produced with a pump within common rail. The direct-injection diesel engine achieves low fuel consumption and features a turbocharger with intercooler.



common rail fuel injection system

Eco-components

EC - 027

Automobile Parts

Parts of motor vehicles/motorcycles

Automobile Electronic Controller

Hitachi, Ltd.

1-18-13, sotokanda, chiyoda-ku, tokyo Japan

Tel 81-3-3258-1111 Fax

E-mail

URL <http://www.hitachi.co.jp/Div/apd/en/index.html>



A5 Resource consumption

B3 Resource saving



Description of Products

High-reliability electronic control unit like an automobile engine controller.

Development Concept

Compact, advanced, lightweight controller based on high-density packaging.



MEC31-010

Eco-components

EC - 028

Automobile Parts

Parts of motor vehicles/motorcycles

Pulley Assy-VTC

Hitachi, Ltd.

1-18-13, sotokanda, chiyoda-ku, tokyo Japan

Tel 81-3-3258-1111 Fax

E-mail

URL <http://www.hitachi.co.jp/Div/apd/en/index.html>



A3 Hazardous substances

A5 Resource consumption

B3 Resource saving



Description of Products

VTC designed for continuously controlling the phase of the intake valve timing in the automobile engine depending on the load conditions, improving the torque/fuel efficiency and reducing the volume of discharged gas.

Development Concept

Lightweight, compact VTC that reduces the impact to the environment by restricting the use of harmful substances.



HR type

Eco-components

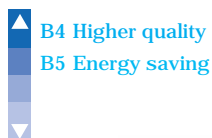
EC - 029

Automobile Parts

Parts of motor vehicles/motorcycles

On-board Beacon for VICS

Hitachi, Ltd.
1-18-13, Sotokande, Chiypoda-ku, Tokyo,
101-8608 Japan
Tel Fax
E-mail
URL



On-board Beacon which can contribute to Ecology through reduction of CO₂ by traffic congestion easing.
Toxic substance reduction by unleading of solder and used parts.
Reduction of power consumption by 6%¹⁾.
Realization of reduction in size and weight, reducing mass by 31% and volume by 3%¹⁾.



On-board Beacon for VICS

Eco-components

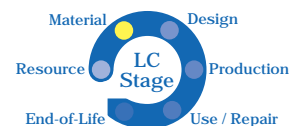
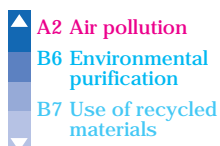
EC - 030

Automobile Parts

Motor vehicle parts and accessories

CERAMIC FILTER of EXHAUST GAS CLEANUP for DIESEL ENGINE

Hitachi Metals Automotive
Components Company
6-27-19, Haramatida, Matida-shi, Tokyo, Japan
Tel 81-42-732-5335 Fax
E-mail
URL http://www.hitachi-metals.co.jp/e/prod/prod06/p06_09.html



Coexistence of high filtration efficiency and low fuel consumption (low pressure drop)
Contribute to reduce PM (Particulate Matter) of diesel vehicles which are low fuel consumption and energy saving Realize low pressure drop and lightweight High filtration efficiency, without worsening fuel consumption Correspond to new long-term emission regulation.



CERAMIC FILTER

Eco-components

EC - 031

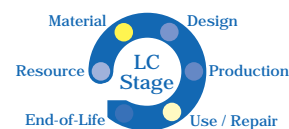
Packaging

Lifestyle products

Packaging Solution From Natural Plant Fiber and Eco-Friendly Paper

HAARU Products & Packaging (HP&P)
Blk 139 Tampines, Street 11 #01-54, 520139 Singapore
Tel +65 9112 7698 Fax
E-mail stephanie.tan@haaru.com
URL www.Haaru.com

- ▲ A3 Hazardous substances
- B1 Recyclability
- B6 Environmental purification
- ▼ B7 Use of recycled materials



HAARU Products & Packaging (HP&P) offer packaging solutions such as advertising and brand building carriers for trade fairs, shopping carriers, promotional gifts, customize packaging and imprints using only biodegradable and recyclable fabrics.

To highlight the importance on protecting the environment, packaging materials we used, are composed primarily of the plant materials cellulose and lignin, the papers and cardboard we use, are made from cotton and other fiber waste. Burlap poses no threat to the environment because it neither emits toxic gases nor harmful chemicals and it do not cause the problems like the synthetic material in waste management cycles through emitting hazardous gases during incineration of landfill sites. Life cycle for this fabric is longer thus minimise environmental impact and yet enhance recyclability of the materials. We aim to introduce viable alternatives for consumers and to the industries that eco-friendly products can prove to be as stylish, even more durable and can come into good replacement. Productivity should not be of cost to the environment and Eco-living can become a reality.



Brand Building Packaging / Promotional items

Eco-components

EC - 032

Others

Printing Ink

Sheet-fed offset printing ink containing soybean oil

TOYO INK MFG. CO., LTD.
3-13, Kyobashi 2-chome, Chuo-ku, Tokyo, Japan
Tel 81-3-3272-5720 Fax 81-3-3272-9788
E-mail master@toyoink.co.jp
URL <http://www.toyoink.co.jp>

- ▲ A2 Air pollution
- A3 Hazardous substances
- A5 Resource consumption
- ▼ B7 Use of recycled materials



This is low pollution/low emission printing ink. Aromatic ingredients content in the ink is less than 11%, soy oil content is more than 20%, which doesn't deteriorate drying on print, still ensure printing of the same quality as regular ink.



TK Hy-Unity SOY

Eco-components

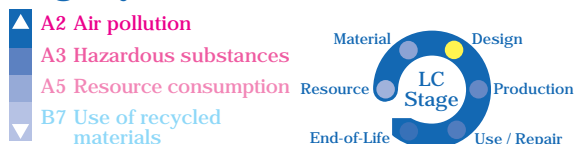
EC - 033

Others

Printing Ink

Sheet-fed offset printing ink containing soybean oil and no VOC

TOYO INK MFG. CO., LTD.
3-13, Kyobashi 2-chome, Chuo-ku, Tokyo, Japan
Tel 81-3-3272-5720 Fax 81-3-3272-9788
E-mail master@toyoink.co.jp
URL <http://www.toyoink.co.jp>



This is sheet-fed offset printing ink for thin paper with low pollution/emission, which doesn't contain any VOC (abbreviation of Volatile Organic Compound, petroleum solvent). It has good setting and drying properties equivalent to regular sheet-fed process ink. It acquired the "Soy Seal" issued by the ASA (American Soybean Association), which certifies that the ink contains soybean oil/soybean protein. Besides, vegetable oil replaced VOC in the ink, and aromatic capacity ratio in the ink was set at less than 1%.



TK Hy-Ecoo NV

Eco-components

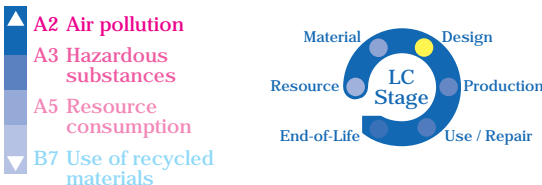
EC - 034

Others

Printing Ink

Web offset ink containing soybean oil and no aromatic solvent

TOYO INK MFG. CO., LTD.
3-13, Kyobashi 2-chome, Chuo-ku, Tokyo, Japan
Tel 81-3-3272-5720 Fax 81-3-3272-9788
E-mail master@toyoink.co.jp
URL <http://www.toyoink.co.jp>



This is high-performance web offset process ink with low pollution/emission, containing soybean oil. It realized equivalent efficiency to conventional products without detriment to drying property. From the standpoint of environmental conservation, it uses only aroma-free solvent and soybean oil more than 7% of whole content. Aromatic capacity ratio is set at less than 1%.



WD LeoEcoo SOY

Eco-components

EC - 035

Others

Printing Ink

Hybrid UV ink containing soybean oil with deinking properties

TOYO INK MFG. CO., LTD.

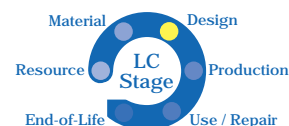
3-13, Kyobashi 2-chome, Chuo-ku, Tokyo, Japan

Tel 81-3-3272-5720 Fax 81-3-3272-9788

E-mail master@toyoink.co.jp

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

- ▲ A2 Air pollution
- A3 Hazardous substances
- A5 Resource consumption
- ▼ B7 Use of recycled materials



This is the new generation printing ink combining the printing effect of oil ink and quick drying properties of UV ink, which enables to make out high-gloss print with high color rendition. It is eco-friendly low pollution/low emission type printing ink with deinking properties same as oil ink, certified with Soy Seal. Aromatic capacity ratio is set at less than 1% and VOC is 0%. The percentage of soybean oil contained in the ink is more than 7%.



FD Hybrid Eco SOY

Eco-components

EC - 036

Others

Printing Ink

Water based gravure printing ink for laminated films

TOYO INK MFG. CO., LTD.

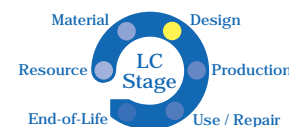
3-13, Kyobashi 2-chome, Chuo-ku, Tokyo, Japan

Tel 81-3-3272-5720 Fax 81-3-3272-9788

E-mail master@toyoink.co.jp

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

- ▲ A2 Air pollution
- A3 Hazardous substances
- A5 Resource consumption
- ▼ B3 Resource saving



This is non-hazardous water based gravure printing ink with low pollution and low emission. It is multi-purpose lamination ink applicable for wide range areas from snack to retort food. The percentage of VOC contained ink is set at less than 20%.



Eco-components

EC - 037

Others

Printing Ink

Water based gravure printing ink for polystyrene film

TOYO INK MFG. CO., LTD.
3-13, Kyobashi 2-chome, Chuo-ku, Tokyo, Japan
Tel 81-3-3272-5720 Fax 81-3-3272-9788
E-mail master@toyoink.co.jp
URL <http://www.toyoink.co.jp>

- ▲ A2 Air pollution
- A3 Hazardous substances
- A5 Resource consumption
- ▼ B3 Resource saving



This water based gravure printing ink is non-hazardous ink with low pollution/emission. Among different applications, it is particularly suitable for printing on polystyrene shrink label for PET bottles. VOC (volatile organic compounds) content in the ink is set at less than 20%.



Eco-components

EC - 038

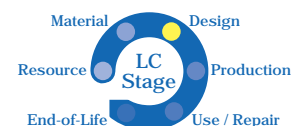
Others

Printing Ink

Water based flexographic printing ink for corrugated Boards

TOYO INK MFG. CO., LTD.
3-13, Kyobashi 2-chome, Chuo-ku, Tokyo, Japan
Tel 81-3-3272-5720 Fax 81-3-3272-9788
E-mail master@toyoink.co.jp
URL <http://www.toyoink.co.jp>

- ▲ A2 Air pollution
- A3 Hazardous substances
- A5 Resource consumption
- ▼ B3 Resource saving



100% water based flexographic ink with low pollution and low emission. This ink is for corrugated boards, designed to have low viscosity and high concentration. It is excellent at fast drying, decorative property, and printability. The percentage of VOC content in the ink is less than 5%.



Eco-components

EC - 039

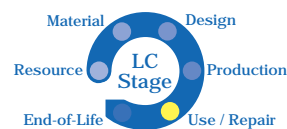
Others

Industrial plastic products

Reverse osmosis membrane element for high quality pure water

Nitto Denko Corporation
HERBIS OSAKA, 2-5-25, Umeda, Kita-ku,
Osaka, 530-0001 Japan
Tel 81-6-6452-2101 Fax 81-6-6452-2102
E-mail info@hydranautics.com
URL <http://www.nitto.com>
<http://www.membranes.com>

- ▲ A5 Resource consumption
- B4 Higher quality
- B5 Energy saving
- ▼ B6 Environmental purification



This Reverse osmosis membrane is used for producing ultrapure water from river water, or ground water for industrial use, safe drinking water from foul water and agricultural water. It eliminates impurities like salinity contained in water with very fine pores on the membrane surface. The "ESPA series" which is globally supplied under Hydranautics brand can create high quality pure water using around half of the energy required by current products. It was developed to produce ultrapure water vital to manufacture of semiconductors. The membrane has a skin layer of 0.6 micron-meter thick, with a well-developed three-dimensional pleated structure with a depth of 0.4 micron-meter, which increases double the specific surface area. Accordingly, this allows the permeate water to be produced with less pressure than was previously needed. "ESPA4" has a highest productivity & rejection with next-generation performance.



Products/Model: ESPA4 from Hydranautics

3

Eco-products

- I Home electric appliances / Lightings
- II Carriers / Automobiles
- III OA / IT Equipments
- IV OA / Furniture
- V Apparel / Fabric Product
- VI Commodity / Outdoor Goods / Housing Kit
- VII Building and Civil Engineering
- VIII Machines and Equipments
- IX Others

Eco-products

EP - 001

Home electric appliances / Lightings

Paper exhibiton panel

Eco-friendly paper panel exhibition board

Shin Nippon Core Co., Ltd.

1-3-9, Kokaba, Iwatsuki-ku, Saitama-shi, Saitama Japan

Tel 81-48-793-1171 Fax 81-48-793-2775

E-mail shin-nippon@sncore.jp

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

A4 Waste

A5 Resource consumption

B1 Recyclability



Explanation panels used at exhibitors are usually made from styrene which contains petroleum so the boards are disposed of as industrial waste. However, the OK eco-panel with direct printing can be recycled after use or disposed of by incineration with little environmental impact. This is because it is made from paper and has a combined structure of G-flute corrugated cardboard with a honeycomb core which is light and strong.



OK Eco-panel Direct printing Type

Eco-products

EP - 002

Home electric appliances / Lightings

The Daylighting System Using Mirror Ducts

The Daylighting System using Mirror Ducts

Materialhouse Co., Ltd.

1-19-3, Naka-ikegami, Ota-ku, Tokyo, Japan

Tel 81-3-3751-5158 Fax 81-3-3755-0065

E-mail m.iwata@materialhouse.co.jp

URL www.materialhouse.co.jp

A1 Global warming

A2 Air pollution

B4 Higher quality

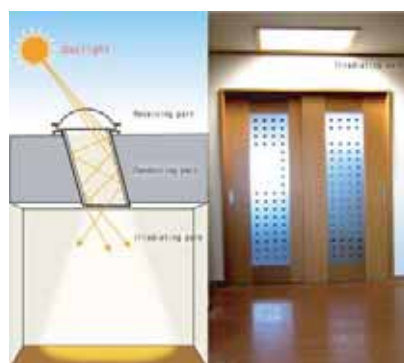
B5 Energy saving



The daylighting system using mirror ducts (the System) brings daylight into indoors. It is easy to use, compared to the skylight system using top lights, because it thoroughly diffuses and controls light during the receiving and conducting processes.

The System contributes to CO₂ discharge reduction by decreasing electric power usage for lighting as well as the creation of comfortable environments that artificial lighting cannot provide. It has the following characteristics:

- A simple structure, utilizing mirrors to lead daylight into rooms, which supplies plenty of light economically.
- High energy-use efficiency because the System simply uses natural light without converting it into electricity, etc.
- No energy consumption to operate any machinery or equipment because there is nothing like sun-chasing devices.
- Maintenance-free for significant time of period because its closed up structure protects itself from most trouble and deterioration.



The Daylighting System using Mirror Ducts

Eco-products

EP - 003

Home electric appliances / Lightings

Gas and oil appliances

Gas Cooking Stove with high efficiency burners

Osaka Gas Co., Ltd.

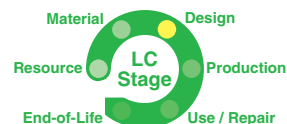
4-1-2, Hiranomachi, Chuo-ku, Osaka, Japan

Tel 81-6-6205-4605 Fax 81-6-6202-1040

E-mail

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

▲ **A1 Global warming**
 ▲ **B5 Energy saving**



The burner of 56% efficiency has produced economic and energy-saving advantages over conventional cookers of 40% efficiency. With the glass surface, it is easy to clean and maintain. Compared with induction heater cookers, the gas cooking stove has reduced annual CO₂ emission by 60%.



Eco-products

EP - 004

Home electric appliances / Lightings

Gas and oil appliances

Dishwasher - Gas heated water washes dishes economically

Osaka Gas Co., Ltd.

4-1-2, Hiranomachi, Chuo-ku, Osaka, Japan

Tel 81-6-6205-4605 Fax 81-6-6202-1040

E-mail

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

▲ **A1 Global warming**
 ▲ **B5 Energy saving**



The energy efficient gas water heater supplies hot water for the dishwasher and, compared with handwashing, water consumption is reduced to 1/8 and gas consumption to 1/4.



Eco-products

EP - 005

Home electric appliances / Lightings

Heated air and hot water heating systems

Heat pump Water for home use

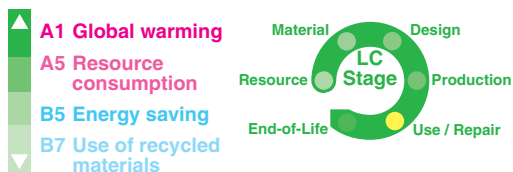
Hitachi Home&Life Solutions, inc.

2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan

Tel 0120-3121-11 Fax

E-mail

URL <http://www.kandenfan.hitachi.co.jp> (Japanese only)



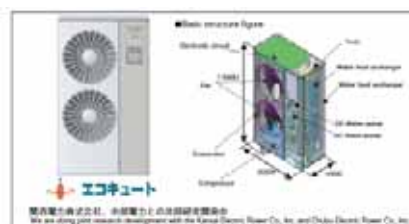
High-power packaged unit for home use "ECO CUTE²⁾". Utilizing natural refrigerants (CO₂).

Utilizing natural refrigerants with GWP(Global Warming Potential) value of approximately 1/1730 that of CFCs substitutes. Enabling High power and saving energy with Hitachi unique PAM¹⁾-control technology.

Compact design integrating the heat pump equipment and small support tank enables space-saving. Achieved the highest industry ratings with heating power of 23KW and COP²⁾ rating of 4.6.

1)PAM:Pulse Amplitude Modulation

2)COP:Coefficient of Performance



RHK 23TBA

Eco-products

EP - 006

Home electric appliances / Lightings

Heating and cooking apparatus

IH Cooking Heater

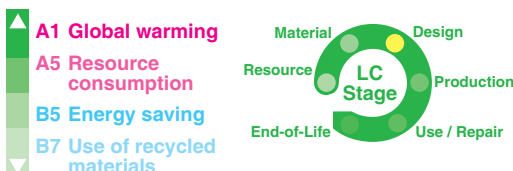
Hitachi Home&Life Solutions, inc.

2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan

Tel 0120-3121-11 Fax

E-mail

URL <http://www.kandenfan.hitachi.co.jp> (Japanese only)



Suitable for open kitchen space Wide Top Plate - Induction Heater Cooking Table.

High heating efficiency (90%) induction heater cooking and energy saving by 0W idling power. (67kWh power consumption saving compared with current model)

Cutting 92% smoke by palladium oxidation catalyst device Silent design approx. 38dB of lowest noise in the market.

1)Roomy cooking space by 75cm wide top plate.



HTW-4WGGG

Eco-products

EP - 007

Home electric appliances / Lightings

Parts of heating and cooking apparatus

Dish Washer

Hitachi Appliances, Inc.

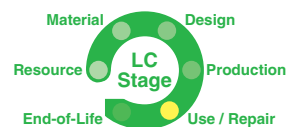
Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome,
Minato-ku, 105-8410 Japan

Tel Fax

E-mail

URL <http://kadenfan.hitachi.co.jp/ssen/index.html>

▲ A1 Global warming
B5 Energy saving



Because the voltage is twice, washing is also speedier, and the time of the post-putting things in order is remarkably shortened by the high-power. The operating method can be selected in proportion to the dirt condition and the amount of tableware such as deliberate courses at remarkable dirt and an unctuous dish.



Dish Washer

Eco-products

EP - 008

Home electric appliances / Lightings

Elevators

Machine Room-Less Elevator

Hitachi, Ltd. Urban Planning and Development Systems

1-18-13, Soto-Kanda, Chiyoda-ku, Tokyo, Japan

Tel 81-3-4564-3722 Fax 81-3-4564-3883

E-mail

URL <http://www.hitachi.co.jp/Prod/elv/index2.html>

▲ A1 Global warming
A5 Resource consumption
B3 Resource saving
B5 Energy saving



Machine Room-Less Elevator realizes "Human-Friendly Environment for the Next Generation".

12.6% of the operation power consumption (CO₂ exhaust) has decreased. (Compared with model in 1994)

Density of formaldehyde in the elevator car is less than 0.08ppm.

Non-chloridization vinyl (Olefin) is adopted for the car floor tile.



Eco-products

EP - 009

Home electric appliances / Lightings

Reactors, generators, carbonizers and electrolytic cells

Cerazone -100% ozone treatment system-

TERAO CO.,LTD,

1-7-18, Minami-harimaya-cho, Kochi-shi, Kochi, Japan

Tel 81-88-882-2617 Fax 81-88-883-6653

E-mail info@terao-kochi.co.jp

URL <http://www.terao-kochi.co.jp/info/info03sci.html>

▲ B1 Recyclability

B3 Resource saving

▼ B6 Environmental purification



This product is designed to recirculate the water in large bathtubs. It employs filtering and ozone sterilization and can process 10 tons of water per hour.

(1) Energy consumption is 950,000 MJ and carbon dioxide emissions are 38 tons over the entire life cycle of the product, including 10 years of use.

(2) Energy consumption in the use stage is about 80 MWh, the volume of water treated over 10 years about 1,050 tons, and the average per month 9 tons.



ISO Type III

Eco-products

EP - 010

Home electric appliances / Lightings

Projector

Portable LCD Projector, Quick & Easy P1SD

Panasonic AVC Networks Company, Matsushita Electric Industrial Co., Ltd.

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan

Tel 81-6-6905-8356 Fax 81-6-6905-4755

E-mail

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

▲ A1 Global warming

B4 Higher quality

B3 Resource saving

▼ B5 Energy saving



- SD memory card can be used direct. It will be a projection start if the picture photoed with the digital camera is inserted in an SD memory card slot.
- Easy to give a PowerPoint® presentation without a PC. Just use Panasonic's Image Creator software to convert the Microsoft PowerPoint® file to a JPEG file, and then you can leave your PC at home or the office.
- Easy to carry, too. It's the world's lightest projector of its kind, and the smallest. It weighs only 2.9 pounds (1.3kg) and measures just 23.4 x 18.8 x 6.5cm (9.2 x 7.4 x 2.6 inches). Its footprint is around 30% smaller than a sheet of A4 or letter-sized paper.
- Circuit has been integrated to promote energy saving, and compactness of circuit boards and fundamental parts has been improved.
- Non-Use of Specific Chemical Substances*
(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Portable LCD Projector, TH-P1SD

Eco-products

EP - 011

Home electric appliances / Lightings

Air conditioners

Room Air Conditioner

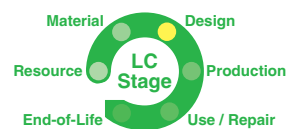
Hitachi Home & Solutions, inc.

2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan

Tel 0120-3121-11 Fax

E-mail

URL <http://www.kandenfan.hitachi.co.jp> (Japanese only)



The highest level energy conservation will be achieved with the "Double accelerator systems".

"Double accelerator systems" can realize the innovative energy conservation and the highest level heating performance. Air-intake and air-discharge function will make air in a room being kept fresh, and the twin airflow will keep the room at an ideal temperature and provide for comfort.

Newly-developed "Nano-titanium air-purifying systems" will make clean air in a room effectively.



HAM-72QH5

Eco-products

EP - 012

Home electric appliances / Lightings

Office, service industry and household machines

Garbage Disposal Equipment

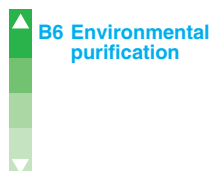
Hitachi Appliances, Inc.

15-12, Nishi shimbashi 2-chome, Minato-ku, Tokyo, Japan

Tel Fax

E-mail

URL <http://kadenfan.hitachi.co.jp/index.html>



Description of Products

Compact indoor garbage disposal equipment available in the kitchen.

Development Concept

Odor during garbage disposal is completely removed so that the equipment can be used inhouse. This compact equipment employs the high temperature bio-technology, eliminating the need for replacements (sawdusts).



BGD-V18

Eco-products

EP - 013

Home electric appliances / Lightings

AC-DC miniature motors

Small size fan motor for room air conditioner

**Matsushita Electric Industrial Co.,LTD.
Motor Company**

20-1 Imajuku town, echizen city, Fukui,
915-0861 Japan
Tel 81-778-22-8711 Fax 81-0778-23-0218
E-mail
URL

▲ **A5 Resource consumption**
■ **B3 Resource saving**
■ **B4 Higher quality**



While securing an identical characteristic to the conventional fan motor, it made a motor diameter small and it reduced motor mass from 820g to 620g.
The use quantity of the material could be substantially reduced.



ARW50A8P30AC fan motor for room air conditioner

Eco-products

EP - 014

Home electric appliances / Lightings

Distribution and control equipment

General Monitoring and Control System for Public Plants

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://www.mitsubishielectric.co.jp/>

▲ **B3 Resource saving**
■ **B5 Energy saving**
■ **A3 Hazardous substances**



This multi-controller allows sequence control and instrumentation control to be executed with one CPU.

Material:

Reduces virgin resources (resources that do not include recycled resources) by 7%.
Reduces amount of non-recyclable resources by 5%.

Energy:

Reduces electrical power consumption by 8%, by making the CPU unit, I/O unit and other parts more compact.

Toxicity:

Reduces substances potentially harmful to the environment by 65%.



MACTUS-GRX 730/530 GRX Process Controllers

Eco-products

EP - 015

Home electric appliances / Lightings

Electric rice cookers

Micro-computer Controlled Rice Cooker & Warmer

Hitachi Appliances, Inc.

HitachiAtagoBldg., 15-12, NishiShimbashi 2-chome,
Minato-ku, Tokyo, 105-8410 Japan

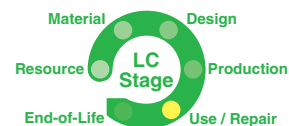
Tel 81-3-3506-1697 Fax 81-3-3506-1549

E-mail

URL <http://kadenfan.hitachi.co.jp/kitchen/index.html>

Rice can be cooked in a short time of 22-30 minutes.
The steam cap can be removed, and the cleaning is easy.
It is easy to see the display in the ball.
There are abundant menus.

▲ B4 Higher quality
B5 Energy saving



Micro-computer Controlled Rice Cooker & Warmer

Eco-products

EP - 016

Home electric appliances / Lightings

Electronic ovens

Steam Microwave Oven for Homes ; Efficient and Energy-saving

Matsushita Electric Industrial Co., Ltd Microwave Oven Business Unit

800 Tsutsui-cho, Yamatokoriyama City, Nara,
639-1188 Japan

Tel 81-743-56-9883 Fax 81-743-56-4040

E-mail

URL http://national.jp/product/cooking/mi_oven/

It is an energy conservation steam microwave oven that achieved highly effective and the wrapless warming by triple heating of the adoption of the highly effective inverter power supply, steam, the electric wave, and the heater.

▲ A1 Global warming
A5 Resource consumption
B4 Higher quality
B5 Energy saving



Steam Microwave Oven : NE-SS30-S

Eco-products

EP - 017

Home electric appliances / Lightings

Electronic ovens

Microwave Oven

Hitachi Appliances, Inc.

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

Tel Fax

E-mail

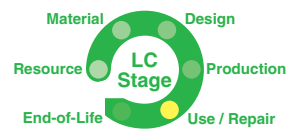
URL <http://kadenfan.hitachi.co.jp/range/lineup/ax10/index.html>

Four kinds of heatings that add the cooking stove, the oven, and the grill can be combined with "Nano steam" of 300C.



B4 Higher
quality

B5 Energy
saving



シヤンパン(N)

MRO-AX10

Eco-products

EP - 018

Home electric appliances / Lightings

Electric refrigerators

Environmentally-friendly refrigerator

Mitsubishi Electric Corporation

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

Tel 81-3-3218-2238 Fax 81-3-3218-2465

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

URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

1. Auto-closer function prevents door from being left open, avoiding waste of electricity.

2. All refrigerator models were Freon-free by March 2005.

3. Uses lead-free solder to attach electronic components to circuit board.

4. Vegetable compartments from used refrigerators can be recycled in-house for air conditioner parts, and plastic that was recycled in-house can be used in base protectors*.

* "Closed-Loop Recycle System of Plastics"



B5 Energy
saving

A3 Hazardous
substances

B1 Recyclability

A2 Air pollution



MR-G50NF,MR-A41NF

Eco-products

EP - 019

Home electric appliances / Lightings

Electric refrigerators

Refrigerator

Hitachi Home&Life Solutions, inc.

2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan

Tel 0120-3121-1 Fax

E-mail

URL <http://www.kandenfan.hitachi.co.jp> (Japanese only)



Energy saving approximate 85% by low speed control and PAM (Pulse Amplitude Modulation)

Control of motor torque at the low-speed operation, PAM (Pulse Amplitude Modulation) control of compressor and vacuum insulation panel contribute to energy saving.

Automatic door closer and indicator on the door make the door closed certainly.

Low-temp freezing technology maintains the freshness of food more.



R-SF47TM

Eco-products

EP - 020

Home electric appliances / Lightings

Electric refrigerators

French door-type refrigerator bearing plasma cluster ions

SHARP CORPORATION

22-22, NAGAIKE-SHO, 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://www.sharp.co.jp/>



Non-CFC (non-chlorofluorocarbon) refrigerator that incorporates eco-friendly materials and improved energy saving functions. The product includes energy saving technologies that we have developed such as a high efficiency compressor and meticulous inverter control and vacuum insulation panel. The product incorporates a flexible power saving mode including a power saving function during your absence. Uses non-CFC refrigerant R-600a. By using advanced technology, it achieves ODP (ozone-depleting potential) of zero and 1/400th of the value of conventional CFC substitutes' GWP (global warming potential). The product has been already compliant with EU RoHS directive and J-Moss by utilizing leadfree solder boards and abolishing bromine fire retardant. Further, the product incorporates recycled resin (PP, Hi-PS).



Refrigerator SJ-HV42K-W/C/B

Eco-products

EP - 021

Home electric appliances / Lightings

Electric refrigerators

High-efficiency capacity refrigerator-freezer with a compact modular system

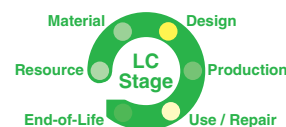
TOSHIBA CONSUMER MARKETING CORPORATION

2-15 Sotokanda 2-Chome, Chiyoda-ku, Tokyo,
101-0021 Japan

Tel 81-3-3257 6150 Fax

E-mail

URL <http://www.toshiba.co.jp/tcm/>



This product is the model that realized an inner capacity of 451L by adopting a compact module system, while holding the same main-part dimension as that of the previous model. It can be placed in the same space as the 400L class model that is our product before one year. In addition, the electric power saving and the food-freshness retaining have been reinforced by using the improved heat-insulating materials and by adopting the twin cooling system with two evaporators. The cooling system works individually for the refrigerating temperature zone (refrigerating compartment and crisper) and for the freezing temperature zone (freezing compartment, ice-making compartment, and select compartment). From the viewpoint of universal design, electrically powered touch-opening & automatic-closing door was fitted to the refrigerator that is used most frequently, and thereby, the improvement of convenience was realized.



GR-W45FB

Eco-products

EP - 022

Home electric appliances / Lightings

Electric refrigerators

Top Unit Refrigerator 'Compact BiG'

Matsushita Refrigeration Company

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555 Japan

Tel 81-77-563-3611 Fax

E-mail

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



This household refrigerator-freezer doesn't use CFCs. And as this refrigerator-freezer has adopted the top unit system, storage space of freezing compartment has been enlarged about one and a half times as previous model.

The inner volume has been increased to about 10% in the same size as previous model by developing the compressor improved about 10% reduction in size and weight compared with the previous model and putting it from the bottom of main body of existing way into the top.

Employing a newly developed high-performance vacuum insulation material of about 25% heat insulation performance was made, the electrical annual energy consumption was reduced by about 10% of previous model products.

A method for removing metals or any other foreign objects that cause defective moldings of recycled plastics has been developed, the mass of recycled plastic parts usable for a refrigerator has been increased to about 20% of plastic parts.



Products/Model : NR-F500T

Eco-products

EP - 023

Home electric appliances / Lightings

Electric refrigerators

Eco-friendly refrigerator

MITSUBISHI ELECTRIC CORPORATION

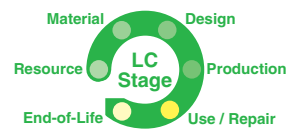
2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310 Japan

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

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

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

- ▲ B5 Energy saving
- B1 Recyclability
- B7 Use of recycled materials
- ▼ A3 Hazardous substances



This refrigerator includes a vegetable compartment that leverages the power of light to increase vitamin content and polyphenols.

Material:

The plastics in refrigerators are designed to be recycled at the product's end of life, and recycled plastics recovered in-house treatments are re-assembled to make new products such as room air conditioners.

Plastic parts are labeled to facilitate recycling.

Energy:

An auto-closer function prevents the door from being left open, preventing cold air rushing out and being wasted.

A series of six sensors for the different compartments makes cooling highly efficient.

Toxicity:

CFCs.-free

The icemaker includes a lead cleaning filter that reduces the amount of lead in tap water by 60%.

Does not use any substances regulated by the EU's RoHS Directive or Japan Industrial Standards' J-Moss Standards.



MR-G50J

Eco-products

EP - 024

Home electric appliances / Lightings

Kitchen ware

Induction Heating Cooking Heater for double all metal wares

Matsushita Electric Industrial Co.,Ltd.

1-5-1 Takatsukadai, Nishi-ku, Kobe City, 651-2271 Japan

Tel 81-78-992-9461 Fax

E-mail

URL

- ▲ A1 Global warming
- A2 Air pollution
- B4 Higher quality
- B5 Energy saving
- ▼



Features

Double all metal wares can be used thanks to induction heating evolution.

Heating power is highly enhanced.

The built-in optical sensor has made automatic water heating and rice cooking possible.

Easy-to-read indicators and easy-to-operate universal design.

Environmental Performance

High thermal efficiency: enamel-coated pans approx. 90%, aluminum pans approx. 75% in water-heating mode.

Minimal stand-by power consumption.

Non-Use of Specific Chemical Substances *

(*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.) (except the lead of sealing agent at sheathed heater)



Induction Heating Cooking Heater KZ-VSW32B

Eco-products

EP - 025

Home electric appliances / Lightings

Kitchen ware

Dishwasher; Easy to use, Water-saving

Matsushita Electric Industrial Co., Ltd.

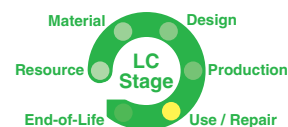
1-2 Kamisu-cho, Toyonaka City, Osaka, 561-0823 Japan

Tel 81-6-6331-6278 Fax 81-6-6334-0567

E-mail

URL http://national.jp/product/house_hold/dishwasher/

A5 Resource consumption
B5 Energy saving



-Product feature:

Expanding of the tableware entrance due to the dome-shaped body and two doors opened up and down each, it became easy to set tableware in and out, and lead to great usability.

The mist spray of concentrated detergent before a washing process enables removing a lipstick, tea stain, etc.

In addition, the mist spray can sanitize dishes.

-Water saving:

Adoption of four wash nozzle switching system enhance washing efficiency, and have water usage for a dish cut by about 55%. (Compared to our company product made in 2002).

-Green material:

Non-Use of Specific Chemical Substances*

(* : Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

User's manual is made with 70% recycled paper.



Dishwasher NP-BM1

Eco-products

EP - 026

Home electric appliances / Lightings

Dishwasher

Dishwasher, Hard Water Ion Washing, Reducing Detergent and Water

SHARP CORPORATION

22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6625-0438 Fax 81-6-6628-1653

E-mail morishita.masaaki@sharp.co.jp

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

A1 Global warming
B5 Energy saving
B3 Resource saving
B4 Higher quality



This dishwasher is equipped with a detergent-free option.

It incorporates an "ion course" that allows dishes to be thoroughly cleaned in hard water without the use of detergent for regular wash. It incorporates a "powerful ion course" for much tough wash on chopping board for sallow and tea stains. It realizes 1/15 less water consumption.

Power supply cord doesn't include lead or DOP. PVC is phased out from plastic material and coating material.

Easy separation and disassemble. Metal is used for outer cabinet and polypropylene for washing unit for easy recycling.



Dishwasher QW-SL1-W

Eco-products

EP - 027

Home electric appliances / Lightings

Household Kitchen Waste Composter

“Composting Bio Mix” Household Kitchen Waste Composter

SHARP CORPORATION

22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6625-0438 Fax 81-6-6628-1653

E-mail morishita.masaaki@sharp.co.jp

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

▲ A4 Waste
B4 Higher quality
B5 Energy saving
▼



Proprietary Composting Bio Mix breaks down organic kitchen waste, dramatically reducing disposal volume and minimizing odors during processing

Reduce waste volume dramatically

Reduces the volume of kitchen waste (more than 92%*1 in 24 hours).

Energy saving

Energy efficient with low power use based on a composting system that operates at room temperatures. (Electricity costs : Approximately 300 yen /month*2)

Environment friendly material

Lead-free solder is used for all circuit boards. Vegetative soy ink and recycled paper are used in the instruction manual.

*1 When processing a standard 700 grams of organic kitchen waste at an ambient temperature of 20C.

*2 Calculated based on the New Electric Utility Benchmark Price for Electricity of ¥22/kWh (including tax) when processing 700 g/day of ordinary organic kitchen waste at an ambient temperature of 20C with catalytic deodorization OFF.



Household Kitchen Waste Composter NP-40CX-S

Eco-products

EP - 028

Home electric appliances / Lightings

Water purifier

Alkaline Ion Water Purifier of low standby power consumption

Matsushita Electric Works, Ltd.

1048, Kadoma, Kadoma-shi, Osaka, Japan

Tel 81-6-6908-1131 Fax

E-mail

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

▲ A1 Global warming
B2 Longevity
B3 Resource saving
B5 Energy saving
▼



Product features

- The new "Quick ionization" and "Water saving" modes save approx. 1 ton of water annually.
- The newly adopted "musty odor filter cartridge" removes musty odors as well as lead and trihalomethane.

Environmental features

- The standby power consumption has been reduced by approx. 50% from that of our conventional model "PJ-A77" (0.8W - 0.4W).
- Adoption of high-performance activated carbon has elongated the filter life to one year, which previously varied depending on the filtered substance. (Lead/Trihalomethane filtering life: 6 months - 1 year)
- The solenoid valve cuts waste water discharge in the purifying mode, which made up 20% of the total water amount before.



Alkaline Ion Water Purifier TK7205-S

Eco-products

EP - 029

Home electric appliances / Lightings

Water purifier

OKlin - Food Waste Decomposer by fermentation

Abacus Corporation Pte Ltd

Blk 1 Defu Lane 10, #03-571 539182 Singapore

Tel +65 6285 6100 Fax +65 6281 7761

E-mail abetrad@singnet.com.sg

URL

▲ A4 Waste

B1 Recyclability

B7 Use of recycled materials



Food wastes are decomposed into vapor and carbon dioxide within 24 hours at 95% with the help of > ultra-modern bio-tech. Just 5% of them is left in the form of dried powder -- recycled as compost. Wastes like > soups and gravy, etc. are done likewise.

After decomposition, the gas is deodorized through the wooden chips containing micro-organisms for deodorization. Part of the gas is recycled as a source of nurture for micro-organisms and the other goes out into the air. Semi-permanent!

Fantastic environment-friendly! No exhaust and drainage systems are required. No air and water pollution!



FD-02SK for 2kg

Eco-products

EP - 030

Home electric appliances / Lightings

Air conditioners

Environmentally-friendly air-conditioner

Mitsubishi Electric Corporation

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

Tel 81-3-3218-2238 Fax 81-3-3218-2465

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

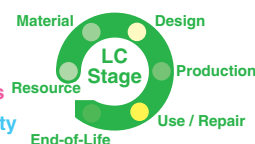
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

▲ B5 Energy saving

A3 Hazardous substances

B1 Recyclability

▲ A5 Resource consumption



1. Compressor using the Poki Poki Motor®, achieved energy consumption efficiency by 136%. MOVE-EYE (name of sensing system to find appropriate area to be air conditioned) increased energy efficiency by about 30%.

2. Uses lead-free solder to attach electronic components to circuit board.

3. Our unique replacement technology now makes it possible to reuse existing pipes, reducing waste.

4. Service panel of the outdoor unit is made of plastic recycled in-house from vegetable compartments of used refrigerators{*}.

5. Fan of indoor unit is made of plastic recycled in-house from used air conditioners*.

6. Simple, easy-to-dismantle body design allows for easy recycling and cleaning.

* "Closed-Loop Recycle System of Plastics"



MSZ-Z40RS

Eco-products

EP - 031

Home electric appliances / Lightings

Air conditioners

High performance, energy-saving air conditioner

DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6374-9304 Fax 81-6-6373-4380

E-mail kankyo@daikin.co.jp

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



Top-class energy savings

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.



FTXG-E Series

Eco-products

EP - 032

Home electric appliances / Lightings

Air conditioners

High performance, energy-saving air conditioner

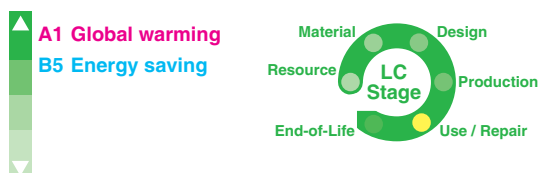
DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6374-9304 Fax 81-6-6373-4380

E-mail kankyo@daikin.co.jp

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

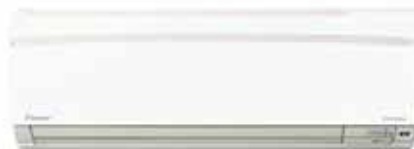


Higher Energy Savings

The FTKS25D model delivers a 23% higher COP of 3.57, thanks to its advanced DC Inverter technology. Daikin also provides a range of energy-saving functions including Intelligent Eye and Econo Mode.

Sophisticated Appearance with Flat Panel

The simple and stylish flat panel design harmonizes with any interior decor. Daikin's 2.5 and 3.5 kW class D series were awarded Japan's prestigious Good Design Award.



FTK(X)S-D Series

Eco-products

EP - 033

Home electric appliances / Lightings

Air conditioners

Air conditioner featuring ion air purification technology

SHARP CORPORATION

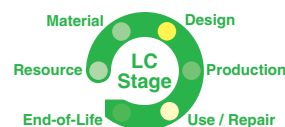
22-22, Nagaike-cho, Abeno-ku, Osaka-shi,
Osaka, Japan

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

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

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

- ▲ B1 Recyclability
- B4 Higher quality
- B5 Energy saving
- ▼ B6 Environmental purification



The use of "Plasmacluster Ion air purification technology" helps to inactivate fungus and airborne viruses. One of the best energy saving scores in the industry (COP 5.41), energy saving ratio (148%) and the lowest stand-by power consumption (about 0.5W). The main board uses lead-free solder. The instruction manual has been printed using recycled paper and soya ink. Waste plastic (polypropylene) has been recycled for components of the indoor unit. (COP is an acronym for The Coefficient of Performance. It represents cooling and heating capacity (kW) per 1kW power consumption. The higher the COP value, the greater the energy efficiency.)



Air conditioner AY-T40SX

Eco-products

EP - 034

Home electric appliances / Lightings

Air conditioners

Energy-saving air conditioner for residential use

Toshiba Carrier Corporation

12-32, Konan2-chome, Minato-ku, Tokyo, 108-0075
Japan

Tel 81-3-5781-7878 Fax 81-3-5781-7852

E-mail

URL <http://toshiba-carrier.co.jp/>

- ▲ A5 Resource consumption
- B3 Resource saving
- B4 Higher quality
- B5 Energy saving



The Daiseikai GDR series of room air conditioners introduced in 2006 automatically clean air filters and eliminate molds generation inside of the units by newly developed "Air conditioner cleaning mechanism". This mechanism enables energy saving by preventing filter plugging and dirt accumulation inside of the indoor units. The GDR achieved high energy saving performance of COP 5.12 and energy conservation standards rate of 140% by adopting various technology such as high performance inverters, compressors and heat exchangers. The GDR models save 40% of electric consumption compared to 1995 models and contribute for reducing environmental impacts by adopting refrigerant R410A of ozone layer depletion coefficient zero and lead free solder etc.



RAS-406GDR(W)

Eco-products

EP - 035

Home electric appliances / Lightings

Air conditioners

Air Conditioner ; energy-saving , air-cleaning

**Matsushita Electric Industrial Co.,Ltd,
Air Conditioner Business Unit**

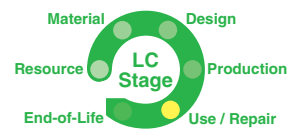
2-3-1-1 Noji-higashi ,Kusatsu City ,Shiga, 525-8520
Japan

Tel 81-77-567-9807 Fax 81-77-561-3208

E-mail

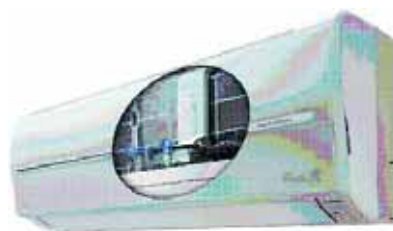
URL <http://national.jp/product/air/aircon>

- ▲ A1 Global warming
- B1 Recyclability
- B4 Higher quality
- ▼ B5 Energy saving



This air-conditioner has many functions, including air purification using an oxygen supply function, an automatic filter cleaning function and an ultrasonic ion air-cleaning function.

To upgrade energy efficiency, the high-performance 'e-scroll compressor' and 'hybrid heat exchanger' were developed, with which Matsushita has already attained Japan's FY06 energy-saving target by 125%.



CS-X226A

Eco-products

EP - 036

Home electric appliances / Lightings

Air conditioners

High Efficiency Type Air Cooled Chilling Unit AH-Series

Hitachi Appliances, Inc.

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

Tel Fax

E-mail

URL http://www.hitachi-ap.co.jp/products/business/ac/chiller/index_f.html

- ▲ A1 Global warming
- B5 Energy saving



Cold water and the warm water are supplied by an efficient air cooling heat pump method as the heat source machine for the air-conditioning of the Central method.



High Efficiency Type Air Cooled Chilling Unit AH-Series

Eco-products

EP - 037

Home electric appliances / Lightings

Air conditioners

Eco-friendly "Kirigamine" MOVE-EYE Room Air Conditioner

MITSUBISHI ELECTRIC CORPORATION

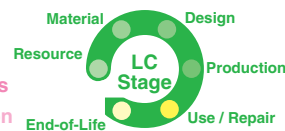
2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310 Japan

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

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

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

- ▲ A1 Global warming
- B1 Recyclability
- A3 Hazardous substances
- ▼ A5 Resource consumption



This air conditioner features the W-MOVE-EYE energy conservation sensor for upgraded comfort and energy efficiency.

Material:

Plastic recovered from used cross-flow fans is recycled in a closed cycle and used in new cross-flow fans.

The service panel of the outdoor unit is made of plastic recycled in-house from vegetable compartments of used refrigerators. Plastic parts are labeled to facilitate recycling.

Reuse of existing pipes is possible, which substantially reduces waste materials.

MOVE-EYE takes into account the temperature as it is perceived by the body, which serves to automatically save electricity by around 30%.

Energy:

Places where people actually are, are selected and efficient zone air conditioning increases energy efficiency by around an additional 10%. Cleanliness is maintained and energy efficient properties extended by a function for limiting dirt on the inside of the unit and an easy mechanism for cleaning.

Toxicity:

Does not use any substances regulated by the EU's RoHS Directive or Japan Industrial Standards' J-Moss standards.



MSZ-ZW40TS

Eco-products

EP - 038

Home electric appliances / Lightings

Air conditioning and household equipment

Air-conditioning system with floor thermal storage

Hitachi Plant Engineering & Construction Co., Ltd.

2-11, Kanda-Nishikichou, Chiyoda-ku, Tokyo, Japan

Tel 81-3-5281-0131 Fax 81-3-5281-0139

E-mail a-sales@hitachiplant.co.jp

URL <http://www.hitachiplant.hbi.ne.jp>

- ▼ A5 Resource consumption
- B4 Higher quality
- B5 Energy saving



Energy Saving Using: Floor Sensible Heat Storage+ Packaged Air Conditioning. 7% Energy saving. 10% CO₂ reduction. 15% Running cost reduction, Additional cost reduction through thermal storage discount contract signed with utility company.¹⁾ 20% Reduction in heat load peak using floor sensible heat storage.²⁾ (Based on Hitachi Plant Experiment)

1) Utility rate discounts ensured by shifting part of day-time cooling loads to night time.

2) Downsizing cooling equipments through Peak Cut (During Cooling Season). Shifting day-time thermal loads to night time.



Floor Sensible Thermal Storage Concept

Eco-products

EP - 039

Home electric appliances / Lightings

Dehumidifier

Decesiccant system type dehumidifier

Matsushita Ecology Systems Co., Ltd.

4017 Shimonakata, Takaki-cho, Kasugai City,

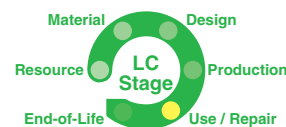
Aichi, 486-8522 Japan Japan

Tel 81-568-81-1666 Fax 81-568-83-1112

E-mail

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

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- ▲ B5 Energy saving



This desiccant system type dehumidifier is an environmentally-friendly product devoid of Freon gas.

Thanks to newly developed heat-exchange devices, the power consumption of the dehumidifier is remarkably reduced by 20% compared with the conventional model in 2005.

It is also equipped with the cloth drier function that automatically stops its operation when clothing is dry.



F-YXB60

Eco-products

EP - 040

Home electric appliances / Lightings

Air Purifier

Air purifier using Plasmacluster ion technology

SHARP CORPORATION

22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka, Japan

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

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

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

- ▲ B2 Longevity
- ▲ B3 Resource saving
- ▲ B4 Higher quality
- ▲ B5 Energy saving



Newly developed "Plasmacluster Ion Shower" inactivates airborne mold fungi and harmful bacteria as well as removes drifting house dust in interior spaces by releasing a burst of powerful Plasmacluster ions in a shower-like pattern into the air.

DC motor and inverter control contribute to reduce energy consumption and achieve an annual electric bill of about 440 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.) A standby power consumption is 0.3W. We have discontinued the use of specific bromine fire retardant. Vegetative soya ink and recycled paper are used for the instruction manual. We also applied fire retardant resin to the body and a bicapsular cabtyre cord to allow the product to be placed on the floor.



Air Purifier FU- T51CX-W

Eco-products

EP - 041

Home electric appliances / Lightings

Electric washing machines

Environmentally-friendly washer/dryer

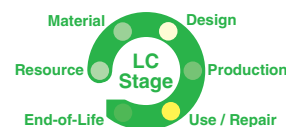
Mitsubishi Electric Corporation

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

Tel 81-3-3218-2238 Fax 81-3-3218-2465

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

URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>



- 1 By reusing waste heat generated at drying operation, electricity charge can be reduced by about 10%.
- 2 Chrome-free painting steel plate is applied to body part.
- 3 Uses lead-free solder to attach electronic components to circuit board.
- 4 Save cooling water by controlling room temperature-rise at drying operation.
- 5 Recycled Styrofoam planed to be used.
- 6 Salt water in balancer unit of wash tub is reused at recycling plants in Japan.



MAW-HD88X

Eco-products

EP - 042

Home electric appliances / Lightings

Electric washing machines

Water-Dryer

Hitachi Home&Life Solutions, inc.

2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan

Tel 0120-3121-11 Fax

E-mail

URL <http://www.kandenfan.hitachi.co.jp> (Japanese only)



Beat Wash uses three action to wash and dry clothes dramatically reducing water consumption.

Beat Wash uses three actions-pressing, beating and kneading-to get clothes gleaming clean, with incredibly low water consumption. It takes about 120minutes to wash and dry 4kg of laundry. Up to 7kg can be dried at one time.

Beat Wash is fast, makes clothes fluffy and clean, and can dry large volumes of laundry!

Beat Wash uses a pump to circulate highly condensed soapy water, washing your laundry using 60% less water (compared with Hitachi washing machines of eight years ago).

Even large laundry items can be loaded and unloaded with ease, thanks to the wide loading door.

The control panel is installed on the wide loading door for ease of access.

The large size of the panel and buttons makes them easy to see and use.



BW-DV9F

Eco-products

EP - 043

Home electric appliances / Lightings

Electric washing machines

Fully Automatic Washer/Dryer Combo with Ag+ Ion Coating

SHARP CORPORATION

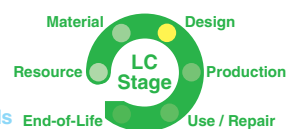
22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6625-0438 Fax 81-6-662-0153

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

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

- ▲ B1 Recyclability
- B3 Resource saving
- B5 Energy saving
- ▼ B7 Use of recycled materials



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 rise at shorter time. Then it enables energy saving. Standby energy is 0W.

We have developed our own technology for the recycling of plastic. 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.

Main board uses lead-free solder.



Fully Automatic Washer/Dryer Combo ES-TG84V-S

Eco-products

EP - 044

Home electric appliances / Lightings

Electric washing machines

Low noise, less vibration & energy-saving Front in Drum TW-150VC washing dryer

TOSHIBA CONSUMER MARKETING CORPORATION

2-15 Sotokanda 2-Chome, Chiyoda-ku, Tokyo, 101-0021 Japan

Tel 81-3-3257-6150 Fax

E-mail

URL <http://www.toshiba.co.jp/tcm/>

- ▲ A4 Waste
- B4 Higher quality
- B7 Use of recycled materials



A demand for drum-type washing machine with dryer is rising. This product is the model for which the water-saving performance and the power consumption of the conventional machine were further improved. It was made to eliminate the J-Moss (*) regulation material, and thus the reduction of environment load was attempted. Strong cleaning solution penetrates into the fibres of clothes, because it keeps falling over the clothes like shower when washing. The water consumption when washing is 86 L, and in comparison with our company's model (AW-7 OE8) of 9 years ago, about 127L of saving water was achieved. The laundry is easy to dry and quickly finished, because the water splashes at a high speed of 1500 revolution/min. (*) J-Moss: Japan-The marking for presence of the specific chemical substances for electrical and electronic equipment



TW-150VC(W)

TW - 150VC

Eco-products

EP - 045

Home electric appliances / Lightings

Electric washing machines

Cool-wind“Air-conditioner”function-mounted Front in Drum washing dryer

TOSHIBA CONSUMER MARKETING CORPORATION

2-15 Sotokanda 2-Chome, Chiyoda-ku, Tokyo, 101-0021

Japan

Tel 81-3-3257-6150 Fax

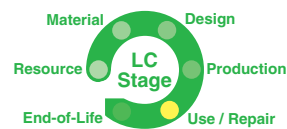
E-mail

URL <http://www.toshiba.co.jp/tcm/>

A4 Waste

B4 Higher quality

B7 Use of recycled materials



This product is a large-capacity drum-type washing dryer of 9kg for washing and 6kg for washing/drying. It realized the high energy-saving performance by installing the following two engines; one is an "S-DD engine +3" that is excellent in speed and control, and the other is a newly developed "air-conditioner cycle engine". Owing to an installed compressor, the "air-conditioner cycle engine" has almost the same function as that of an air-conditioner: dehumidification and air-cooling. The clothes can therefore be dried quite without using water and a heater. We realized, for the first time in the world, a cold wind air-conditioner based on the washing machine that can cool the room air and then send it out as a cold wind. We offer a comfortable "amenity room" for washing or dressing.



TW - 2500VC

Eco-products

EP - 046

Home electric appliances / Lightings

Electric washing machines

Full Auto Washer Dryer with Heat Pump System

Matsushita Electric Industrial Co., Ltd.

1-2 Kamisu-cho, Toyonaka City, Osaka, 561-0823

Japan

Tel 81-6-6331-6758 Fax 81-6-6334-0567

E-mail

URL http://national.jp/product/house_hold/wash/

A1 Global warming

B4 Higher quality

B5 Energy saving



This model realized an environment-friendly washing machine by employing 'Drying System with Heat-pump'. It achieved 54% saving of the electrical power consumption for washing & drying, and also achieved 57% saving of the water consumption of washing & drying 6kg laundry, compared with the last year's model. It also achieved 46% saving of the drying time compared with the last year's model.



Products Model: NA-VR1000

Eco-products

EP - 047

Home electric appliances / Lightings

Electric washing machines

Drum-Type Washer and Dryer - AQUA

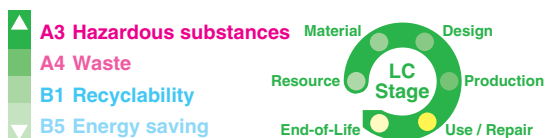
SANYO Electric Co.,Ltd.

1-1, Sanyo-cho, Daito City, Osaka 574-8534, Japan

Tel 81-72-870-7142 Fax 81-72-870-7491

E-mail hira074299@sanyo.co.jp

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



- 1) Storing water of the last rinse cycle in a tank to purify with ozone and reuse for the next load of laundry or as a dehumidifier for drying produces substantial water savings during washing;
- 2) Bacteria elimination and deodorization by ozone for delicate clothes and laundry that cannot be made wet or will be washed later



Drum type washing dryer(AWD-AQ1)

Eco-products

EP - 048

Home electric appliances / Lightings

Electric cleaning machines

Vacuum Cleaner

Hitachi Home&Life Solutions, inc.

2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan

Tel 0120-3121-11 Fax

E-mail

URL <http://www.kandenfan.hitachi.co.jp> (Japanese only)



Realization of compact & light weight cleaner with powerful motor and high reliability. Reduction of body weight¹⁾, saving energy and using non-lead solder for power control board. The highest suction power in this field(as of September, 2004) with same consumption power of former vacuum cleaner(CV-SH10/CV-PH10). Making of long life motor of 5 times²⁾ as long as before(CV-XG20). Saving money for paper bag fee by about ¥2,772³⁾ per year due to no paper bag type(CVXG20/CV-SH10)Realization of big dust capacity about 1.7 times as large as before with the construction of keeping power, and cutting down quantity of using paper bag.(CV-PH10)

1) CV-XG20 : Body weight reduction ratio, about 29%, CV-SH10 : about 8%, CV-PH10: about 13% compared with Hitachi's former same class models.

2) In case that customer replaces the paper bag(model name GP-110F) one time per a month.

3) Comparison with Hitachi's former model CV-WB8(1999 model)



CV-SH20V

Eco-products

EP - 049

Home electric appliances / Lightings

Electric cleaning machines

Home-use CYCLONE cleaner conforming to the RoHS directive

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East 2-17-2 Higashi Gotanda,
Shinagawa-ku, Tokyo, 141-8664, Japan

Tel 81-3-6422-7160 Fax 81-3-6422-7121

E-mail environment@toshibatec.co.jp

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

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- ▲ B4 Higher quality
- ▲ B5 Energy saving



Reduction of hazardous chemical substances: Conforming to the RoHS directive (Use of Cr-free steel sheet for the main-body motor, Use of Pb-free solder for the circuit board, etc.). Energy saving: This cleaner has a sensor that detects the accumulation of the dust on filter, and it does cleaning of the filter by the "TYPHOON separation method", which uses high-speed centrifugal force to separate the dust and air efficiently. This cleaner has a "gfilter-cleaning ROBO" in it and the dust on filter is thrown off by the automatic rotation of the filter. This cleaner is the "TYPHOON ROBO -system"-mounted cleaner, which was developed for the first time in the world. Resource saving: Recycled material is used for the instruction manual and the package. Regard for living environment: Clean exhaust due to the works of the various filters (W- zeolite deodorant filter, ALLER-GET filter, HEPA-CLEAN filter etc.)



VC-75TC

Eco-products

EP - 050

Home electric appliances / Lightings

Electric cleaning machines

Vacuum Cleaner: Domestic vacuum cleaner with energy saving & high suction

Matsushita Electric Industrial Co.,Ltd

1500 Hayashida-cho, Higashiomi City, Shiga,
527-8501 Japan

Tel 81-748-23-5621 Fax 81-748-24-1385

E-mail

URL

- ▲ A5 Resource consumption
- ▲ B5 Energy saving



This vacuum cleaner detects suction with a dust sensor and controls power depending on quality of dust automatically. Therefore the power consumption is reduced 50% compared with a vacuum cleaner without dust sensor (which has 1000W power, with high position, without dust sensor).

And also thanks to the vibration to beat the dust bag by drawing the power cord it can suck up about double quantity of the dust (compared with our vacuum cleaner MC-S81, years before).



MC-P600JX

Domestic Vacuum Cleaner : MC-P600JX,

Eco-products

EP - 051

Home electric appliances / Lightings

Electric cleaning machines

Cyclone Cleaner with Tissue Paper Block System: SC-XW33G Series

SANYO Electric Co.,Ltd.

1-1,Sanyo-cho,Daito City,Osaka 574-8534, Japan

Tel 81-72-870-7142 Fax 81-72-870-7491

E-mail hira074299@sanyo.co.jp

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

▲ B3 Resource saving

■ A4 Waste



- 1) Easy disposal (care) of garbage by employing tissue paper front of a filter (SANYO's original method) and reduction of paper consumption;
- 2) 7-year paper consumption reduced 686g, or 65%, as compared to the conventional paper carton type cleaner;
- 3) Wet-cleaning of a filter unnecessary (Reduced water usage: 42 l/year)



Electric cleaning machines(SC-XW33G)

Eco-products

EP - 052

Home electric appliances / Lightings

Electric hot water cleaning seats for toilet

Energy-saving personal hygiene system

Matsushita Electric Industrial Co., Ltd.

Hygiene Toilet Seat & Heating Equipment Business Unit

800 Tsutsui-cho, Yamatokoriyama City, Nara, 639-1188 Japan

Tel 81-743-56-9877 Fax 81-743-56-9934

E-mail

URL <http://national.jp/sumai/hp/>

▲ A1 Global warming

■ A2 Air pollution

■ B4 Higher quality

■ B5 Energy saving



This product realized the greatest level of energy conservation in domestic market through instant heating of washing water and of the toilet seat created with newly-developed high-temperature radiation heater and aluminum isotropic heating material.



Products/Model : DL-GW70,50,40,20

Eco-products

EP - 053

Home electric appliances / Lightings

Dish Washer

Hitachi Home&Life Solutions, inc.
2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan
Tel 0120-3121-11 Fax
E-mail
URL <http://www.kandenfan.hitachi.co.jp> (Japanese only)

Household electric appliances



Seven-person table service can be washed at one time with water.

Water Saving : The dishwasher uses only approx. 1/14 of water for hand washing! You can save nearly 139 liters of water per operation.

Easy to Load : It is easy to put seven-person table service (160 pieces) into it. You can wash a day's dishes at one time and an time!

Ag+ion Coating for Bacteria Elimination (First-ever in the industry) Sterilization of dishes and the dishwasher-inside is all available.



KF-W70EV

Eco-products

EP - 054

Home electric appliances / Lightings

Heat Pump Water Heater Using Natural Refrigerant

Matsushita Electric Industrial Co.,Ltd,
Air Conditioner Business Unit
2-3-1-1 Noji-higashi, Kusatsu City, Shiga,
525-8520 Japan
Tel 81-77-567-9807 Fax 81-77-561-3208
E-mail
URL <http://national.jp/sumai/hp/>

A1 Global warming
A2 Air pollution
B4 Higher quality
B5 Energy saving



One - third of the energy consumed by a household is used for heating water.

This highly efficient and energy-saving water heater has a heat pump that uses natural refrigerant (CO₂).

Its primary energy efficiency has reached 114% and CO₂ emissions are only about half of the amount emitted from a gas water heater. (Ozone-Depleting Potential, Global Warming Potential, Highly efficient)



HE-46K2QRS

Eco-products

EP - 055

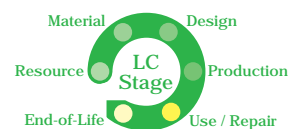
Home electric appliances / Lightings

Massage chair

Massage chair for the entire body with low standby power consumption

Matsushita Electric Works, Ltd.
1048, Kadoma, Kadoma-shi, Osaka, Japan
Tel 81-6-6908-1131 Fax
E-mail
URL <http://www.mew.co.jp>

▲ A1 Global warming
A3 Hazardous substances
▼ B5 Energy saving



Product features

- The "masseur changer function" covers a variety of professional techniques (finger pressure, massage, rubbing, and stretching).
- Three-dimensional 965 massage patterns are available. Four "auto full-body courses" are available for a total massage.
- The massage area has increased by 27% from our conventional model "EP2110".

Environmental features

- The power switch (relay) cuts the power supply to the motor during standby mode, reducing the standby power consumption by approx. 90% from that of our conventional model 'EP2110'(5W 0.5W).
- All components used for this product (including electronic components and their electrodes, soldered joints, and harnesses) are free from lead.



REAL PRO X EP3510-C

Eco-products

EP - 056

Home electric appliances / Lightings

Fluorescent lamps

Screw-in fluorescent lamp "spiraLUPICA"

MITSUBISHI ELECTRIC OSRAM Ltd.
Tobu Yokohama Bldg.No.3(4F) 8-29,
Kita-Saiwai 2-chome, Nishi-ku, Yokohama-shi,
Kanagawa, 220-0004 Japan
Tel 81-45-323-5187 Fax 81-45-323-5156
E-mail
URL <http://www.mol-oml.co.jp>

▲ A5 Resource consumption
B2 Longevity
B5 Energy saving



"spiraLUPICA" is the compact screw base fluorescent lamp. This enable to save energy by replacing from incandescent lamp. Also the lifetime of spiraLUPICA is longer than that of incandescent lamp. Spiral shaped inner bulb realize the compact size similar like general incandescent lamp. Light output just after switching on of this product is brighter than that of our conventional products. (A15 type, G15 type) UV radiation, which attracts unwanted insects or causes color fading, is remarkably reduced. (A15 type)

- Consumption energy is about a quarter of incandescent lamp.
- Lifetime of this products is 6 times longer than incandescent lamp. (A15 type)
- Heating value is about a quarter of incandescent lamp.
- Luminous flux right after turning on achieves to about 40% of spec value. (A15 type and G15 type)



spiraLUPICA A15 type

Eco-products

EP - 057

Home electric appliances / Lightings

Fluorescent lamps

EFA-series bulb-type new fluorescent lamp for energy saving

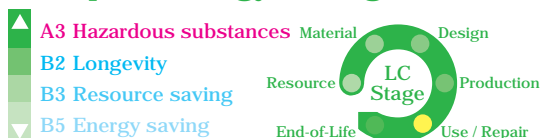
TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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

Tel 81-46-862-2159 Fax 81-46-860-1203

E-mail toshiya.tanaka@tlt.co.jp

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



The size of 60W bulb (EFA15/12-RJ) is 55mm in outer diameter and 109mm in length, which is the same in length as that of the 60W white lamp (LW100V57WJ), but rather slim. The bulb of 40W (EFA10/8-RJ) has the same form as that of the 40W white lamp (LW100V36W). Power consumption of these bulbs is 1/5 of that of the conventional filament lamp and their lives are 6 times longer than 1000 hours of the conventional filament lamp. The glass material is Pb-free glass and the circuit was soldered by use of Pb-free solder. A large non-emission area near the clasp portion was reduced and almost similar light distribution as that of the conventional filament lamp was attained. As a result, the necessity to develop a special acceptor of the clasp was lost. Moreover, disappeared was the discomfort that users may feel particularly for the distribution of light.



EFA15series(left), EFA10series(right)

Eco-products

EP - 058

Home electric appliances / Lightings

Fluorescent lamps

Bulb-form type fluorescent lamp for the saving of general illumination power

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

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

Tel 81-46-862-2159 Fax 81-46-860-1203

E-mail toshiyuki.ikeda@tlt.co.jp

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



In October, 2005, we released for sale the fluorescent lamp "neo ball Z ReaL": 60W -EFA 15/12-R, 40W- EFA 10/8-R. They have a shape of common electric bulb and can radiate light even from the vicinity of their screw bases. The size of "neo ball Z ReaL" is 55mm outer diameter, 109 mm long for 60W lamp, and 98 mm long for 40W lamp. Its power consumption is 1/5 in comparison with the common electric bulb of the same shape. Its life is 6,000 hour, which is 6 times longer than 1000 hour of the bulb. By use of Pb-free glass for the main bulb and Pb-free solder for the circuit, the reduction of hazardous substances was carried out. In this type of the previous fluorescent lamp, the non-emission area due to the cover of the circuit storing portion was relatively large. This caused the lowering of the adaptability to the lighting tools and the shadow when lighted in the device. These problems were completely removed. As the products of same series, afterwards, a slim T (EFT15/12) of 38mm in outer diameter and a chandelier type (EFTC15/12) like the flame of candle were added. The use of "neo ball" will increase with the growth of lighting-tools design.



EFA15/12-R(left),
EFTC15/12(center), EFT15/12(right)

Eco-products

EP - 059

Home electric appliances / Lightings

Fluorescent lamps

Long life and high lumen maintenance fluorescent lamp 'PA-LOOK PREMIER'

Matsushita Electric Industrial Co.,Ltd.
Lighting Company

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

Tel 81-72-682-7521 Fax 81-72-682-4066

E-mail

URL <http://panasonic.co.jp/lamp/company/>

- ▲ B2 Longevity
- B4 Higher quality
- B3 Resource saving
- ▼ A4 Waste



By optimizing the quantity of emitters and developing new electrodes of straight type tubes, life of fluorescent lamps is lengthened by 1.5 times in circular type and 1.2 times in straight type.

By forming an even protection layer with using the original coating technology, blackening of tubes is reduced and about 80% of full brightness is still provided at the rated life.

This bright fluorescent lamp 'PA-LOOK PREMIER' is good for eyes, and reduces the frequency of lamp replacement, resources and wastes owing to its long life.



PA-LOOK PREMIER fluorescent lamp ;
straight type and circular type

Eco-products

EP - 060

Home electric appliances / Lightings

lamps

Industry's first fluorescent lamp for office to energy and resource-saving

TOSHIBA LIGHTING & TECHNOLOGY
CORPORATION

Minamishinagawa JN Bldg, 2-13, Minamishinagawa
2-Chome, Shinagawa-ku, Tokyo, Japan

Tel 81-3-5463-8800 Fax

E-mail

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

- ▲ A5 Resource consumption
- B2 Longevity
- B3 Resource saving
- ▼ B5 Energy saving



"NEOSLIM-Z SQUARE" is a square fluorescent lamp designed for high frequency operation in offices (ceiling-fixture) and is industry-first in energy-saving and resource-saving.

- (1) High efficiency : we achieved lamp efficiency of 103 lm/W at 35°C ambient temperature.
- (2) High luminous flux : 7200 lm, providing brightness equivalent to that of four 20W tubular type fluorescent lamps.
- (3) Long life : rated-life of 15,000 hours.(Conventional fluorescent lamps have a life of 6,000 hours for circular, 8,500-12,000 hours for tubular type, respectively.)
- (4) Resource-saving : Uses a slim tube with a diameter of 16mm. (Tube diameter of current fluorescent lamps is 25mm-32.5mm.)



NEOSLIM Z SQUARE FHG70EN

Eco-products

EP - 061

Home electric appliances / Lightings

lamps

RoHS-Free Liliput Series Fluorescent Energy Saving Lamp

Megaman (S) Electrical & Lighting Pte Ltd
101 Kitchener Road, #01-32 Jalan Besar Plaza,
208511 Singapore
Tel +65 6396 5576 Fax +65 6396 7456
E-mail sales@megaman.com.sg
URL www.megaman.com.sg

- ▲ A3 Hazardous substances
- B1 Recyclability
- B5 Energy saving
- ▼ B7 Use of recycled materials



Established in 1994, MEGAMAN has already established itself as a respected German brand, making it one of the top 3 brands in the CFL industry. In Europe, MEGAMAN is a leading brand in energy-saving lamps that has successfully positioned itself as one of the innovative leaders in lamp designs that are exceptionally outstanding.

Megaman cares for environment, our eco-friendliness lies in the: RoHS compliant features in all MEGAMAN lamps exported to Europe. Lead-free Soldering and Lead-free Glass used in RoHS compliant models. Silicone Sleeve holds broken glass and mercury in place before proper disposal and recycling. Water-based adhesive is used to prevent release of toxic substances during lamp operation.



MU111i/E27 - RoHS compliant features in Liliput Plus and Liliput with INGENIUM series

Eco-products

EP - 062

Home electric appliances / Lightings

lamps

55W Amalgam Lamp

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
URL

- ▲ B4 Higher quality
- B5 Energy saving
- B6 Environmental purification



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 colour temperature.

This lamp can be used widely for energy saving for indoor and outdoor, 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.



gp-SFL-55W/HPF amalgam 840HT (design pending)

Eco-products

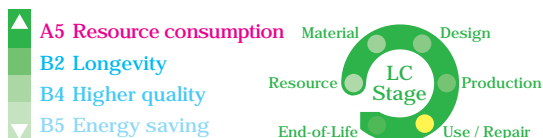
EP - 063

Home electric appliances / Lightings

Electric discharge lamps

Ceramic metal halide lamp "HCI series"

MITSUBISHI ELECTRIC OSRAM Ltd.
Tobu Yokohama Bldg. No.3(4F) 8-29, Kita-Saiwai
2-chome, Nishi-ku YOKOHAMA, 220-0004 Japan
Tel 81-45-323-5187 Fax 81-45-323-5156
E-mail
URL <http://www.mol-oml.co.jp>



"HCI series" are compact metal halide lamp with ceramic bulb. Their efficiency and color rendering properties are superior to quartz bulb type. Also it enables to decrease lamp to lamp color variation. It keeps stable luminous flux and lighting color from starting to the end of lifetime. Now the bulb of "HCI series" are proceeded to change into ball shaped tube "POWERBALL" which improves the lamp performance such as efficiency, color rendering properties and so on.

Many kinds of products are lined up in base, wattage and lighting color, therefore they can be utilized at various places of commercial facilities.

- Especially, HCI-TE100W(4000K, transparent type) achieves high efficiency of 115lm/W.
- General color rendering index Ra is 90.
- Lighting colors of WDL and NDL type are lined up. Also SHOPLIGHT type, which is improved in red color reproducibility, is suitable for needs reproducibility of brilliant color in shop.



HCI-TE100W

Eco-products

EP - 064

Home electric appliances / Lightings

Electric discharge lamps

Energy saving and high performance gas discharge lamp 'Cerameta premier SPD'

Matsushita Electric Industrial Co.,Ltd.
Lighting Company
1-1 Saiwai-cho, Takatsuki City, Osaka, 569-1193 Japan
Tel 81-72-682-7521 Fax 81-72-682-4066
E-mail
URL <http://panasonic.co.jp/lamp/company/>



'Cerameta premier SPD' is a high lumen output and long life lamp suitable for ceiling lighting, street lighting, landscape lighting, etc.

With using the new slim one-molding ceramic tubes, high lamp efficiency (125 lm/W, 2.3 times higher than mercury lamps) is achieved, electricity consumption is reduced by about 60%, and 17 ton-CO₂ is reduced annually.

The weight is reduced by about 70% in comparison with mercury lamps, and the wastes are also remarkably reduced.



Cerameta premier SPD

Eco-products

EP - 065

Home electric appliances / Lightings

Electric discharge lamps

Ceramics Metal Halide Lamp

Hitachi Lighting, Ltd.
2-5-2 Suda-cho, Chiyoda-ku, Tokyo, 101-0041 Japan
Tel 81-3-3255-5261 Fax
E-mail
URL http://www.hitachi-hll.co.jp/catalog/lamp/index/l85_1.pdf



B5 Energy saving



Description of Products

This high-performance lamp has a ceramics arc tube that can be turned on through the regular mercury-vapor lamp ballast.

Development Concept

The electrical charge is halved, maintaining the same life span and almost the same brightness.



MF200CL/BU/190

Eco-products

EP - 066

Home electric appliances / Lightings

lamps

Energy-Saving LED Lighting

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
URL



B4 Higher quality
B5 Energy saving
B6 Environmental purification



gpLiCHT LED down light utilized Latest Japanese LED technology to attain several benefits in lighting. Extremely long life (>50,000 hrs) combined with high outputs (>85lm/W). This lamp also achieves superior colour rendering (CRI > 80) without UV emissions, low power consumption fixture from 3W to 10W. Due to the small size of LEDs, this technology can be used to make very compact fitting. gpLiCHT LED down light suitable for lift, lift lobby, corridor, tunnel, link-way and any location require energy saving down light.



gp-SBLED/COOL WHITE/3X1W/ROUND

Eco-products

EP - 067

Home electric appliances / Lightings

Straight-tube fluorescent lamp fixtures

Office lighting system "TIMER SERUKON series"

Matsushita Electric Works, Ltd
1048, Kadoma, Kadoma-shi, Osaka, Japan
Tel 81-6-6908-1131 Fax
E-mail
URL <http://www.mew.co.jp>

▲ A1 Global warming
B5 Energy saving
A3 Hazardous substances
▼



- 1 This product realizes remarkable energy saving by cutting extra brightness of a newly attached lamp. It achieved a sharp reduction in energy consumption of
- 1 41% compared with the conventional products with using an Hf inverter and such a cutting function.
- 1 The light efficiency is increased by about 10% by using the high reflection 'Super-bright coating', and the system provides a highly efficient illumination of 100lm/W or more.



FSA42666A PF9

Eco-products

EP - 068

Home electric appliances / Lightings

Ring-tube fluorescent lamp fixtures

Lighting to wake up, Ceiling Lights 'ASSA'

Asahi Matsushita Electric Works, Ltd.
7-7-6, Yumegaoka, Iga-shi, Mie, 518-8518 Japan
Tel 81-595-26-3600 Fax 81-595-26-3643
E-mail
URL <http://www.anl.co.jp/>

▲ A1 Global warming
B5 Energy saving
B2 Longevity
B3 Resource saving
▼



- 1 This product applies a work of light to promoting a pleasant awakening in coordination with a body rhythm of a human, biological clock.
- 1 It takes 30 minutes for becoming bright, as simulating a morning light.
- 1 Quantity of energy saving depending on the intensity of illumination is noticed by sound.
- 1 Its power consumption is equal, brightness is double, and life is about two times longer than the conventional products.
- 1 It reduced about 80% of power consumption by controlling the ratio of brightness to about 10%.



Ceiling Lights HFAZ7803

Eco-products

EP - 069

Home electric appliances / Lightings

Fluorescent lamp fixtures

Lighting Control System

Hitachi Lighting, Ltd.
2-5-2 Kandasuda-cho, Chiyodaku, Tokyo, 101-0041 Japan
Tel 81-3-3255-5261 Fax
E-mail
URL http://www.hitachi-hll.co.jp/for_facilities/kkt_system.html



Description of Products

The lighting system totally controls lighting facilities in 24-hour convenience stores to save energy.

Development Concept

Each energy-saving lighting facility is controlled optimally and automatically to remove undesired lighting and save energy so that global warming can be prevented.



DR20851 System (Combination with other lighting instruments)

Eco-products

EP - 070

Home electric appliances / Lightings

Electric lighting fixtures

Longer Lamp Life & Eco Lighting: Fluorescent Digital Starter

DCT Co.,Ltd.
3-15-6, Higashi Shibuya-ku, Tokyo, Japan
Tel 03-5468-7131 Fax 03-5468-7399
E-mail info@dct-web.co.jp
URL www.dct-web.co.jp



Don't you have the problem of frequent replacement of fluorescent lamps and glow starters in your buildings and elevators? Don't you have the problem of disposing heaps of lamps out of use that contain toxic mercury? Here is a solution to these problems. The Digital Starter Pro has a built-in microcomputer chip for software control of emitter diffusion in lighting the lamp. It offers maintenance-free outsourcing service by drastically extending lamp service life up to 30 times longer than the conventional glow starter. The longer lamp life directly leads to save environment by minimizing the number of fluorescent lamp wastes. Moreover, Digital Starter Pro facilitates the diligent turn on/off of lamps in order to achieve greater energy saving. Features

1. Advanced digital circuit assures optimum electrode preheating time
2. Multi pulse lighting system assures reliable lighting even under severe environment
3. Instantaneous lighting
4. Automatic relighting function makes retries to light lamps in the event of momentary voltage drop
5. Double protection function is a safety protection system with automatic power cut off feature for lamps near the end of their service life



Digital Starter Pro series. FDS-1E, 1P, 4P/5P

Eco-products

EP - 071

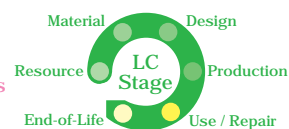
Home electric appliances / Lightings

Electric lighting fixtures

Electrodeless Lamp lighting system "EVER LIGHT series "

Matsushita Electric Works,Ltd
1048, Kadoma, Kadoma-shi, Osaka, Japan
Tel 81-6-6908-1131 Fax
E-mail
URL <http://www.mew.co.jp>

- ▲ B2 Longevity
- B5 Energy saving
- A3 Hazardous substances
- ▼ A4 Waste



This electrodeless lamp lighting system achieved the long life of 60,000 hours and energy saving of 40% or more compared with the mercury light of same brightness.

The system reduces the usage of resources and wastes remarkably by eliminating its lamp's weight and with its long life.

It covers a wide range of luminous flux (18W-240W), so that it can be used as the various lighting equipments for street lighting , road lighting , floodlighting and downlighting, etc .



Electrodeless Lamp 150W street light

Eco-products

EP - 072

Home electric appliances / Lightings

Office Lighting Fixture

High-efficiency office luminaire offering both energy and resource savings

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION
Electric Products Equipment Division
Minamishinagawa JN Bldg, 2-13, Minamishinagawa
2-Chome, Shinagawa-ku, Tokyo, Japan
Tel 81-3-5463-8769 Fax 81-3-5463-8824
E-mail
URL <http://www.tlt.co.jp/>

- ▲ A1 Global warming
- A3 Hazardous substances
- B3 Resource saving
- ▼ B5 Energy saving



White steel plates and aluminum mirror plates with a 90% reflection factor are used as reflectors, contributing to the high efficiency of this product. To reduce the environmental burden, it uses materials such as chromium-free steel plates, lead-free electric wire and soft solder. It uses less raw material thanks to a reduction in equipment size and weight, and partial packaging. The luminaire has universal voltage so it can be used with power supply voltages ranging from 100V to 242V.



FHR-42941K-PH9

Eco-products

EP - 073

Home electric appliances / Lightings

Lighting Fixture

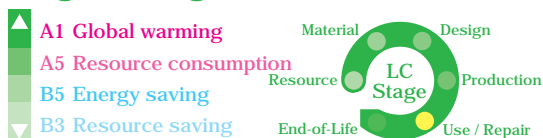
Energy saving HID lighting fixture for high-ceilinged rooms

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION

Electric Products Equipment Division
Minamishinagawa JN Bldg, 2-13, Minamishinagawa
2-Chome, Shinagawa-ku, Tokyo, Japan
Tel 81-3-5463-8776 Fax 81-3-5463-8824

E-mail

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



High-color-rendering 250W NEOCERA lamp (offering the best lamp efficiency in the industry) and newly developed reflective film, make this product one of the best lamps in the industry in terms of light output ratio and allows you to reduce the number of lights installed. The product also cuts energy use by about 52% compared with others such as 400W mercury lamp+adaptive accessories in high-ceilinged facilities. An inverter equipped with 100%-50% continuous dimming function also contributes to energy saving by offering flexible lighting control.



DD-25101FK-DPM2

Eco-products

EP - 074

Home electric appliances / Lightings

Emergency Lighting fixture

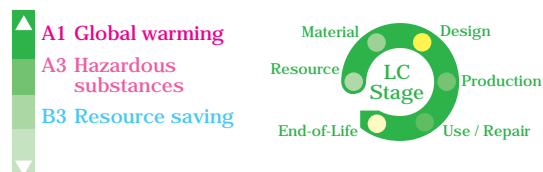
Emergency Lighting Fixture with fewer substances related to RoHS Directive

TOSHIBA LIGHTING & TECHNOLOGY CORPORATION Electric Products Equipment Division

Minamishinagawa JN Bldg, 2-13, Minamishinagawa
2-Chome, Shinagawa-ku, Tokyo, Japan
Tel 81-3-5463-8769 Fax 81-3-5463-8824

E-mail

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



The main body consists of a chrome-free steel plate without any soil pollutant. The lighting unit is a halogen-free plate without any dioxin emission substance. Lead-free wire is used in electric wires inside the lighting fixture to cut down toxic substances. The emergency battery is a cadmium-free nickel hydride battery.



IEM-18321HN

Eco-products

EP - 075

Home electric appliances / Lightings

Solar Lighting System

EsoLit: Environmental-Friendly Solar Lighting System

GRENZONE PTE LTD

51 Ayer Rajah Crescent #06-17, 139948 Singapore

Tel +65 6872 2350 Fax +65 6872 5610

E-mail info@grenzone.com

URL www.grenzone.com

- ▲ A1 Global warming
- B3 Resource saving
- B5 Energy saving
- ▼ B6 Environmental purification



EsoLit Solar Lighting System is the ideal solution for streetlight, rural road, factory, housing estate and other common areas for high brightness illuminations. Moreover, it operates at low voltage level, which is safe for public use. No unsightly and costly cables need to be laid to compromise the view. Aesthetically designed outdoor weatherproof lighting fitting incorporate with high efficiency lamp operates at high frequency to save energy and provide stable illumination. The system automatically turn on and off at dusk and dawn by sensing the daylight. It has built-in protection circuits for over-charging and discharging of the storage battery. The solar module will continue functioning even in cloudy or raining weather condition.



GZS06215C/W, GZS06218L

Eco-products

EP - 076

Home electric appliances / Lightings

DVD Video Recorder

HDD & DVD Recorder with Dual Layer Disc Compatibility

PIONEER CORPORATION

4-1 Meguro 1-chome, Meguro-ku, Tokyo, 153-8654

Japan

Tel 81-3-3494-1111 Fax

E-mail

URL

- ▲ A3 Hazardous substances
- B3 Resource saving
- B5 Energy saving



Compatible with dual layer discs, it realizes a maximum of 24 hours continuous picture recording. These features help reduce the number of unnecessary storage discs, thus contributing to resource savings. In addition to the internal 160GB HDD, an expansion HDD "HDD-S250" can also be connected. Thus, not only recordable time is expanded, but also recorded programs are easier managed by category. This extends the product life cycle considerably. It also has an energy saving design with a 0.36W standby power consumption (with FL backlights off). Thanks to a 6.9cm high low-profile design, it reduces the burden on transportation and the like. In addition, it also adopts lead-free solder.



DVR-540H

Eco-products

EP - 077

Home electric appliances / Lightings

Video cameras

DVD VIDEO CAMERA

Hitachi, Ltd. Ubiquitous Platform Group
2-2-1, Ohte-machi, Chiyoda-ku, Tokyo, Japan
Tel 0120-3121-11 Fax 0120-3121-34
E-mail
URL <http://av.hitachi.co.jp>

- ▲ A1 Global warming
- B1 Recyclability
- B4 Higher quality
- ▼ B5 Energy saving



DVD cam birth with the continuation skill! compact size which makes, which sees, to photographs.

Light emitting diode system is reduced adoption and 12% of amount of used electricity to the back light of a liquid crystal display monitor. Non halogen board and lead free solder are adopted as a circuit board.

Recyclable corrugated paper is adopted as the cushion of packing material.



DZ-GX20

Eco-products

EP - 078

Home electric appliances / Lightings

Video cameras

Smaller/Energy-saving "Handycam®" by unique, high-density technology

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

- ▲ A1 Global warming
- A3 Hazardous substances
- A5 Resource consumption
- ▼ B3 Resource saving



Until recently, high-definition camcorders have been the preserve of professionals. The "Handycam®" "HDR-HC1," however, brings such technology within reach of everyone thanks to Sony's high-density technology. A later model, the "HDR-HC3," is approximately 26% smaller and lighter than the "HDR-HC1". The "HDR-HC3" also incorporates the new "ClearVid CMOS Sensor™," which reduces power consumption by approximately 45%, compared to the "HDR-FX1", a 3CCD camcorder. By making such improvements, Sony has made shooting high-definition video easier to handle.



Digital HD "Handycam®" HDR-HC3

Eco-products

EP - 079

Home electric appliances / Lightings

HDD & DVD Video Recoder

HDD&DVD video recorder having an improved environment-efficiency

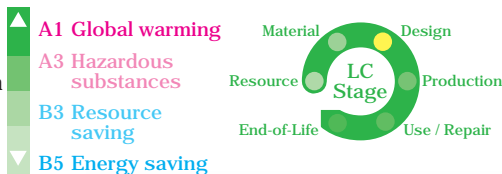
TOSHIBA CORPORATION Digital Media Network Company

1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan

Tel 81-428-34-3299 Fax 81-428-30-7347

E-mail

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



Environment efficiency (*1) was improved by the reduction of the load to the environment and by the enhancement of the product value. We reduced the power consumption by improving the efficiency of the circuit and by reducing the weight of the product; the latter was realized by simplifying structure, by reducing the PCB(Printed Circuit Board) and by popularizing the design. In comparison with the model in fiscal 2000, the weight of product was reduced by 29% and the power consumption was reduced by 26%. The power consumption while standby is about 0.7-watt. In order to increase the product value, 80GB HDD of the model in fiscal 2000 was replaced with 200 GB HDD, which can conduct long-time picture recording. A double recording function which can record two programs at the same time was added. The model in fiscal 2000 was usable only for single recording. In addition, DVD multi-drive was installed; thereby DVD-R can do dubbing at a speed of 105-times at its maximum. (The model in fiscal 2000: 4-times speed).

(*1: Environment efficiency of a product is defined by the ratio of the product's value to the environment impact given by the product.)



RD-XS38

Eco-products

EP - 080

Home electric appliances / Lightings

DVD Video Recorder

DVD Video Recorder, DIGA EX350/150

Panasonic AVC Networks Company, Matsushita Electric Industrial Co., Ltd.

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan

Tel 81-6-6905-8356 Fax 81-6-6905-4755

E-mail

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



Equipped with a special function to record into HDD two different channel programs during the same broadcast time, named 'Double Recording'.

Circuit is highly integrated to conserve energy.

Compact and light weight 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.)



DVD Video Recorder, DMR-EX350

Eco-products

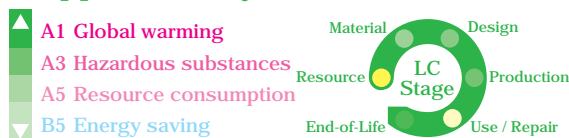
EP - 081

Home electric appliances / Lightings

Digital cameras, Digital video

Cybershot which realized stamina of approximately 420 shots

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>



Reduction of energy consumption of Imaging processor "Real Imaging Processor" realized stamina of approx.420 shots.

- Lead-free solder are used for soldering
- No halogenated flame-retardants used in cabinet.
- Pulp-mold cushion made from recycled paper is used for cushioning.
- Carton box made from 100% recycled paper.
- VOC(Volatile Organic Compound)-free vegetable oil based ink is used for carton box.



Cybershot DSC-T30

Eco-products

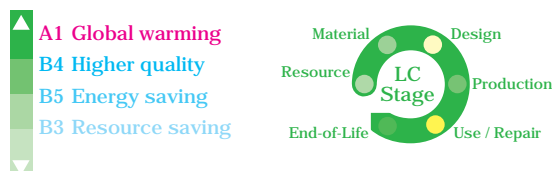
EP - 082

Home electric appliances / Lightings

Digital cameras, Digital video

Digital Camera, LUMIX FX01

Panasonic AVC Networks Company, Matsushita Electric Industrial Co., Ltd
1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan
Tel 81-6-6905-8356 Fax 81-6-6905-4755
E-mail
URL <http://panasonic.co.jp/pavc/>



28mm Wide-Angle 3.6x Optical Zoom LEICA DC VARIO-ELMARIT Lens of this stylish, compact model lets you take wide-angle shots with rich perspective.

As compact as it is, the LUMIX body still houses a large, 2.5inch LCD. The High Angle mode makes it easy to view the LCD image when holding the camera high above you.

Achieved power consumption of 1.6W (reduced by 11% compared with our current model DMC-FX9) due to low power circuit technology.

Power saving performance realizing about 320 continuous shots.

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.)



Digital Camera, DMC-FX01

Eco-products

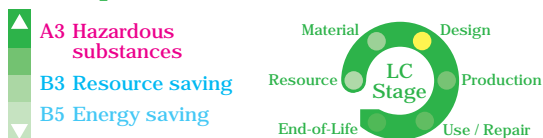
EP - 083

Home electric appliances / Lightings

Digital cameras, Digital video

Digital Movie Camera with Daily Life Waterproof VPC-CA6

SANYO Electric Co.,Ltd.
1-1,Sanyo-cho,Daito City,Osaka 574-8534, Japan
Tel 81-72-870-7142 Fax 81-72-870-7491
E-mail hira074299@sanyo.co.jp
URL <http://www.sanyo.co.jp/>



Palm-Sized Movies and Photographs Available with This One!
First*(* As of 21/07/06)

Features:

- 1) Resource saving design by volume reduction;
- 2) Complies with RoHS (Restriction of Hazardous Substances) Directive;
- 3) Change of resin plated parts from hexavalent to trivalent chromium-contained;
- 4) Production of substrates with lead-free solder;
- 5) Use of ink not containing heavy metals (cadmium, lead, mercury, and hexavalent chromium) for packing boxes and operation manuals;
- 6) Use of recycled paper for packing boxes; Non-use of foamed polystyrene



VPC-CA6 Series
Weather Proof Digital Movie Camera

Digital Movie Camera(VPC-CA6)

Eco-products

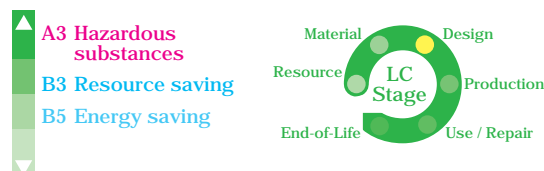
EP - 084

Home electric appliances / Lightings

Digital cameras, Digital video

High Definition Digital Movie Camera VPC-HD1

SANYO Electric Co.,Ltd.
1-1,Sanyo-cho,Daito City,Osaka 574-8534, Japan
Tel 81-72-870-7142 Fax 81-72-870-7491
E-mail hira074299@sanyo.co.jp
URL <http://www.sanyo.co.jp/>



Smallest & Lightest!(* (* As of 11/01/06 SANYO study)

Features:

- 1) Complies with RoHS Directive;
- 2) Change of resin plated parts from hexavalent to trivalent chromium-contained;
- 3) Production of substrates with lead-free solder;
- 4) Use of ink not containing heavy metals (cadmium, lead, mercury, and hexavalent chromium) for packing boxes and operation manuals



VPC-HD1
High-Definition Digital Movie Camera

Digital Movie Camera(VPC-HD1)

Eco-products

EP - 085

Home electric appliances / Lightings

DVD Camcorder

DVD Camcorder with 3CCD & O.I.S, DIGICAM D300

Panasonic AVC Networks Company,
Matsushita Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka,
571-8504 Japan

Tel 81-6-6905-8356 Fax 81-6-6905-4755

E-mail

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

- ▲ A1 Global warming
- B4 Higher quality
- B5 Energy saving
- ▼ B3 Resource saving



Achieved stand-by power consumption of 0.1W 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.)



DVD Camcorder, VDR-D300

Eco-products

EP - 086

Home electric appliances / Lightings

DVD Player

Low-Power-Consumption / Low-Profile DVD Player

PIONEER CORPORATION

4-1 Meguro 1-chome, Meguro-ku, Tokyo, 153-8654
Japan

Tel 81-3-3494-1111 Fax

E-mail

URL

- ▲ A1 Global warming
- A3 Hazardous substances
- B5 Energy saving
- ▼



In addition to the high performance "12 bit image DAC" for an improved picture, it also realizes low power consumption, 7W electric power consumption and 0.5W standby power consumption, consequently contributing to reductions in CO₂ emissions. Thanks to a low-profile design with a height of 49.5mm, it reduces the amount of materials used and eliminates burdens on transport and the like. In addition, it adopts lead-free solder.



DV-393

Eco-products

EP - 087

Home electric appliances / Lightings

Electronic equipment, and parts and attachments and accessories

Air Cleaner

Hitachi Appliances, Inc.
15-12, Nishi shimbashi 2-chome, Minato-ku,
Tokyo, Japan
Tel Fax
E-mail
URL <http://kadenfan.hitachi.co.jp/index.html>

▲ A5 Resource consumption
B3 Resource saving
B2 Longevity



Description of Products

This air cleaner removes odor and pollens quickly and supplies nebulous clean air. In addition, it has a new filter for long product life span.

Development Concept

Compact air cleaner equipped with a humidifier and a new filter for eco-friendliness and long product life span.



EP-V32

Eco-products

EP - 088

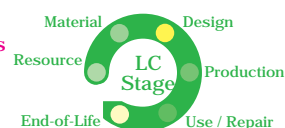
Home electric appliances / Lightings

Primary batteries

Mercury-Free Silver Oxide Batteries

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo, 141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

▲ A3 Hazardous substances
B4 Higher quality



Silver oxide batteries, used in wristwatches and other small products, traditionally contain mercury to prevent the generation of hydrogen gas; a cause of the deterioration of batteries. Because the production of silver oxide batteries without mercury has generally been seen as unfeasible, the use of mercury in these batteries is exempted, due to the difficulty in realizing it¹. Sony has been conducting research with the aim of realizing mercury-free silver oxide batteries since the 1990s. These efforts led to the development of a technologies; a new zinc alloy powder, a new anticorrosion material in anode and a new zinc anti-corrosion process onto the collector. These technologies have facilitated the production of mercury-free batteries that deliver equal safety and performance as their conventional batteries.

¹Exemption approved under the proposed new European Battery Directive, which outlines obligations for the use and disposal of batteries before the European Parliament and its Environmental Committee. (as of March 2006)



Mercury-free silver oxide battery, SR626SWS

Eco-products

EP - 089

Home electric appliances / Lightings

Mini Disc using Recycled Plastic

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

Mini discs

- ▲ A5 Resource consumption
- B3 Resource saving
- A4 Waste
- ▼ B7 Use of recycled materials



Sony's Bianca minidisc (MD) uses recycled resin for approximately 30% of total plastic content, excluding the disc itself. Labels and index cards are made from 100% recycled paper and printed using volatile organic compound (VOC)-free vegetable oil-based ink.



Minidisc, 5MDW74BAA

Eco-products

EP - 090

Home electric appliances / Lightings

Plain paper personal facsimile, Energy conservation, Natural resources

Panasonic Communications Co., Ltd
4-1-62, Minoshima, Hakata-Ku, Fukuoka-shi,
Fukuoka, Japan
Tel 81-92-477-1103 Fax 81-92-477-1488
E-mail
URL <http://panasonic.co.jp/pcc/index.html>

Facsimiles

- ▲ A1 Global warming
- A3 Hazardous substances
- B5 Energy saving
- ▼



- Succeeded in reducing the product size through space-saving printed circuit boards and minimization of the size of motors.
- Reduced power consumption by energy-conservation design.
- Reduced environmental load by using chrome-free surface processed steel, in addition to lead-free solder used for mounting printed circuit boards which is already employed in conventional models.



KX-PW605DL

Eco-products

EP - 091

Home electric appliances / Lightings

Radio receivers

Hand-wound Radio, which can recharge your mobile phone

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

▲ A1 Global warming
▲ A5 Resource consumption
▲ B5 Energy saving
▼ B3 Resource saving



Useful everyday, and at emergency. Hand-wound Radio.

1. Playing time by one minute (120 times) winding:
FM(TV1-3ch): approx. 40 minutes
AM: approx. 60 minutes
LED Light: approx. 15 minutes
2. LED light
Spot light and diffusion light are equipped.
3. Recharging mobile phone
Mobile phone by NTT docomo, au, Vodafone and TU-KA, can be recharged. ^{*1}



Hand-Wound Radio ICF-B01

^{*1}:There are some non-applicable models. Not applicable for PHS.

Eco-products

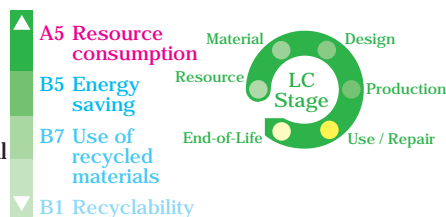
EP - 092

Home electric appliances / Lightings

Television receivers

High-quality, Energy-saving and easy-to-use Color Television

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>



The company is striving to develop eco-products that reduce environmental impact throughout their life cycle by establishing environmental goals based on MET: That is, Materials should be effectively exploited, Energy should be efficiently used, and Toxic substances should be reduced. A 3R product assessment is made for design and development which looks at green procurement and reducing plastics/packaging materials and power consumption.



25T-D104S

Eco-products

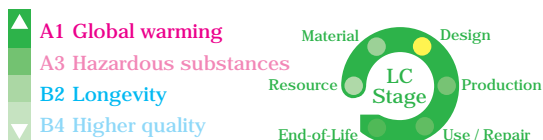
EP - 093

Home electric appliances / Lightings

Plasma Display Television

Hitachi, Ltd. Ubiquitous Platform Group
2-2-1, Ohte-machi, Chiyoda-ku, Tokyo, Japan
Tel 0120-3121-11 Fax 0120-3121-34
E-mail
URL <http://av.hitachi.co.jp>

Television receivers



10% decrease in energy consumption while in standby mode compared to previous models, due to high efficiency of the standby power and changes to the control of the microcontroller.
- Uses environmentally friendly materials such as lead-free solder and power cord sheathing, chrome-free steel plates and hexavalent chromium-free screw.
- Promotes a longer life span with the ALIS Method which decreases the burden on fluorescent materials compared to ordinary panels.
- Model promoting the RoHS Directive and WEEE Directive(as of October 2005).



55PD-8800

Eco-products

EP - 094

Home electric appliances / Lightings

High-Definition Plasma Television, minimum consumption power, minimum weight

PIONEER CORPORATION
4-1 Meguro 1-chome, Meguro-ku, Tokyo, 153-8654 Japan
Tel 81-3-3494-1111 Fax
E-mail
URL



Pioneer, an industry leader, introduced a PDP featuring the both minimum rated power consumption and the minimum weight compared with equivalent PDP products in the industry. This is achieved by several unique technologies, such as the new "P.U.R.E."¹ Black Panel" with improved luminous efficiency. Adopting Pioneer's unique "Crystal Emissive Layer" technology, Pioneer achieved the minimum² rated consumption of 343W compared with 50-inch PDPs in the industry. Using the third generation direct film filter technology adopted for the PDP products, a minimum weight³ of 37.4 kg is achieved in the industry.

¹ "P.U.R.E." is an abbreviation of "Plasma Ultimate Reference Exclusive".

² Investigation by Pioneer for 50-inch and 42-inch Plasma TV on April 19, 2006.

³ The product weight of "PDP-507HX" is a total weight of the display and speakers.



PDP-507HX

Eco-products

EP - 095

Home electric appliances / Lightings

Television receivers

High-Definition Plasma Television, minimum consumption power, minimum weight

PIONEER CORPORATION

4-1 Meguro 1-chome, Meguro-ku, Tokyo,
153-8654 Japan

Tel 81-3-3494-1111 Fax

E-mail

URL

- ▲ A1 Global warming
- B3 Resource saving
- B4 Higher quality
- ▼ B5 Energy saving



Pioneer, an industry leader, introduced a PDP featuring both the minimum rated power consumption and the minimum weight compared with equivalent PDP products in the industry. This is achieved by several unique technologies, such as the new "P.U.R.E."^{*1} Black Panel" with improved luminous efficiency. Adopting Pioneer's unique "Crystal Emissive Layer" technology, Pioneer achieved the minimum^{*2} rated consumption of 288W, compared with 42-inch PDPs in the industry. Using the third generation direct film filter technology adopted for PDP products, a minimum weight^{*3} of 29.0kg is achieved in the industry.

*1 "P.U.R.E." is an abbreviation of "Plasma Ultimate Reference Exclusive".

*2 Investigation by Pioneer for 50-inch and 42-inch Plasma TV on April 19, 2006.



, PDP-427HX

Eco-products

EP - 096

Home electric appliances / Lightings

Television receivers

Megapixel ALIS High Definition Plasma TV: Energy Saving

Hitachi, Ltd., Ubiquitous Platform Systems
Shin-Otemachi Bldg. 2-1, Otemachi 2-chome, Chiyoda-
ku, Tokyo, 100-0004, Japan

Tel Fax

E-mail

URL

- ▲ A1 Global warming
- B3 Resource saving
- B1 Recyclability
- B5 Energy saving



The high definition TV realizes 1.11 megapixels (1024x1080) and achieves the highest level brightness (white peak, panel element) of 1400cd/m².

Energy Saving

Compared to its previous model, this environment friendly TV consumes approximately 35% less power annually.

Design & Component Production

It is equipped with lead-free printing board, halogen-free chassis, and chrome-free materials.

Product Use

Power down function is activated automatically when the running TV has been left for a certain period.

Longevity

Megapixel ALIS panel realized about 60000 hours of panel life.



TV: W42P-H9000, STAND: TB-PSR4261

Eco-products

EP - 097

Home electric appliances / Lightings

Television receivers

Digital Hi-Vision Plasma TV, VIERA PX600 Series

Panasonic AVC Networks Company,
Matsushita Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka,
571-8504 Japan

Tel 81-6-6905-8356 Fax 81-6-6905-4755

E-mail

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

▲ A1 Global warming
B4 Higher quality
B5 Energy saving
▼ B3 Resource saving



New PEAKS (PEAKS processor, PEAKS driver, PEAKS Panel) achieved clear and vivid high quality picture. High gradation resolution by 16bit digital processing. Deep black by new black creation. Brighter picture by improved luminous efficiency panel.

Annual power consumption (kWh/year): Reduced by approx. 37% (TH-37PX600, compared with our conventional model TH-37PX300).

Achieved stand-by power consumption of approx. 0.1W.

Long lifetime design of plasma panel: Approx. 60,000 hours.

Non-Use of Specific Chemical Substances*

(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Digital Hi-Vision Plasma TV, TH-58/50/42/37PX600

Eco-products

EP - 098

Home electric appliances / Lightings

Television receivers

Digital Hi-Vision Plasma TV, VIERA PX60 Series

Panasonic AVC Networks Company, Matsushita
Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504
Japan

Tel 81-6-6905-8356 Fax 81-6-6905-4755

E-mail

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

▲ A1 Global warming
B4 Higher quality
B5 Energy saving
▼ B3 Resource saving



New PEAKS (PEAKS processor, PEAKS driver, PEAKS Panel) achieved clear and vivid high quality picture. High gradation resolution by 16bit digital processing. Deep black by new black creation. Brighter picture by luminous efficiency improved panel.

Annual power consumption (kWh/year): Reduced by approx. 45% (TH-37PX60, compared with our conventional model TH-37PX300).

Achieved stand-by power consumption of approx. 0.1W.

Long lifetime design of plasma panel: Approx. 60,000 hours.

Non-Use of Specific Chemical Substances*

(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Digital Hi-Vision Plasma TV, TH-50/42/37PX60

Eco-products

EP - 099

Home electric appliances / Lightings

Liquid crystal Rear Projection television receivers

BRAVIA E series LCD rear-projection TV realized 50" screens by 195 watts

Sony Corporation

6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan

Tel 81-3-5448-2111 Fax 81-3-5448-2244

E-mail

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

▲ A1 Global warming
B5 Energy saving
A5 Resource consumption
▼ B3 Resource saving



Sony's BRAVIA E series of LCD rear-projection televisions consume less power because they generate bright images from low output lamps, compared with other types of flat-screen televisions. The lamps in these sets have newly developed reflectors that improve the efficiency of the optical engine. As a result, the televisions can achieve high levels of brightness on 50V (50-inch visual size) screens while consuming only 195 watts of electricity; less than half that of plasma televisions*.

* Compared to the rated power consumption of the Sony KDE-P50HVX, a 50V plasma television



BRAVIA E series KDF-50E1000

Eco-products

EP - 100

Home electric appliances / Lightings

Liquid crystal television receivers

The "LocationFree™"TV uses recycled plastic for parts, including bezel

Sony Corporation

6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan

Tel 81-3-5448-2111 Fax 81-3-5448-2244

E-mail

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

▲ A5 Resource consumption
B3 Resource saving
A1 Global warming
▼ A3 Hazardous substances



- Recycled plastic is partially used for the bezel of monitor
- Standby power consumption: 0.1W
- Lead-free solder is used for soldering
- Halogenated flame retardants are not used in cabinets and printed wiring boards
- 100% recycled magazine paper is used for the carton and VOC (Volatile Organic Compound)-free vegetable oil based ink is used for printing the carton.



The "LocationFree™"TV monitor LF-X11

Eco-products

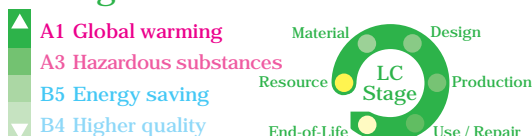
EP - 101

Home electric appliances / Lightings

Liquid crystal television receivers

BRAVIA, LCD TV with various energy-saving functions

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>



1. Energy consumption level bar
The bar indicate the level of energy being saved
2. Brightness censer
Adjusting the brightness of the screen by censing the lightness of the room,
3. Auto shut-off
10 minutes after the broadcasting is over, the power mode will be automatically switched to stand-by mode
4. Energy-saving mode
Energy-saving mode by remote controller to make the picture brightness moderate.
5. Auto Shut-off after certain non-commanding hours
After a certain pre-set period, one/two/three hours, without any command, the power mode will be automatically switched to stand-by mode
6. Off-timer
Auto shut-off by setting a timer
7. PC power management
While connecting with PC, if there is no signal over 30 second, the power mode will be automatically switched to stand-by mode, and turns on at signals.



BRAVIA KDL-32,40,46V2000/S2000

Eco-products

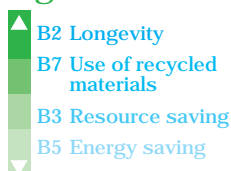
EP - 102

Home electric appliances / Lightings

Liquid crystal television receivers

45V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>



5V type extended high definition TV equipped with Full high-definition Resolution (1920x1080 pixels) liquid crystal panel. AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts, and uses recycled materials.

The environmentally conscious AQUOS (LC-45BE1W)

- Backlight longevity is about 60,000 hours.
 - Stand using 20% recycled material
 - Non-halogen cabinet
 - Lead-free solder circuit board
 - Hexavalent chromium-free sheet steel
 - Halogen-free power cords and inner cables
 - Hexavalent chromium-free fasteners (nuts and bolts)
- In addition, we have developed world-first technology for painting the plastic parts of consumer electronics with plant-based paint made from corn. We use this paint on the stand of this model.



4Products/Model:
AQUOS LCD TV LC-45BE1W

Eco-products

EP - 103

Home electric appliances / Lightings

Liquid crystal television receivers

37V/32V/26V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>

- ▲ B2 Longevity
- B7 Use of recycled materials
- B3 Resource saving
- ▼ B5 Energy saving



37V/32V/26V type extended high definition TV equipped with high-definition Resolution (1366x768 pixels) liquid crystal panel. AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts and uses recycled materials.

The environmentally conscious AQUOS (LC-37BD1W/32BD1/26BD1)

- Backlight longevity is about 60,000 hours.
- Stand using 20% recycled material
- Non-halogen cabinet
- Lead-free solder circuit board
- Hexavalent chromium-free sheet steel
- Halogen-free power cords and inner cables
- Hexavalent chromium-free fasteners (nuts and bolts)



Products/Model: AQUOS LCD TV LC-37BD1W/32BD1/26BD1

Eco-products

EP - 104

Home electric appliances / Lightings

Liquid crystal television receivers

Liquid crystal TV having improved environmental performance

TOSHIBA CORPORATION Digital Media Network Company

1-9-2, Hatara-Cho, Fukaya-Shi, Saitama 366-8510, Japan

Tel 81-48-574-2532 Fax 81-48-572-8120

E-mail tooru.hirata@toshiba.co.jp

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

- ▲ A3 Hazardous substances
- B3 Resource saving
- B5 Energy saving



In comparison with the previous model, the various reductions were achieved: (1) annual power consumption by JETTA method was reduced by 30%, which is due to the use of histogram backlight control; (2) machine weight was reduced by 18%, which is due to the change of frame structure; (3) amount of cushioning material was reduced by 27%, which is due to the change of material's figure; (4) weight of the instruction manual was reduced by 52% due to the change of explanation structure; (5) number of screws was reduced by 37% owing to the optimization of machine structure, and thereby disassembly time was shortened by 35%.

Conformity to RoHS was satisfied by the adoption of substitutes such as lead free solder and trivalent-chrome plating screw. Energy saving, resource saving and high picture quality were realized by use of the new digital brain "Meta-brain Pro".



REGZA 37C1000

Eco-products

EP - 105

Home electric appliances / Lightings

Liquid crystal television receivers

Digital Hi-Vision LCD TV, VIERA LX600

Panasonic AVC Networks Company,
Matsushita Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan
Tel 81-6-6905-8356 Fax 81-6-6905-4755
E-mail
URL <http://panasonic.co.jp/pavc/>

A1 Global warming
B4 Higher quality
B5 Energy saving
B3 Resource saving



- 1 Image processing system New PEAKS achieved clear and vivid high quality picture by adopting for various scenes (bright/dark, still/moving).
- 1 Power consumption (W): Reduced by approx. 14% (TH-32LX600, compared with our conventional model TH-32LX300).
- 1 Achieved stand-by power consumption of approx. 0.1W.
- 1 Long backlight lifetime of approx. 60,000 hours.
- 1 Non-Use of Specific Chemical Substances*
(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Digital Hi-Vision LCD TV : TH-32LX600

Eco-products

EP - 106

Home electric appliances / Lightings

Liquid crystal television receivers

Digital Hi-Vision LCD TV, VIERA LX60 Series

Panasonic AVC Networks Company, Matsushita
Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan
Tel 81-6-6905-8356 Fax 81-6-6905-4755
E-mail
URL <http://panasonic.co.jp/pavc/>

A1 Global warming
B4 Higher quality
B5 Energy saving
B3 Resource saving



- > Image processing system New PEAKS achieved clear and vivid high quality picture by adopting for various scenes (bright/dark, still/moving).
- > Power consumption (W): Reduced by approx. 20% (TH-32LX60, compared with our conventional model TH-32LX30).
- > Achieved stand-by power consumption of approx. 0.1W.
- > Long backlight lifetime of approx. 60,000 hours.
- > Non-Use of Specific Chemical Substances*
(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Digital Hi-Vision LCD TV, TH-32/26/23/20LX60

Eco-products

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Home electric appliances / Lightings

Liquid crystal television receivers

45V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>

- ▲ B2 Longevity
- B7 Use of recycled materials
- B3 Resource saving
- ▼ B5 Energy saving



45V type extended high definition TV equipped with Full high-definition Resolution (1920x1080 pixels) liquid crystal panel. AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts, and uses recycled materials.

The environmentally conscious AQUOS (LC-45BE2W)

- Backlight longevity is about 60,000 hours.
- Stand using 20% recycled material
- Non-halogen cabinet
- Lead-free solder circuit board
- Hexavalent chromium-free sheet steel
- Halogen-free power cords and inner cables
- Hexavalent chromium-free fasteners (nuts and bolts)

In addition, we have developed world-first technology for painting the plastic parts of consumer electronics with plant-based paint made from corn. We use this paint on the stand of this model.



Products/Model:
AQUOS LCD TV LC-45BE2W

Eco-products

EP - 108

Home electric appliances / Lightings

Liquid crystal television receivers

37V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>

- ▲ B2 Longevity
- B7 Use of recycled materials
- B3 Resource saving
- ▼ B5 Energy saving



37V type extended high definition TV equipped with Full high-definition Resolution (1920x1080 pixels) liquid crystal panel. AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts, and uses recycled materials.

The environmentally conscious AQUOS (LC-37BE1W)

- Backlight longevity is about 60,000 hours.
- Stand using 20% recycled material
- Non-halogen cabinet
- Lead-free solder circuit board
- Hexavalent chromium-free sheet steel
- Halogen-free power cords and inner cables
- Hexavalent chromium-free fasteners (nuts and bolts)



Products/Model:
AQUOS LCD TV LC-37BE1W

Eco-products

EP - 109

Home electric appliances / Lightings

Liquid crystal television receivers

37V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>

▲ B2 Longevity

■ B7 Use of recycled materials

■ B3 Resource saving

▼ B5 Energy saving



37V type extended high definition TV equipped with Full high-definition Resolution (1920x1080 pixels) liquid crystal panel. AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts and uses recycled materials.

The environmentally conscious AQUOS (LC-37BE2W)

- Backlight longevity is about 60,000 hours.
- Stand using 20% recycled material
- Non-halogen cabinet
- Lead-free solder circuit board
- Hexavalent chromium-free sheet steel
- Halogen-free power cords and inner cables
- Hexavalent chromium-free fasteners (nuts and bolts)



Products/Model:
AQUOS LCD TV LC-37BE2W

Eco-products

EP - 110

Home electric appliances / Lightings

Liquid crystal television receivers

37V/32V/26V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>

▲ B2 Longevity

■ B7 Use of recycled materials

■ B3 Resource saving

▼ B5 Energy saving



37V/32V/26V type extended high definition TV equipped with high-definition Resolution (1366x768 pixels) liquid crystal panel.

AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts and uses recycled materials.

The environmentally conscious AQUOS (LC-37BD2W/32BD2/26BD2)

- Backlight longevity is about 60,000 hours.
- Stand using 20% recycled material
- Non-halogen cabinet
- Lead-free solder circuit board
- Hexavalent chromium-free sheet steel
- Halogen-free power cords and inner cables
- Hexavalent chromium-free fasteners (nuts and bolts)



Products/Model:
AQUOS LCD TV LC-37BD2W/32BD2/26BD2

Eco-products

EP - 111

Home electric appliances / Lightings

Liquid crystal television receivers

20V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>

▲ B2 Longevity

■ B7 Use of recycled materials

■ B3 Resource saving

▼ B5 Energy saving



20V type extended high definition TV equipped with high-definition Resolution (1366x768 pixels) liquid crystal panel. AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts and uses recycled materials.

The environmentally conscious AQUOS (LC-20EX1)

- Backlight longevity is about 60,000 hours.
- Stand using 20% recycled material
- Non-halogen cabinet
- Lead-free solder circuit board
- Hexavalent chromium-free sheet steel
- Halogen-free power cords and inner cables
- Hexavalent chromium-free fasteners (nuts and bolts)



Products/Model:
AQUOS LCD TV LC-20EX1

Eco-products

EP - 112

Home electric appliances / Lightings

Liquid crystal television receivers

20V Ground and BS,110 CS digital high-definition liquid crystal television

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://www.sharp.co.jp/>

▲ B2 Longevity

■ B7 Use of recycled materials

■ B3 Resource saving

▼ B5 Energy saving



20V type extended high definition TV equipped with high definition Resolution (1366x768 pixels) liquid crystal panel. AQUOS is an energy-efficient, space- and resource-saving product. And, AQUOS minimizes harmful substances in its parts and use: recycled materials.

The environmentally conscious AQUOS (LC-20AX6)

- Backlight longevity is about 60,000 hours.
- Stand using 20% recycled material
- Non-halogen cabinet
- Lead-free solder circuit board
- Hexavalent chromium-free sheet steel
- Halogen-free power cords and inner cables
- Hexavalent chromium-free fasteners (nuts and bolts)



Products/Model:AQUOS LCD TV LC-20AX6

Eco-products

EP - 113

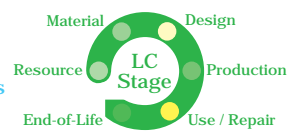
Home electric appliances / Lightings

Liquid crystal television receivers

Eco-friendly Wide-Screen LCD Television

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://www.mitsubishielectric.co.jp/>

- ▲ B5 Energy saving
- ▲ A3 Hazardous substances
- ▲ B7 Use of recycled materials
- ▼ B4 Higher quality



This LCD television features an "auto-turn" function to put it in the ideal position when the user is seated and a brightness sensor that is eye and environment-friendly.

Material:

Environmentally conscious packaging using recycled polystyrene foam.

Energy:

Brightness sensor automatically controls the brightness of the screen by automatically detecting the brightness of the room of the room, which limits electrical power consumption.

Toxicity:

Does not use any substances regulated by the EU's RoHS Directive or Japan Industrial Standards' J-Moss standards.



LCD-R37MX5 "REAL"

Eco-products

EP - 114

Home electric appliances / Lightings

Stereo sets

DVD/MD Mini System with Top-Class Low Power Consumption

PIONEER CORPORATION
4-1 Meguro 1-chome, Meguro-ku, Tokyo,
153-8654 Japan
Tel 81-3-3494-1111 Fax
E-mail
URL

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- ▲ A5 Resource consumption
- ▼ B5 Energy saving



Compliant with various types of DVDs, CDs and MDs, this compact and lightweight Mini Component System has a body 17 cm wide and 3.8 kg in weight (about a 33% reduction compared to the conventional equivalent model X-HA7DV). It is equipped with an "F. AUDIO IN" terminal, which is convenient for reproduction of a digital audio player, and a "USB" terminal that allows you to play music stored on your personal computer. It is also able to receive FM/AM broadcasts. With fully digitalized sound, the air-cooling fan and the heat sink can be eliminated on the total 50W output. Thus, a reduction in the number of parts are achieved. It has realized 33W consumption power (about a 52% reduction compared to the conventional equivalent model X-HA7DV) and 0.25W standby consumption power through its energy saving design. Furthermore, it also adopts lead-free solder.



X-MF7DV-C

Eco-products

EP - 115

Home electric appliances / Lightings

Stereo sets

Energy/Resource Saving DVD 5.1ch Home Theater System

PIONEER CORPORATION

4-1 Meguro 1-chome, Meguro-ku, Tokyo,

153-8654 Japan

Tel 81-3-3494-1111 Fax

E-mail

URL

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- ▲ B3 Resource saving
- ▼ B5 Energy saving



This is a compact, light weight and high-powered home theater system, and once connected to your TV set, allows you to enjoy DVD surround sound at the optimum position with automatic acoustic field calibration system, "MCACC" developed by Pioneer. With the sound fully digitalized from DVD to amplifier output, this system is equipped with a DVD 5.1-channel amplifier, which eliminates a heat sink (radiator) from the power section despite the total 360W output. The DVD/CD receiver section has a 6cm high low-profile design. It also adopts lead-free solder. 1) Consumption power: 44W (about a 75% reduction) 2) DVD/CD Receiver Weight: 3.1 kg (about a 58% reduction)(Compared to the conventional equivalent model HTZ-300DV)



HTZ-353DV

Eco-products

EP - 116

Home electric appliances / Lightings

Stereo sets

Mini hi-fi stereo systems using 100% recycled polystyrene

Sony Corporation

6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,

141-0001 Japan

Tel 81-3-5448-2111 Fax 81-3-5448-2244

E-mail

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

- ▲ A4 Waste
- ▲ A5 Resource consumption
- ▲ B3 Resource saving
- ▼ B7 Use of recycled materials



The plastic used inside Sony's MHC-GNZ7D and MHC-GNX80 mini hi-fi stereo systems is made from 100% recycled polystyrene, a material from used polystyrene foam. As a consequence, these systems have achieved recycled material ratios of 9.2% and 6.5%, respectively.



MHC-GNZ7D uses recycled plastic

Eco-products

EP - 117

Home electric appliances / Lightings

Head phone stereo sets

Walkman® using vegetable-based plastic

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>



Sony is actively developing and using vegetable-based plastics. In fiscal 2002, Sony began using vegetable-based plastics for the casings of "Walkman®" portable audio products, front panels of DVD players and components for "AIBO" robots, becoming one of the first companies in the industry to use these plastics in commercial products.

This "Walkman®" uses vegetable-based plastic for around 90% of the product body. This reduces the amount of oil-derived resources used by 55%.

Additionally, of course, the plants absorbed CO₂ while they were grown, thus reducing CO₂ emissions by 20%.



Walkman® WM-FX202

Eco-products

EP - 118

Home electric appliances / Lightings

Digital audio players

50 hours of continuous play "Walkman®" by low-power consumption LSI

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>



A tiny, millimeter-scale chip with the Virtual Mobile Engine™ (VME); Sony's proprietary low-power consumption semiconductor technology; has more efficient circuitry that reduces power consumption to one-fourth of previous LSI without VME in playing mode. This improvement has enabled up to 50 hours*¹ of continuous play on the "Walkman®; A Series" NW-A608, allowing users to enjoy music for longer periods while remaining environmentally conscious.

*¹ When listening to tracks in ATRAC3 format at 132Kbps in Normal Power Save mode and using the internal rechargeable battery.



Walkman® A series NW-A608

Eco-products

EP - 119

Home electric appliances / Lightings

Digital video disc player

DVD player using Vegetable-based plastics

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>



Sony is actively developing and using vegetable-based plastics. In fiscal 2002, Sony began using vegetable-based plastics for the casings of "Walkman®" portable audio products, front panels of DVD players and components for "AIBO" robots, becoming one of the first companies in the industry to use these plastics in commercial products. In 2004, Sony became the first company in the world to develop a new vegetable-based plastic with flame-retardant properties and to release a DVD player made with this plastic. This achievement reflected the development of a new technology that enhances the flame-resistance of vegetable-based plastic, opening the door to the material's application in a broad range of consumer electronics.



DVD Player, DVP-NS955V

Eco-products

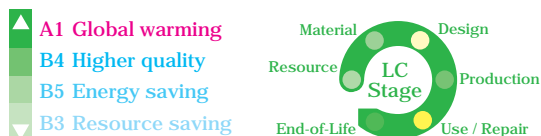
EP - 120

Home electric appliances / Lightings

Digital audio disc players

SD Stereo System, D-dock SX800/400

Panasonic AVC Networks Company, Matsushita Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan
Tel 81-6-6905-8356 Fax 81-6-6905-4755
E-mail
URL <http://panasonic.co.jp/pavc/>



- ¹ Achieved stand-by power consumption of 0.1W due to low power circuit technology.
- ¹ Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.
- ¹ Non-Use of Specific Chemical Substances*
(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



SD Stereo System, SC-SX400

Eco-products

EP - 121

Home electric appliances / Lightings

Finished speaker systems

Puremalt Speaker System Using Recycled Whiskey Barrel Materials

PIONEER CORPORATION

4-1 Meguro 1-chome, Meguro-ku, Tokyo,

153-8654 Japan

Tel 81-3-3494-1111 Fax

E-mail

URL

▲ A3 Hazardous substances

■ A4 Waste

▼ A5 Resource consumption



Using barrel materials that have aged whiskey for over 50 years, the Puremalt Speaker has revived such materials, fulfilling a purpose, as speaker cabinets. It not only reutilizes resources but also creates a "warm and soft sound" which cannot be reproduced with newly logged materials. Efforts are being made to reduce the environmental impact through the adoption of lead-free solder as well as a reduction in the number of degradable parts. Portions of the proceeds from our sales are being donated to the "Green Fund" (National Land Afforestation Promotion Organization) to support future afforestation.



S-A4SPT-PM

Eco-products

EP - 122

Home electric appliances / Lightings

Finished speaker systems

The home theater system: Multi-Channel Surround Sound from A Single Component

Yamaha Corporation

10-1 Nakazawa-cho, Hamamatsu, Shizuoka, 430-8650

Japan

Tel Fax 81-53-467-2110

E-mail <https://www2.yamaha.co.jp/info/global/other.php>

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

▲ B3 Resource saving

■ B5 Energy saving

▲ A3 Hazardous substances

▼ A1 Global warming



In order to enjoy the sound of a multi-channel surround system, many speakers that were placed along the periphery of a room are indispensable. Digital Sound Projector™ does not need other speakers and a speaker cable besides the main body. Digital Sound Projector™ is one-body, but by using the reflection of sound on the wall, it creates the same sound-field around the listener as that of the conventional system in which the front, center and surrounding speakers were separated. Digital Sound Projector™ was made light and compact by unifying it with amplifier, speakers, and other parts, and it was possible to reduce the material quantity by about 35%. Digital Sound Projector™ has adopted a high-efficiency digital amplifier, and it has an energy-saving design as shown in the stand-by power consumption of less than 0.1 W. Digital Sound Projector™ has reduced the environmental load substances and conforms to the RoHS directive of EU.



Digital Sound Projector™ YSP-1000

Eco-products

EP - 123

Home electric appliances / Lightings

Data processing machines

Digital Pen

Hitachi Maxell, Ltd.
2-18-2, Iidabashi, Chiyoda-ku, Tokyo, 102-8521 Japan
Tel Fax
E-mail
URL [http : //www.maxell.co.jp/e/products/industrial/digitalpen/index.htm](http://www.maxell.co.jp/e/products/industrial/digitalpen/index.htm)

▲ B4 Higher quality
B5 Energy saving
▼



The Maxell digital pen "Penit " is a high technology interface/device that converts handwritten analog information created using "pen and paper" into digital data, enabling the data to be utilized in various applications. The digital pen is a sophisticated integration of Maxell electronics embodied in a sleek style. It converts analog information (handwritten order forms, clinical charts and handwritten memos) into digital data and stores it in its built-in memory. Once stored in the pen's built-in memory, the information can be easily transferred to a PC or other IT devices, such as a mobile phone, via a Bluetooth or USB interface over networks, and used in a variety of applications. When using the digital pen, you won't even realize that you are using a state-of-the-art IT and network device. The Maxell digital pen further expands the possibility of using advanced networks for everyone from business users to consumers.



Digital Pen

Eco-products

EP - 124

Home electric appliances / Lightings

SDHC Memory Card

SDHC Memory Card, 4GB 5MB/s Transfer Rate

Panasonic AVC Networks Company, Matsushita Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan
Tel 81-6-6905-8356 Fax 81-6-6905-4755
E-mail
URL <http://panasonic.co.jp/pavc/>

▲ A5 Resource consumption
B4 Higher quality
B3 Resource saving
B5 Energy saving
▼



- ¹ The new rank SDHC memory card of 4GB of large scale. It is recordable by the MPEG2 animation for the maximum about 200 minutes by LP mode record. Of course, still picture record and music are also recordable in large quantities by high quality of image and sound quality.
- ¹ Corresponds to a class 2 SD Speed Class that realizes stable animation record.
- ¹ The transmission rate of a maximum of 5MB/s is realized.
- ¹ A suitable new design is adopted as new rank SDHC memory card.
- ¹ Non-Use of Specific Chemical Substances*
(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



SDHC Memory Card, RP-SDR04GJ1K

Eco-products

EP - 125

Home electric appliances / Lightings

Bicycles and parts

Electric Hybrid Bicycle with Regenerative Charge Function

SANYO Electric Co.,Ltd.

1-1,Sanyo-cho,Daito City,Osaka 574-8534, Japan

Tel 81-72-870-7142 Fax 81-72-870-7491

E-mail hira074299@sanyo.co.jp

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



- 1)Combination of the regenerative break charge system and ecological charge mode doubled the range of travel at one charge (compared to SANYO's existing models);
- 2)Adoption of lead-free solder;
- 3)Abolition of foamed polystyrene for packaging;
- 4)The lightest model in the industry (As of August 2006, according to study by SANYO. 24- or 26-inch models employing nickel hydride battery)



Electric Hybrid Bicycle (CY-SS263D)

Eco-products

EP - 126

Home electric appliances / Lightings

Video disc recorder

DVD RECORDER

Hitachi, Ltd. Ubiquitous Platform Group

2-2-1, Ohte-machi, Chiyoda-ku, Tokyo, Japan

Tel 0120-122-790 Fax 0120-312-134

E-mail

URL



Possible to record ground digital, too,! Hi-Vision can be recorded. HDD/DVD recorder birth. 27% reduction of amount of used electricity.¹⁾ Chrome free steel plate and a non halogen system plastic are adopted as cases. Non halogen board and lead free solder are adopted as a circuit board.

¹⁾ It is based on comparison with the conventional model dealing with un Hi-Vision.



DV-DH1000W

Eco-products

EP - 127

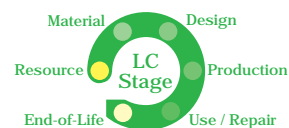
Home electric appliances / Lightings

Video disc recorder

Small energy consumption DVD recorder RDR-HX65

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

- ▲ A1 Global warming
- A3 Hazardous substances
- B5 Energy saving
- ▼ A4 Waste



Revised energy-saving law in Japan set the target of the amount of annual energy-consumption for DVD recorder equipped analog tuner to be put on market from year 2008. This RDR-HX65 has already achieved the target.

1. Energy consumption on standby-mode (at standby on low energy consumption mode) : 0.3W
2. Lead-free solder is used for soldering
3. No halogenated flame-retardants used in front panel and main printed wiring boards
4. Paper is used for the packaging cushions



DVD Player, RDR-HX65

Eco-products

EP - 128

Home electric appliances / Lightings

Mini DV

Mini-DV Cassette using Recycled Resin

Sony Corporation
6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

- ▲ B3 Resource saving
- A5 Resource consumption
- A4 Waste
- ▼ B7 Use of recycled materials



The 3DVM60RE Mini-DV Cassette uses recycled resin for more than 40% of the plastic in its cassette and case. The label and index card are 100% recycled paper and are printed using VOC-free vegetable oil-based ink. The 3DVM60RE conformed to the Environmental Consciousness Standards for Recording Media Products, issued by the Japan Recording-Media Industries Association in June 2003.



Mini DV, 3DVM60RE

Eco-products

EP - 129

Machines and Equipments

Plastic products for automobiles

Plastic Back Door Module for Automotive

Hitachi Chemical, Ltd.

1150, Goshomiya, Chikusei-shi, Ibaraki, Japan

Tel 81-296-28-2222 Fax 81-297-28-2685

E-mail

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

▲ A1 Global warming

■ A2 Air pollution

▼ B5 Energy saving



This door module produced first time in Japan contributes to realize lighter weight and excellent styling.

17% lighter than conventional steel door. (Improve fuel consumption)

Styling flexibility compare to steel door.

Reduction in assemble works for interior and exterior parts.



Plastic Back Door Module for Automotive

Eco-products

EP - 130

Carriers / Automobiles

Plastic products

Spectrally Selective Solar Control Films

V-KOOL (S) Pte Ltd

12 Jalan Kilang Barat, #01-01 Globamatrix Building, 159354 Singapore

Tel +65 6776 5432 Fax +65 6774 9949

E-mail info@v-kool.com.sg

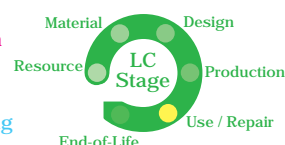
URL www.v-kool.com.sg

▲ A5 Resource consumption

■ B3 Resource saving

▼ B5 Energy saving

▼ B6 Environmental purification



First developed for aerospace and defence applications, V-KOOL's wavelength or spectrally-selected technology revolutionized the industry by being the first "intelligent" film that can differentiate between wavelength in the solar spectrum.

The technology behind V-KOOL's revolutionary performance is in a complex process of embedding multiple stacks of heat reflecting. The super clear substrate is embedded with 7 atomic layers of Gold, Silver and Indium Oxide. This complex process gives V-KOOL it's amazing heat reflection qualities without looking reflective or dark. V-KOOL films work by reflecting heat rather than absorbing heat. Heat absorbing films can cause intensive heat build-up in the car due to re-radiated heat and thermal stress onto the glass can result in glass breakage or cracks.

A July 2000 desert test program with the U.S Department of Energy's National Renewable Energy Laboratory (NREL) reported that a test vehicle equipped with V-KOOL film had significantly reduced interior cabin temperatures and improved fuel economy by 3%.



Eco-products

EP - 131

Carriers / Automobiles

Titanium muffler

Nippon Steel Corporation
2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan
Tel 81-3-3275-5144 Fax 81-3-3275-5979
E-mail kankyo@hq.nsc.co.jp
URL <http://www0.nec.co.jp/kankyoku/index.html>

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 (see the cover).

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 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). 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 the lightness.

Rolled non-ferrous metal and alloy materials

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▼ B6 Environmental purification



Eco-products

EP - 132

Carriers / Automobiles

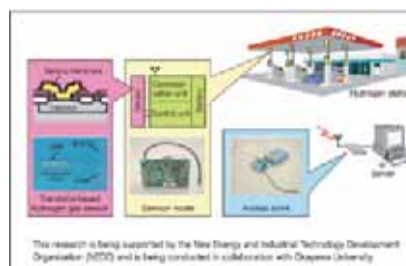
Wireless hydrogen gas detection system

Hitachi, Ltd. Advanced Research Laboratory
1-280, Higashi-Koigahuchi, Kokubunji-shi, Tokyo, Japan
Tel 81-42-323-1111 Fax 81-42-327-7884
E-mail
URL yokosawa@rd.hitachi.co.jp

- ▲ A1 Global warming
- ▲ A2 Air pollution
- ▲ B4 Higher quality



Security Surveillance for a Hydrogen Energy Society.
Miniaturized transistor-based hydrogen sensor mass produced by using a semiconductor process.
Wireless communicating sensors that can be placed wherever convenient.
Multi-point detection system that monitors gas leaks in all corners of hydrogen stations.



Security Surveillance for a Hydrogen Energy Society

Eco-products

EP - 133

Carriers / Automobiles

Automobile

New eco-friendly Prius with hybrid power

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



The new Prius model is equipped with THS, a new-generation Toyota Hybrid System known as Hybrid Synergy Drive, which means simultaneous evolution of ecology and power. It achieves world-beating fuel consumption of 35.5km/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)



Prius

Eco-products

EP - 134

Carriers / Automobiles

Automobile

Idling Stop System for improved fuel consumption

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



The Toyota Vitz is a CVT* vehicle, featuring the Toyota Intelligent Idling Stop System which applies hybrid technology. We achieved the lowest domestic fuel consumption value of 22.5km/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 1.0F <オプション装着車> 2005.2

Vitz

Eco-products

EP - 135

Carriers / Automobiles

Automobile

TOYOTA FCHV

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-1754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



From the start of the fuel cell vehicle effort in 1992, Toyota has pursued 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) 300km, (Max speed) 155km/h, (Weight) 1860kg, (Seating capacity) 5 persons.



TOYOTA FCHV

Eco-products

EP - 136

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA CAROLLA"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



"TOYOTA CAROLLA" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.
1) Specific fuel consumption (10-15 Japanese test cycle): 17.2km/liter
2) Technology to reduce fuel consumption
- High-efficiency transmission
- Variable valve timing
- Electric power steering system



1.5-liter gasoline engine, Front-wheel drive

Eco-products

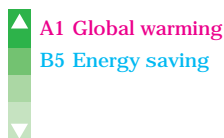
EP - 137

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA CAROLLA FIELDER"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



A1 Global warming
B5 Energy saving



"TOYOTA CAROLLA FIELDER" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 1) Specific fuel consumption(10-15 Japanese test cycle): 17.2km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Electric power steering system



1.5-liter gasoline engine, Front-wheel drive

Eco-products

EP - 138

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA CAROLLA RUNX"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



A1 Global warming
B5 Energy saving



"TOYOTA CAROLLA RUNX" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 1) Specific fuel consumption(10-15 Japanese test cycle): 17.2km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Electric power steering system



1.5-liter gasoline engine, Front-wheel drive

Eco-products

EP - 139

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA CROWN ROYAL"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving
▼



"TOYOTA CROWN ROYAL" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

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
- Battery charge control system



2.5-liter gasoline engine, Rear-wheel drive

Eco-products

EP - 140

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA MARK X"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving
▼



"TOYOTA MARK X" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

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



2.5-liter gasoline engine, Rear-wheel drive

Eco-products

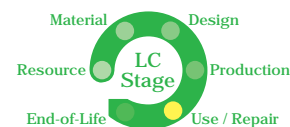
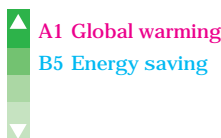
EP - 141

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA IPSUM"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



"TOYOTA IPSUM" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 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



2.4-liter gasoline engine, Front-wheel drive

Eco-products

EP - 142

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA WISH"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



"TOYOTA WISH" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 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



1.8-liter gasoline engine, Front-wheel drive

Eco-products

EP - 143

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA HIACE WAGON"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



"TOYOTA HIACE WAGON" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 8.6km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing
 - Battery charge control system



2.7-liter gasoline engine, Rear-wheel drive

Eco-products

EP - 144

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA ALPHARD"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



"TOYOTA ALPHARD" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 9.7km/liter
- 2) Technology to reduce fuel consumption
 - High-efficiency transmission
 - Variable valve timing



2.4-liter gasoline engine, Front-wheel drive

Eco-products

EP - 145

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA NOAH"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



A1 Global warming

B5 Energy saving



"TOYOTA NOAH" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

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



2-liter gasoline engine, Front-wheel drive

Eco-products

EP - 146

Carriers / Automobiles

Automobile

Eco-friendly Hybrid vehicle "TOYOTA ALPHARD HYBRID"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



A1 Global warming

B5 Energy saving



"TOYOTA ALPHARD HYBRID" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

1) Specific fuel consumption (10-15 Japanese test cycle): 17.2 km/liter

2) Technology to reduce fuel consumption

- Hybrid system
- Idling stop system
- Continuously variable transmission
- Variable valve timing



2.4-liter gasoline engine, All-wheel drive

Eco-products

EP - 147

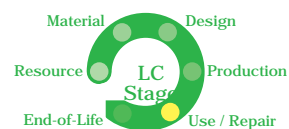
Carriers / Automobiles

Automobile

Eco-friendly Hybrid vehicle "TOYOTA HARRIER HYBRID"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving
▼



"TOYOTA HARRIER HYBRID" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 17.8 km/liter
- 2) Technology to reduce fuel consumption
 - Hybrid system
 - Idling stop system
 - Continuously variable transmission
 - Variable valve timing
 - Electric power steering system



3.3-liter gasoline engine, All-wheel drive

Eco-products

EP - 148

Carriers / Automobiles

Automobile

Eco-friendly Hybrid vehicle "TOYOTA KLUGER HYBRID"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving
▼



"TOYOTA KLUGER HYBRID" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 75% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 17.8 km/liter
- 2) Technology to reduce fuel consumption
 - Hybrid system
 - Idling stop system
 - Continuously variable transmission
 - Variable valve timing
 - Electric power steering system



3.3-liter gasoline engine, All-wheel drive

Eco-products

EP - 149

Carriers / Automobiles

Automobile

Eco-friendly vehicle "TOYOTA HARRIER"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



"TOYOTA HARRIER" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

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



2.4-liter gasoline engine, Front-wheel drive

Eco-products

EP - 150

Carriers / Automobiles

Automobile

Eco-friendly vehicle TOYOTA KLUGER

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



"TOYOTA KLUGER" clears the 2010 Fuel Efficiency Standards, and also achieves an exhaust emission level that is 50% lower than the 2010 Exhaust Emission Standards in the Ministry of Land.

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

Photo Caption



2.4-liter gasoline engine, Front-wheel drive

Eco-products

EP - 151

Carriers / Automobiles

Automobile

Eco-friendly vehicle TOYOTA PROBOX WAGON

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



"TOYOTA PROBOX WAGON" clears the 2010 Fuel Eff Standards, and also achieves an exhaust emission level that lower than the 2010 Exhaust Emission Standards in the Min Land.

- 1) Specific fuel consumption (10-15Japanese test cycle):17.2
- 2) Technology to reduce fuel consumption
 - Variable valve timing



1.5-liter gasoline engine,Front-wheel drive

Eco-products

EP - 152

Carriers / Automobiles

Automobile

CNG (Compressed natural gas) vehicle"TOYOTA PROBOX"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



CNG vehicle emits little CO₂ and NO_x, particulate emissions are zero. (Max cruising range)350km (Max payload)400kg



PROBOX

Eco-products

EP - 153

Carriers / Automobiles

Automobile

CNG (Compressed natural gas) vehicle "DYNA & TOYOACE"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving
▼



CNG vehicle emits little CO₂ and NO_x, particulate emissions are zero. (Max cruising range) 300km (Max payload) 2ton



Eco-products

EP - 154

Carriers / Automobiles

Automobile

LPG (Liquefied petroleum gas) vehicle "TOYOTA DYNA"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A2 Air pollution
▼



LPG vehicle emits little CO₂ and NO_x, particulate emissions are zero. (Max payload) 1.5-3.0ton



DYNA

Eco-products

EP - 155

Carriers / Automobiles

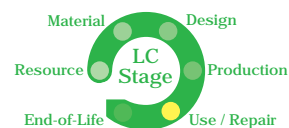
Automobile

LPG (Liquefied petroleum gas) vehicle "TOYOTA COASTER"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



A2 Air pollution



"TOYOTA COASTER" emits little CO₂ and NO_x, particulate emissions are zero.



COASTER (minibus)

Eco-products

EP - 156

Carriers / Automobiles

Automobile

Clean diesel truck "DPNR-equipped TOYOTA DYNA&TOYOACE"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>



A2 Air pollution



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 the NO_x storage reduction three-way catalytic converter technology. (Max payload) 2-3ton (Fuel type) low-sulfur gas oil at 10 ppm max



TOYOACE

Eco-products

EP - 157

Carriers / Automobiles

Name from code

Clean diesel truck "DPR-equipped TOYOTA DYNA&TOYOACE"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A2 Air pollution



This truck equipped DPR(Diesel Particulate Reduction)system achieves ultra-low PM(particulate matter) emission level that is 85% lower than the standard levels for 2000.
(Max payload)2-3ton (Fuel type)low-sulfur gas oil at 50 ppm max



DYNA

Eco-products

EP - 158

Carriers / Automobiles

Automobile

Clean diesel truck "TOYOTA DYNA&TOYOACE Hybrid"

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving



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 achieves a PM emission level that is 85% lower than standard levels for 2000,qualifying it as an ultra-low PM emission diesel vehicle,as well as a NO_x emission level that is 50% lower than the 2000 Exhaust Emission Standards, qualifying it as a LOW- Emission Vehicle.The truck's fuel efficiency has also been improved by 30%.
(Max payload)2-3ton (Fuel type)low-sulfur gas oil at 50 ppm max



DYNA

Eco-products

EP - 159

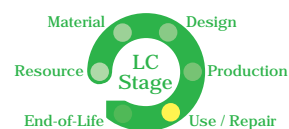
Carriers / Automobiles

Parts of motor vehicles

Tire Temporary Mobility Restoration Kit

Bridgestone Corporation
10-1, Kyobashi 1-chome, Chuo-ku,
Tokyo 104-8340 Japan
Tel 81-3-3563-6972 Fax 81-3-3563-1165
E-mail
URL <http://www.bridgestone.co.jp/english/index.html>

▲ A4 Waste
▲ A5 Resource consumption
▼ B3 Resource saving
▼ B5 Energy saving



Bridgestone corporation has been developing Tire Temporary Mobility Restoration Kit, 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.

- Resource saving: This kit can deal with major puncture case, therefore, spare tire will no longer be necessary when the kit is equipped. Resource used to produce spare tire, which are disposed mostly unused, can be greatly saved.
- Reusable: The kit consists of a sealant and an air compressor. The kit can be reused by replacing the sealant only, when used.



Proto type

Eco-products

EP - 160

Carriers / Automobiles

Car Navigation System

HDD Car Navigation System in consideration of fuel consumption

PIONEER CORPORATION
4-1 Meguro 1-chome, Meguro-ku, Tokyo, 153-8654 Japan
Tel 81-3-3494-1111 Fax
E-mail
URL

▲ A1 Global warming
▲ A5 Resource consumption
▼ B5 Energy saving



This HDD Car Navigation System consists of four units: an in-vehicle main unit (TV/FM/AM tuner, DVD/CD player), a TV monitor unit, a central processing unit (CPU and HDD) and a home kit. Notably, the CPU unit can be detached and acts as a portable unit. Due to this feature, it can be brought into your home to set the driving plan and the best route in advance. Instead of planning this inside your car while idling, you can save more fuel. Also, a link function between the CPU and a PC makes it possible to calculate gasoline mileage. In addition, the product doesn't use a lithium battery to store data in memory, and it uses lead-free solder.



AVIC-VH009

Eco-products

EP - 161

Carriers / Automobiles

Motor vehicle parts and accessories

Water Cooled Alternator

Hitachi, Ltd., Automotive Systems
4-6, Kanda-Surugadai, Chiyoda-ku, Tokyo, Japan
Tel Fax
E-mail info@jiji.hitachi.co.jp
URL <http://www.hitachi.co.jp/Div/apd/en/>

▲ A1 Global warming
B4 Higher quality
B5 Energy saving
▼



It can contribute to Less Emission and Improvement in Fuel Consumption of the Vehicle. 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 various systems (Ex. Motorized 4WD system; one of Hitachi's other contribution for ecology)



LR945-901B

Eco-products

EP - 162

Carriers / Automobiles

Motor vehicle parts and accessories

Variable Displacement Pump

Hitachi, Ltd. Automotive Systems
4-6, Kanda-Surugadai, Chiyoda-ku, Tokyo, Japan
Tel Fax
E-mail info@jiji.hitachi.co.jp
URL <http://www.Hitachi.co.jp/Div/apd/en/>

▲ A1 Global warming
A5 Resource consumption
B4 Higher quality
▼



Variable Displacement Pump for Automobile Power Steering can save Fuel by Controlling Displacement.

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

Pump displacement is controlled suitably according to engine revolution speed.

Cooling piping is simplified and reliability is improved by decreasing oil temperature in the system.



Eco-products

EP - 163

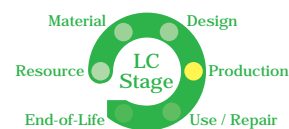
Commodity / Outdoor Goods / Housing Kit

Paper products for daily-use

Environmentally-Friendly Processed Wood Pallet

GPac Technology (S) Pte Ltd
(member of Hong Leong Asia)
14 Ang Mo Kio Street 63, 569116 Singapore
Tel +65 6484 0383 Fax +65 6484 4548
E-mail enquiries@gpac.com.sg
URL www.gpac.com.sg

- ▲ A1 Global warming
- B1 Recyclability
- B3 Resource saving
- ▼ B6 Environmental purification



GPAC's products are environmentally-friendly, we used raw materials and recycled wood to manufacture our pallets. Our products actually return to their source at the end of the life cycle. Use of our pallets can cut down much on deforestation. Replacing metal and plastic pallets with our processed wood pallets and disposal problems also cuts down on the noxious fumes given out by these pallets. Our pallets also cut down current wood pallets' problems of insect migration between countries.

- GPAC Pallets: - fully in compliance with ISPM 15 Guidelines
- winner of Asia Star Award 2006 (Transportation Category)
 - Eco-friendly wood pallet
 - Strong and durable physical properties
 - Water resistant
 - Safe for workers to handle (no nails and splinters)
 - Insect and fungi resistant
 - Helps companies meet ISO 14000
 - Nestable, rackable and stackable



P18L-A1 Pallet without Skid

Eco-products

EP - 164

OA / IT Equipments

Copying machines

Environmet-conscious Multifunctional Copier iR4570

Canon Inc.
30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan
Tel 81-3-3758-2111 Fax 81-3-3758-1160
E-mail
URL <http://www.canon.com>

- ▲ B5 Energy saving
- A3 Hazardous substances
- B3 Resource saving
- ▼ A1 Global warming



<Copy speed>
45ppm (A4, B&W)

<Energy Saving>
Power consumption of only 1W during sleep mode, with Canon's On-Demand fixing technology and improved controller; Warm-up time: 10 seconds from sleep mode

<Elimination of Hazardous Substances>

Compliant with the RoHS directive, which restricts or prohibits the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)

<Resource Saving>

Compact body design of 565mm in width, which reduces the resources used at the manufacturing phase



iR4570

Eco-products

EP - 165

OA / IT Equipments

Copying machines

Energy Saving Digital Imaging System Ricoh Aficio 2015/2018/2018D

Ricoh Company, Ltd.
 Ricoh BLDG, 8-13-1 Ginza, Chuo-ku,
 Tokyo, 104-8222 Japan
 Tel 81-3-6278-5209 Fax 81-3-3543-9347
 E-mail envinfo@ricoh.co.jp
 URL <http://www.ricoh.com/environment/>

▲ A5 Resource consumption
 ▲ A1 Global warming
 ▼ B5 Energy saving



Compared with previous models, the Ricoh Aficio 2015/2018/2018D have improved recovery time (from energy saver mode back to print ready conditions) to less than 10 seconds, because of the same technologies, named as Quick Start Up (QSU), used in other Ricoh Aficio series.

At the same time, power consumption in energy saver mode has been reduced to 1W for basic copier models and to 10W for multifunction models. As the result, more energy saving becomes possible, while waiting less.

In the same manner as other Aficio series, Aficio 2018D has enhanced duplex productivity to reduce the time to complete duplex prints, so that the customers can use duplex mode more, to save paper.



Ricoh Aficio 2018

Eco-products

EP - 166

OA / IT Equipments

Copying machines

Energy Saving Digital Imaging Systems Ricoh Aficio MP1500/ 1600L/2000L

Ricoh Company, Ltd.
 Ricoh BLDG, 8-13-1, Ginza, Chuo-ku,
 Tokyo 104-8222 Japan
 Tel 81-3-6278-5209 Fax 81-3-3543-9347
 E-mail envinfo@ricoh.co.jp
 URL <http://www.ricoh.com/environment/>

▲ A1 Global warming
 ▲ A3 Hazardous substances
 ▼ B5 Energy saving
 ▼ B3 Resource saving



Energy Saving Digital Imaging Systems of 15, 16, and 20 images per minute with quick warm up and quick first copy delivery time: The Ricoh Aficio MP1500/1600L/2000L have such a short recovery time as less than 10 seconds from the off-mode (for copier version) and/or from the sleep-mode (for multi-function version) back to copy/print ready conditions, because of the same technologies, named as Quick Start Up (QSU) used in other Ricoh Aficio series.

At the same time, power consumption in the Off-mode is only 1W for the basic copier and is only less than 10W for multi-function versions. As the result, more energy saving becomes possible, while waiting less. To save paper, it is possible to make 2 or 4 original pages into one side of paper, as the grouping print function.

Aficio MP2000L has the standard automatic duplex capability with leading duplex productivities to save paper resource and energy associated to the lifecycle of paper.

These models have a low ozone emission and have low operation noise, and use no chemical substances written in EU RoHS Directive.



Ricoh Aficio MP2000L

Eco-products

EP - 167

OA / IT Equipments

Copying machines

Energy Saving Digital Imaging Systems Ricoh Aficio 3025/3030

Ricoh Company, Ltd.
 Ricoh BLDG, 8-13-1, Ginza, Chuo-ku,
 Tokyo 104-8222 Japan
 Tel 81-3-6278-5209 Fax 81-3-3543-9347
 E-mail envinfo@ricoh.co.jp
 URL <http://www.ricoh.com/environment/>

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B5 Energy saving
- ▼ B3 Resource saving



Energy and Paper Saving Digital Imaging Systems of 25 and 30 images per minute:

The Ricoh Aficio 3025/3030 have such a short recovery time as less than 10 seconds from the off-mode (for copier version) and/or from the sleep-mode (for multi-function version) back to copy/print ready conditions, because of the same technologies, named as Quick Start Up (QSU) used in other Ricoh Aficio series. At the same time, power consumption in the Off-mode is only 1.2W for the basic copier and is 7.5W for multi-function versions. As the result, more energy can be saved, while waiting less.

These models have the standard automatic duplex capability with leading duplex productivities to save paper resource and energy associated to the lifecycle of paper. Using duplex and grouping print functions, it is possible to print up to 16 original pages into both side of single sheet of paper.

Such paper saving modes can be easily set by using Ricoh original graphical printing screen, preventing mis-prints.

These models have an internal toner recycling system, a low ozone emission & operation noise, and use no chemical substances written in EU RoHS Directive.



Ricoh Aficio 3030

Eco-products

EP - 168

OA / IT Equipments

Copying machines

Energy Saving Digital Imaging Systems Ricoh Aficio 3035/3045

Ricoh Company, Ltd.
 Ricoh BLDG, 8-13-1, Ginza, Chuo-ku,
 Tokyo 104-8222 Japan
 Tel 81-3-6278-5209 Fax 81-3-3543-9347
 E-mail envinfo@ricoh.co.jp
 URL <http://www.ricoh.com/environment/>

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B5 Energy saving
- ▼ B3 Resource saving



Energy and Paper Saving Digital Imaging Systems in 35 and 45 images per minute:

The Ricoh Aficio 3035/3045 have such a short recovery time as less than 10 seconds (3035)/15 seconds (3045) from the off-mode (copier version) and/or from the sleep-mode (multi-function version) back to print ready conditions, because of the same technologies, named as Quick Start Up (QSU) used in other Ricoh Aficio series. And, power consumption is 1.2W in the Off-mode (copier models) and is 8.5W in Sleep mode (multi-function versions). Thus, more energy can be saved, while waiting less.

These models have the standard automatic high speed duplex unit to save paper resource/energy associated to the lifecycle of paper. Using duplex and grouping print functions, it is possible to print up to 16 original pages into both side of single sheet of paper. Such paper saving modes can be easily set by using Ricoh original graphical printing screen, preventing mis-prints.

These models have an internal toner recycling system (no wasting toner), a low ozone emission, a low operation noise, and use no chemical substances written in EU RoHS Directive.



Ricoh Aficio 3035/3045

Eco-products

EP - 169

OA / IT Equipments

Copying machines

Energy Saving Digital Imaging Systems Ricoh Aficio MP5500/6500/7500

Ricoh Company, Ltd.

R Japan

Tel 81-3-6278-5209 Fax 81-3-3543-9347

E-mail envinfo@ricoh.co.jp

URL <http://www.ricoh.com/environment/>

▲ A1 Global warming
A5 Resource consumption
B5 Energy saving
▼



Energy and Paper Saving Digital Imaging Systems in 55, 65, and 75 images per minute:

Typical warming-up time from Sleep/Off mode till print ready conditions was about 300 seconds. Because of such long waiting time, the operators had to be patient to save energy. Ricoh Aficio MP5500/6500/7500 have been improved to save more energy with less waiting time because of innovative Quick Start Up technologies (QSU). It is enhanced from 300 seconds to 30 seconds. For those who cannot wait for 30 seconds to wake it up, it is possible to set an optional 10 seconds mode. Thus, more customers can save more energy with less waiting time.

The unique dual scanning document feeder can scan both sides of original images at the same time, resulting in the same highest duplex productivity even from duplex originals. 16 original pages can be printed on both sides of single sheet of paper, using duplex and grouping functions.

These models have an internal toner recycling system (no wasting toner), a low ozone emission, a low operation noise, and use no chemical substances written in EU RoHS Directive.



Ricoh Aficio 7500

Eco-products

EP - 170

OA / IT Equipments

Full color copying machines

Environmentally conscious color Multifunctional Peripheral

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East, 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664 Japan

Tel 81-3-6422-7160 Fax 81-3-6422-7121

E-mail environment@toshibatec.co.jp

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

▲ A3 Hazardous substances
B5 Energy saving
B7 Use of recycled materials
▼



- By combining network scanning, printing, faxing, and copying capability in a single machine, the e-STUDIO₂81C/351C/451C allow your office to replace a whole range of appliances.
- The warm-up time of these models has been drastically reduced to 1/6 compared with our conventional product by adopting the Twin IH Fusing System.
- Lead-free solders, hexavalent chromium-free steel plates, halogen-free external covers and halogen-free printed circuit boards are used for these models in order to reduce environmental-related chemical substances.
- For more than half of the plastic components, post-consumer plastic materials are adopted.
- These models comply with the international Eco Labels such as ENERGY STAR Program and Blue Angel Mark.
- Featuring a wide, half-VGA-size touch panel LCD, large graphic icons and a full QWERTY keyboard, these models make operation so much easier to give you access to functions in reduced time. The entire control panel has been designed to tilt up and down, making it easier to view in different lighting conditions and enabling easy access for wheelchair users too.



e-STUDIO451C (With optional devices)

Eco-products

EP - 171

OA / IT Equipments

Full color copying machines

Low toner consumption, Digital full color MFP, MX-2700N/2700G

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://www.sharp.co.jp>

- ▲ B5 Energy saving
- B3 Resource saving
- B2 Longevity
- ▼ B7 Use of recycled materials



This MFP has a revolutionary Micro-Fine toner technology offering a lower consumption rate than that of conventional toner in a smaller cartridge that uses less packing materials, while the longer-life photoconductor delivers higher performance comparing with previous models. This product supports two steps 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 (required FAX kit) 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. Recycled plastic is adopted for one component weighing 1.8kg and over.



MX-2700N(inc.Finisher)

Eco-products

EP - 172

OA / IT Equipments

Full color copying machines

Low toner consumption, Digital full color MFP, MX-7000N

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://www.sharp.co.jp/>

- ▲ B5 Energy saving
- B3 Resource saving
- B7 Use of recycled materials



This MFP has a revolutionary Micro-Fine toner technology offering a lower consumption rate than that of conventional toner in a smaller cartridge that uses less packing materials. This product supports two steps 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 (required FAX kit) 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. Recycled plastic is adopted for one component weighing 1.8kg and over.



MX-7000N

Eco-products

EP - 173

OA / IT Equipments

Full color copying machines

Low toner consumption, Digital full color MFP, MX-3500N/3501N

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://www.sharp.co.jp/>

- ▲ B5 Energy saving
- B3 Resource saving
- B2 Longevity
- ▼ B7 Use of recycled materials



This MFP has a revolutionary Micro-Fine toner technology offering a lower consumption rate than that of conventional toner in a smaller cartridge that uses less packing materials, while the longer-life photoconductor delivers higher performance comparing with previous models. This product supports two steps 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 (required FAX kit) 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. Recycled plastic is adopted for one component weighing 1.8kg and over.



MX-3500N(inc.Finisher)

Eco-products

EP - 174

OA / IT Equipments

Full color copying machines

Low toner consumption, Digital full color MFP, MX-4500N/4501N

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://www.sharp.co.jp>

- ▲ B5 Energy saving
- B3 Resource saving
- B2 Longevity
- ▼ B7 Use of recycled materials



This MFP has a revolutionary Micro-Fine toner technology offering a lower consumption rate than that of conventional toner in a smaller cartridge that uses less packing materials, while the longer-life photoconductor delivers higher performance comparing with previous models. This product supports two steps 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 (required FAX kit) 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. Recycled plastic is adopted for one component weighing 1.8kg and over.



MX-4500N(inc.Finisher)

Eco-products

EP - 175

OA / IT Equipments

Full color copying machines

Low toner consumption, Digital full color MFP, MX-5500N

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://www.sharp.co.jp>



B5 Energy saving

B3 Resource saving

B7 Use of recycled materials



This MFP has a revolutionary Micro-Fine toner technology offering a lower consumption rate than that of conventional toner in a smaller cartridge that uses less packing materials. This product supports two steps 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 (required FAX kit) 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. Recycled plastic is adopted for one component weighing 1.8kg and over.



MX-5500N

Eco-products

EP -176

OA / IT Equipments

Full color copying machines

Low toner consumption, Digital full color MFP, MX-6200N

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://www.sharp.co.jp>



B5 Energy saving

B3 Resource saving

B7 Use of recycled materials



This MFP has a revolutionary Micro-Fine toner technology offering a lower consumption rate than that of conventional toner in a smaller cartridge that uses less packing materials. This product supports two steps 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 (required Fax kit) 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. Recycled plastic is adopted for one component weighing 1.8kg and over.



MX-6200N

Eco-products

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OA / IT Equipments

Full color copying machines

Low toner consumption, Digital full color MFP, MX-2300N/2300G

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://www.sharp.co.jp>

- ▲ B5 Energy saving
- B3 Resource saving
- B2 Longevity
- ▼ B7 Use of recycled materials



This MFP has a revolutionary Micro-Fine toner technology offering a lower consumption rate than that of conventional toner in a smaller cartridge that uses less packing materials, while the longer-life photoconductor delivers higher performance comparing with previous models. This product supports two steps 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 (required FAX kit) 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. Recycled plastic is adopted for one component weighing 1.8kg and over.



MX-2300N(inc.Finisher)

Eco-products

EP - 178

OA / IT Equipments

Copying machines

Konica Minolta Bizhub C450 Colour Copier / Printer / Scanner / Fax

Konica Minolta Business Technologies INC.

Marunouchi Center Building No. 6-1,

Marunouchi 1-CHOME, CHIYODA-KU,

Tokyo, 100-0005 Japan

Tel +81 3-6250-2360 Fax +81 3-3218-1384

E-mail

URL <http://konicaminolta.com/environment/product/index.html>

- ▲ A1 Global warming
- A2 Air pollution
- B1 Recyclability
- ▼ B5 Energy saving



- Global Warming: Improvement in manufacturing efficiency and implementation of co-generation systems help reduce CO₂ emission, and ultimately contributing to the prevention of global warming.
- Energy Saving & reduction of Air Pollutants: Konica Minolta created the world's first environmentally low-impact polymerized toner with our innovative technology. Our polymerized toners consume 30% less power in production than conventional pulverized toner, thus contributing to the reduction in CO₂ emission. The new technology helped to cut discharge of air pollutants such as SO_x and NO_x by 40%.
- Reduction & Elimination of Chemical Substances: Konica Minolta assesses products from the development stage in order to forward product designs that eliminate the use of chemicals that are potentially harmful to the environment.

For Singapore Sales enquiries: Tel: +65 6563-5533

Fax: +65 6561-9879

Email: marketing@bt.konicaminolta.com.sg

For other countries enquiries, visit our website at <http://konicaminolta.com.sg>



bizhub C450

Eco-products

EP - 179

OA / IT Equipments

Copying machines

Konica Minolta Bizhub600 Black-And-White Copier/ Printer/ Scanner/ Fax

Konica Minolta Business Technologies INC.
MARUNOUCHI CENTER BUILDING, NO.6-1,
MARUNOUCHI 1-CHOME,CHIYODA-KU, TOKYO,
100-0005 Japan

Tel +81 3-6250-2360 Fax +81 3-3218-1384

E-mail

URL <http://konicaminolta.com/environment/product/index.html>

- Global Warming: Improvement in manufacturing efficiency and implementation of co-generation systems help reduce CO₂ emission, and ultimately contributing to the prevention of global warming.
- Air Pollutants: Konica Minolta created the world's first environmentally low-impact polymerized toner with our innovative technology. Our polymerized toners consume 30% less power in production than conventional pulverized toner, thus contributing to the reduction in CO₂ emission. The new technology helped to cut discharge of air pollutants such as SO_x and NO_x by 40%.
- Recyclability: Post-use copiers are collected and carefully disassembled by hands, one-by-one, to collect parts and materials for reuse and recycling. The plastic parts taken from post-use copiers are first pulverized, then melted, and molded into new copier parts for reuse. This kind of closed-loop materials recycling is one of the most effective recycling measures to help waste while at the same time contributing to conserve natural resources.

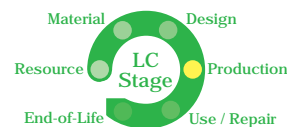
For Singapore Sales enquiries:

Tel: +65 6563-5533 Fax: +65 6561-9879

Email: marketing@bt.konicaminolta.com.sg

For other countries enquiries, visit our website at
<http://konicaminolta.com.sg>

- ▲ A1 Global warming
- ▲ A2 Air pollution
- ▲ B1 Recyclability
- ▼ B5 Energy saving



bizhub 600

Eco-products

EP - 180

OA / IT Equipments

Copying machines

Konica Minolta Bizhub PRO C500 Colour Copier/ Printer / Scanner

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.
MARUNOUCHI CENTER BUILDING, NO.6-1, MARUNOUCHI
1-CHOME,CHIYODA-KU, TOKYO, 100-0005 Japan

Tel +81 3-6250-2360 Fax +81 3-3218-1384

E-mail

URL <http://konicaminolta.com/environment/product/index.html>

- Global Warming: Improvement in manufacturing efficiency and implementation of co-generation systems help reduce CO₂ emission, and ultimately contributing to the prevention of global warming.
- Air Pollutants: Konica Minolta created the world's first environmentally low-impact polymerized toner with our innovative technology. Our polymerized toners consume 30% less power in production than conventional pulverized toner, thus contributing to the reduction in CO₂ emission. The new technology helped to cut discharge of air pollutants such as SO_x and NO_x by 40%.
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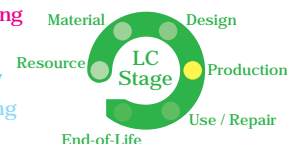
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Tel: +65 6563-5533 Fax: +65 6561-9879

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For other countries enquiries, visit our website at
<http://konicaminolta.com.sg>

- ▲ A1 Global warming
- ▲ A2 Air pollution
- ▲ B1 Recyclability
- ▲ B5 Energy saving



bizhub Pro C500

Eco-products

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OA / IT Equipments

Copying machines

Konica Minolta Bizhub PRO1050 Black-And-White Copier/ Printer/ Scanner

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.
MARUNOUCHI CENTER BUILDING, NO.6-1,
MARUNOUCHI 1-CHOME,CHIYODA-KU, TOKYO,
100-0005 Japan
Tel +81 3-6250-2360 Fax +81 3-3218-1384
E-mail
URL <http://konicaminolta.com/environment/product/index.html>



- Global Warming: Improvement in manufacturing efficiency and implementation of co-generation systems help reduce CO₂ emission, and ultimately contributing to the prevention of global warming.
- Air Pollutants: Konica Minolta created the world's first environmentally low-impact polymerized toner with our innovative technology. Our polymerized toners consume 30% less power in production than conventional pulverized toner, thus contributing to the reduction in CO₂ emission. The new technology helped to cut discharge of air pollutants such as SO_x and NO_x by 40%.
- Recyclability: Post-use copiers are collected and carefully disassembled by hands, one-by-one, to collect parts and materials for reuse and recycling. The plastic parts taken from post-use copiers are first pulverized, then melted, and molded into new copier parts for reuse. This kind of closed-loop materials recycling is one of the most effective recycling measures to help waste while at the same time contributing to conserve natural resources.

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Email: marketing@bt.konicaminolta.com.sg
For other countries enquiries, visit our website at
<http://konicaminolta.com.sg>



bizhub Pro 1050

Eco-products

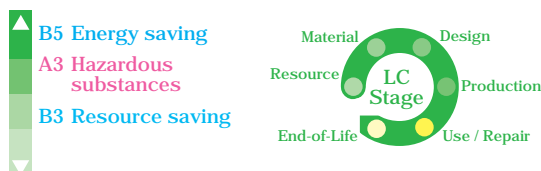
EP - 182

OA / IT Equipments

Full color copying machines

Multifunctional Color Copiers, iR C2880/C2880i/C3380/C3380i

Canon Inc.
30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan
Tel 81-3-3758-2111 Fax 81-3-3758-1160
E-mail
URL <http://www.canon.com>



<Copy speed>

iR C2880/C2880i: 28ppm(B/W)/26ppm(Colour); iR C3380/C3380i: 33ppm (B/W)/30ppm(Colour)

<Energy Saving>

Low power consumption by use of Canon's On-Demand fixing technology provided; Power consumption 3W during sleep mode

<Elimination of Hazardous Substances>

Compliant with the RoHS directive, which restricts or prohibits the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls(PBB), and polybrominated diphenyl ethers (PBDE)

<Resource Saving>

Compact body design of 565mm in width, which reduces the resources used at the manufacturing phase



iR C3380i with optional accessories

Eco-products

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OA / IT Equipments

Full color copying machines

Full Color Digital Multifunctional Copier

Panasonic Communications Co.,Ltd.
2-3-8, Shimomeguro, Meguro-Ku, Tokyo, Japan
Tel 81-3-5434-7020 Fax 81-3-5434-7904
E-mail
URL <http://panasonic.co.jp/pcc/index.html>

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- ▲ B4 Higher quality
- ▼ B5 Energy saving



Thanks to the Panasonic's IH (induction heating) technologies, the DP-C322/C262 can become ready for printing in only approximately 15 seconds from the sleep mode or after power on. This realizes very quick color document output, and helps to conserve environments. In addition, the DP-C322/C262 uses lead free solders, lead and cadmium free materials for harness and power code, hexavalent chromium free screws and steel plates, heavy metal free toner and halogen free plastic components for casing, which contributes to conserve environments. Furthermore, the DP-C322/C262 has "2 in 1" printing function that two same-sized originals are printed out to a single sheet to reduce paper usage and power consumption.



WORKiO DP-C322/C262

Eco-products

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OA / IT Equipments

Full color copying machines

Energy Saving Full Color Digital Imaging Systems Ricoh Aficio MP C1500

Ricoh Company, Ltd.
Ricoh Building, 8-13-1 Ginza, Chuo-ku,
Tokyo 104-8222 Japan
Tel 81-3-6278-4168 Fax 81-3-3543-9342
E-mail envinfo@ricoh.co.jp
URL <http://www.ricoh.com/environment/>

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B5 Energy saving



Energy and Paper Saving Full Color Digital Imaging Systems in 15 images per minute (ipm) in black mode & 6 ipm in full color mode. The print engine of this model is Ricoh's unique Gel-Sprinter system, which requires much less energy than the conventional laser printing system. It takes only 5.5 seconds to be back to print ready conditions from Sleep mode, where power consumption is as low as 3.7 W. (230V model). So, it can be kept in Sleep mode as long as possible. The maximum power consumption is only 110W (Main body). Unlike ink-base engine, the Gel-Sprinter engine requires no waiting time to dry printed image up on paper. So, just after the first side printing is completed, the second side printing can be done without image smearing problems. Thus, high speed duplex print can be made.

Using both duplex and combined printing modes, it is possible to print 8 original images on to a single sheet of paper, which enable to save paper while maintaining productivity. Like other Ricoh Aficio series, these models have a low ozone emission and have low operation noise, and use no chemical substances written in EU RoHS Directive.



Ricoh Aficio MP C1500

Eco-products

EP - 185

OA / IT Equipments

Full color copying machines

Energy Saving Full Color Digital Imaging Systems Ricoh Aficio MP C2500/C3000

Ricoh Company, Ltd.
Ricoh Building, 8-13-1 Ginza, Chuo-ku,
Tokyo 104-8222 Japan
Tel 81-3-6278-5209 Fax 81-3-3543-9347
E-mail envinfo@ricoh.co.jp
URL <http://www.ricoh.com/environment/>



Energy and Paper Saving Full Color Digital Imaging Systems in 25 and 30 images per minute both in full color and black/white modes. The Ricoh Aficio MP C2500/C3000 are the latest full color digital multi-function systems with energy saving modes. Power consumption in Sleep mode is 8W. From this mode, it takes less than 30 seconds to complete warming up. For those who need less waiting time, there are 20 seconds and/or 7 seconds recovery modes to conserve energy while keeping requested productivity by the customers.

As the result, the customers can select a suitable setting for energy saving and recovery time.

These models have the standard automatic duplex capability with leading duplex productivities to save paper resource and energy associated to the lifecycle of paper. Using duplex and combined printing functions, it is possible to print up to 16 original pages into both side of a single sheet of paper.

Such paper saving modes can be easily set by using Ricoh original graphical printing screen, preventing operators from making mis-prints. These models have a low ozone emission, a low operation noise, and use no chemical substances written in EU RoHS Directive.



Ricoh Aficio MP C2500/C3000

Eco-products

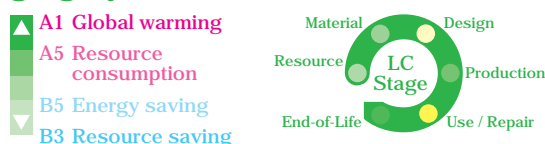
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OA / IT Equipments

Full color copying machines

Energy Saving Full Color Digital Imaging Systems Ricoh Aficio MP C3500/C4500

Ricoh Company, Ltd.
Ricoh Building, 8-13-1 Ginza, Chuo-ku,
Tokyo 104-8222 Japan
Tel 81-3-6278-5209 Fax 81-3-3543-9347
E-mail envinfo@ricoh.co.jp
URL <http://www.ricoh.com/environment/>



The Aficio MP C3500 can print 35 images per minute (ipm) in both the full color and the black modes. And, the Aficio MPC4500 can print 40 ipm in the full color mode and 45 ipm in the black mode. Even in high-speed full color digital imaging systems, more energy can be saved with less waiting time because of Ricoh's Color Quick Start-up (QSU) technologies. From the Sleep mode consuming 7-8W, it takes less than 45 seconds (C3500) or 60 seconds (C4500) to complete warming up. If it is too long to wait, there are 3, 10, and 16-19 seconds recovery modes to conserve energy while keeping requested productivity by the customers.

These models have the standard automatic duplex capability with leading duplex productivities to save paper resource and energy associated to the lifecycle of paper. Using duplex and combined printing functions, 16 original pages can be printed on both sides of a single sheet of paper.

Such paper saving modes can be easily set by using Ricoh original graphical printing screen, preventing operators from making mis-prints. These models have a low ozone emission, a low operation noise, and use no chemical substances written in EU RoHS Directive.



Ricoh Aficio MP C3500/C4500

Eco-products

EP - 187

OA / IT Equipments

Office machines

Scanner: Energy-conservation, space-saving

Panasonic Communications Co., Ltd.
1471, Murata-Machi, Tosu City, Saga, 841-8501 Japan
Tel 81-942-81-2723 Fax 81-942-81-2682
E-mail
URL <http://panasonic.co.jp/pcc/index.html>

▲ A1 Global warming
B3 Resource saving
B5 Energy saving



- Versatile document handling for today's business needs
 - * Virtually any type of paper
 - * ID cards - including embossed hard cards
 - * Mixed paper and hard card batch scanning
 - * Long paper scanning (EKG & monitoring systems)
 - * Double feed prevention roller system
- Fits comfortably in most front-office environments due to a quiet and space saving design.
- Conforms to the international ENERGY STAR program.



Hi-speed color scanner: KV-S1025C / S1020C

Eco-products

EP - 188

OA / IT Equipments

OMR (Optical Mark Reader)

OMR : Recycled paper and materials, power conservation

SEKONIC CORPORATION
7-24-14, Oizumi-Gakuen-cho, Nerima-ku,
Tokyo, Japan
Tel 81-3-3978-2335 Fax 81-3-3922-2144
E-mail omr@sekonic.co.jp
URL <http://www.sekonic.co.jp>

▲ B1 Recyclability
B2 Longevity
B5 Energy saving



- Supports recycled OCR paper (Content: 50%)
- Equipped with power-saving mode for energy conservation (50% power savings in comparison with our conventional machine).
- Material names are specified on exterior and resin parts to allow easy recycling of spent materials.
- Recyclable corrugated paper packaging materials.
- Produced by companies holding ISO 14001 certification.
- Product registered on information plaza for green purchasing.



SR-5500

Eco-products

EP - 189

OA / IT Equipments

High-speed color scanner

Scanner, Energy conservation, Space saving

Panasonic Communications Co., Ltd.
1471, Murata-Machi, Tosu-shi, Saga, Japan
Tel 81-942-81-2723 Fax 81-942-81-2682
E-mail
URL <http://panasonic.co.jp/pcc/index.html>

▲ A1 Global warming
▲ A5 Resource consumption
▼



High-speed color scanner: Space-saving compact design by adopting the curve path ADF. (Requires only 0.4m²; space for scanning size A3 sheet) Conforms to the international ENERGY STAR program.



Hi-speed color scanner: KV-S3065CW

Eco-products

EP - 190

OA / IT Equipments

Office machines

Electronic board, Metallic design, Easy to clean

Panasonic Communications Co., Ltd.
1471, Murata-Machi, Tosu-shi, Saga, Japan
Tel 81-942-81-2723 Fax 81-942-81-2682
E-mail
URL <http://panasonic.co.jp/pcc/index.html>

▲ A1 Global warming
▲ A5 Resource consumption
▲ B3 Resource saving
▲ B7 Use of recycled materials
▼



A series of electronic board of highly luxurious metallic design adopting the aluminum materials for the outside frames: Plain paper standard model (UB-5325).

Plain paper wide model (UB-5825).

Plain paper 4-screen model (UB-7325).

- Replaced the plastic outside frames of the electronic board with the lustrous aluminum frames. The luxurious design is fitted for use in board meeting rooms of business corporations, meeting rooms at hotels and event halls.
- The aluminum frames are easy to clean and resistant to discoloration by ultraviolet rays.



Panaboard: UB-5325/7325/5825

Eco-products

EP - 191

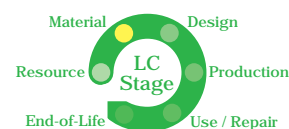
OA / IT Equipments

Magnetic discs

DVD-R/ DVD+R Disc for 16X Speed recording

Hitachi Maxell, Ltd.
1-1-88, Ushitora, Ibaragi-shi, Osaka, Japan
Tel 81-72-623-8250 Fax 81-72-623-9014
E-mail Kankyo@maxell.co.jp
URL

A5 Resource consumption
B3 Resource saving



Less than 7 minutes for recording time per disc. Realizing the stable recording performance from 1x to 16x speed with employing newly developed LTHS¹⁾ recording layer Using only 42% of raw material for the thinner jewel case compare to existing conventional jewel case.

1) Low Thermal interference and High Sensitivity



DR47D.1P

Eco-products

EP - 192

OA / IT Equipments

Automatic telephone exchange switchboards

Small Telephone System, Energy conservation, Resource saving

Panasonic Communications Co.,Ltd
4-1-62, Minoshima, Hakata-Ku, Fukuoka-shi,
Fukuoka,812-8531 Japan
Tel 81-92-477-1848 Fax 81-92-477-1450
E-mail
URL

A1 Global warming
A3 Hazardous substances
B3 Resource saving
B5 Energy saving



Reduced power consumption by energy-conservation design.

4 exchange lines / 16 extensions

Life Cycle Impact :

Global Warming (CO₂ equivalent 467.6kg)

Eco-leaf (Product Environmental Aspects Declaration) :

No.BS-06-001

8 exchange lines / 24 extensions

Life Cycle Impact :

Global Warming (CO₂ equivalent 604.3kg)

Eco-leaf (Product Environmental Aspects Declaration) :

No.BS-06-002



VB-F050 Digital Business Phone "La Relier"

Eco-products

EP - 193

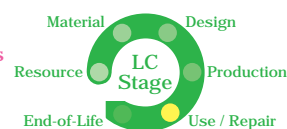
OA / IT Equipments

Facsimiles

High performance eco-friendly fax machine

Panasonic Communications Co.,Ltd.
2-3-8, Shimomeguro, Meguro-Ku, Tokyo, Japan
Tel 81-3-5434-7020 Fax 81-3-5434-7904
E-mail
URL <http://panasonic.co.jp/pcc/index.html>

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- ▲ B4 Higher quality
- ▼ B5 Energy saving



The UF-A600/A500 features a power-saving mode, which sets the heater in the printer block down to the minimum required power in standby/energy-saving mode. This design reduces power consumption at standby mode by approx 80%(compared to our conventional model, UF-A70) In addition, the UF-A600/A500 uses lead free solders, lead and cadmium free materials for harness and power cord, hexavalent chromium free screws and steel plates and halogen free plastic components for casing, which contributes to conserve environments. Furthermore, UF-A600/A500 has "2 in 1" printing function that two same-sized originals are printed out to a single sheet to reduce paper usage and power consumption.



Panafax UF-A600/A500

Eco-products

EP - 194

OA / IT Equipments

Cellular telephone sets

Mobile Phone

Hitachi, Ltd. Ubiquitous Platform Group
2-2-1, Ohte-machi, Chiyoda-ku, Tokyo, Japan
Tel 0120-3121-11 Fax 0120-3121-34
E-mail
URL <http://av.hitachi.co.jp>

- ▲ A3 Hazardous substances
- ▲ A5 Resource consumption



A new style of mobile phone that can be smoothly slid open with one hand. 18% decrease in energy consumption while in standby mode compared to previous model (W11H) 20 minutes increase in continuous call time compared to previous model (W11H) Uses environmentally friendly materials such as lead-free solder and power cord sheathing



W32H

Eco-products

EP - 195

OA / IT Equipments

Cellular telephone sets

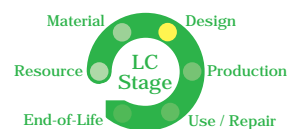
EB-VS2 GSM Mobilephone; Slim, Stylish Handset with a 1.3 megapixel Camera

Panasonic Mobile Communications Co., Ltd.
600 Saedo-cho, Tsuzuki-ku, Yokohama, Kanagawa,
224-8539 Japan

Tel 81-45-938-2372 Fax 81-45-938-2371

E-mail

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



The VS2 is a slim, stylish handset with gently curved contours, a 1.3 mega pixel camera and large 2.2-inch display. The built-in 1.3 mega pixel camera gives you a choice of macro or normal shooting as takes up to 15 consecutive shots. The high-performance large 2.2-inch color TFT QVGA LCD is perfect to display crystal clear images.

To develop GSM mobile phone with lower environmental impacts, we set target across three aspects at the planning stage of each product; Save, Clean and 3Rs (reduce, reuse, and recycle). Our GSM mobile phones have been improved especially "reduce" field, such as "minimizing material use by high density design". VS2 achieved remarkably lightened GSM mobile phone (98g) with a QVGA LCD and a mega pixel camera using the following techniques.

- Integration of electric-components
- Miniaturization of a battery pack
- Monocoque structure to protect LCD unit



EB-VS2 GSM Mobilephone

Eco-products

EP - 196

OA / IT Equipments

Radio applied equipment

Personal Digital Assistant (Mobile Terminal for Settlement of Accounts)

Panasonic System Solutions Company,
Matsushita Electric Industrial Co., Ltd.
4-3-1, Tsunashima-higashi, Kohoku, Yokohama-shi,
Kanagawa, Japan

Tel 81-45-544-3613 Fax

E-mail

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



Personal digital assistant (Model: JT-H470MC) is connected to financial industry such as credit company or bank via settlement center. It meets the demand of expanding market. (credit cards, debit cards or multi-payment account service.) This product is convenient for various businesses such as life and non-life insurance company and delivery-to-home service company that must settle account on visits and deliveries.

- Compact and light weight.(size reduced by 50% and weight, and weight reduced by 33% compared to our previous model.)
- Low power consumption. (8% reduction compared to our previous model.)



JT-H470MC-10

Eco-products

EP - 197

OA / IT Equipments

ie-PDP System

Hitachi IE Systems Co., Ltd.
120-1, saiwai-cho, inazawa-shi, aichi-ken, Japan
Tel 81-587- 21-2111 Fax 81-587- 34-1640
E-mail
URL hitachi-ie.jp/joho/pdp/pdp.html

This ie-PDP system is an interactive display system that enables display and input operations through the touch panel added to the PDP (plasma display).

Development Concept

Not only the display screen size is extended but also the stand weight is decreased. In addition, the structure is designed from a viewpoint of maintainability.

Television receivers

▲ A5 Resource consumption
B3 Resource saving



IEP-SST

Eco-products

EP - 198

OA / IT Equipments

Large-capacity HDD audio-player conforming to the RoHS directive

TOSHIBA CORPORATION Digital Media Network Company
1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan
Tel 81-428-34-2746 Fax
E-mail
URL <http://www.toshiba.co.jp>

▲ A3 Hazardous substances
B5 Energy saving



Used parts (PCB and PCB parts, accessory, packaging material, etc) are all the RoHS perfect conformity products. Halogen-free PCB was used. As for power-saving, 51% reduction has been achieved; the primary HDD audio-player: 411 mW, this machine: 200 mW. As for space-saving, 56% miniaturization has been achieved; the primary HDD audio-player: 181 cm³, this machine: 79 cm³. As for capacity enlargement, HDD made it to be 30GB from 5GB, and thereby, the number of storing-possible music increased from 1,250 songs to 7,500 songs.



gigabeat S30 (Color: pure white(left), piano black(center), crimson red(right))

Eco-products

EP - 199

OA / IT Equipments

Office computers

Disk Array Subsystem SANRISE USP

Hitachi, Ltd. Disk Array Systems Division
1, Horiyamashita, Hadano-shi, Kanagawa, Japan
Tel 81-3-5471-2201 Fax 81-3-5471-2549
E-mail SANRISE@ml.itg.hitachi.co.jp
URL <http://www.hitachi.co.jp/sanrise> (Japanese Only)

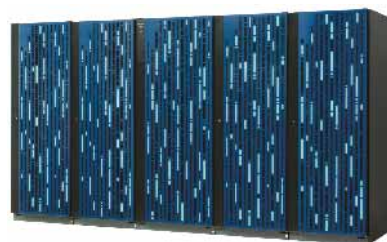
▲ A1 Global warming
A3 Hazardous substances
A5 Resource consumption



SANRISE USP establishes a new industry category, bringing to reality the virtualization of internal

SANRISE USP has a plan corresponding to RoHS Directive. Energy efficiency (based on Japanese Energy Saving Law) : 0.11W/GB

1) Directive 2002/95/EC of the European Parliament and of the council on the restriction of the use of certain hazardous substances in electrical and electronic equipment



HT-4064-RKS/HT-4064-RKM

Eco-products

EP - 200

OA / IT Equipments

IA Server

Environmentally-conscious, quiet and compact server, MAGNIA Z330S

TOSHIBA CORPORATION Personal Computer & Network Company
1-1, Shibaura 1-Chome, Minato-Ku, Tokyo 105-8001, Japan
Tel Fax
E-mail
URL <http://www.magnia.toshiba.co.jp/>

▲ A3 Hazardous substances
A5 Resource consumption
B3 Resource saving



Based on the three areas of saving resources, the elimination of harmful chemical substances, and the enhancement of silent sound, we have developed an IA server to work in harmony with the environment.

- 1) Resource saving: Manufacture of a light and small product weighing 9.4Kg; Reduction of paper consumption by using an online manual; Replacing polystyrene foam with cardboard which is easier to recycle.
- 2) Elimination of harmful chemical substances: Rapid realization of the spread of Halogen, Antimony free substrate and using Pb-free soldering in the mounting technique; products that do not contain the particular hazardous substances of the RoHS directive.
- 3) Enhancement of quiet sound: The noise of the cooling fan was reduced due to the fan's low speed rotation and optimum layout in the design.



MAGNIA Z330S

Eco-products

EP - 201

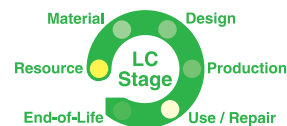
OA / IT Equipments

Personal computers

VAIO Type T; Utilizing new LEDs to create a 4.5mm LCD with low power consumption

6-7-35 Kitashinagawa Shinagawa-ku, Tokyo,
141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

▲ **A1 Global warming**
▲ **A5 Resource consumption**
▲ **A3 Hazardous substances**
▼ **B4 Higher quality**



The 4.5mm LCD of a "VAIO Type T" notebook PC is approximately 50% thinner and 30% lighter than conventional fluorescent tube LCDs. Sony achieved this improvement by utilizing a newly developed white LED as a backlight, and by creating a slimmer light guide panel and a smaller, lighter LCD system board. The use of the white LED backlight has also reduced power consumption by about 25% at the brightest setting. Sony's ultra-slim notebooks can now operate for up to 9 hours¹, owing to various energy-saving features, including the automatic shutdown when there is no media in the internal drives. Instead of fluorescent tubes, the new LCD uses a mercury-free LED backlight², thereby reducing environmental impact.

¹ For a VAIO VGN-TX Type T notebook with Pentium® M Processor and 512 MB RAM

² The use of mercury in fluorescent tubes in LCDs is excepted from the RoHS Directive.



VGN-TX52B/B

Eco-products

EP - 202

OA / IT Equipments

Personal computers

VAIO type T; Utilizing new LEDs to create a 4.5mm LCD with low power consumption

Sony Corporation

6-7-35 Kitashinagawa Shinagawa-ku, Tokyo, 141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

▲ **A1 Global warming**
▲ **A5 Resource consumption**
▲ **A3 Hazardous substances**
▼ **B4 Higher quality**



The 4.5mm LCD of a "VAIO Type T" notebook PC is approximately 50% thinner and 30% lighter than conventional fluorescent tube LCDs. Sony achieved this improvement by utilizing a newly developed white LED as a backlight, and by creating a slimmer light guide panel and a smaller, lighter LCD system board. The use of the white LED backlight has also reduced power consumption by about 25% at the brightest setting. Sony's ultra-slim notebooks can now operate for up to 9 hours¹, owing to various energy-saving features, including the automatic shutdown when there is no media in the internal drives. Instead of fluorescent tubes, the new LCD uses a mercury-free LED backlight², thereby reducing environmental impact.

¹ For a VAIO VGN-TX Type T notebook with Pentium® M Processor and 512 MB RAM

² The use of mercury in fluorescent tubes in LCDs is excepted from the RoHS Directive.



VGN-TX92PS

Eco-products

EP - 203

OA / IT Equipments

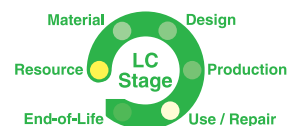
Personal computers

VAIO type S, with stamina mode

Sony Corporation

6-7-35 Kitashinagawa Shinagawa-ku,
Tokyo, 141-0001 Japan
Tel 81-3-5448-2111 Fax 81-3-5448-2244
E-mail
URL <http://www.sony.net>

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ A3 Hazardous substances
- ▼ B4 Higher quality



Sony realized 5.1mm LCD for "VAIO type-S" VGN-SZ91PS, mainly by utilizing a white LED as a backlight, and by creating a slimmer light guide panel and a smaller, lighter LCD system board. Also, this VAIO has a switch for energy mode to fulfill both needs for high-quality and long battery life, by hybrid design of graphic accelerator. SPEED mode when the graphical functions are in need such as for 3D games and HD editing, and STAMINA mode to save energy consumption while powered by battery. Instead of fluorescent tubes, the LCD uses a mercury-free LED backlight^{*1}, thereby reducing environmental impact. ^{*1} The use of mercury in fluorescent tubes in LCDs is excepted from the RoHS Directive.



VGN-SZ91PS

Eco-products

EP - 204

OA / IT Equipments

Personal computers

Personal Computer, Let'snote Y5

Panasonic AVC Networks Company, Matsushita Electric Industrial Co., Ltd.

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504
Japan
Tel 81-6-6905-8356 Fax 81-6-6905-4755
E-mail
URL <http://panasonic.co.jp/pavc/>

- ▲ A1 Global warming
- ▲ B4 Higher quality
- ▲ A5 Resource consumption
- ▼ B3 Resource saving



'A strong (tough) design' corresponding to various mobile environment. The technology cultivated in the field mobile 'tough book' was inherited and the robustness and durability were realized. Achieved world's lightest weight of about 1490g due to employment of shell drive (open-top style drive), thin molding of Magnesium alloy, employment of thin LCD frame, and fanless design. Optical drive is equipped, and data is based on 14.1inch SXGA liquid crystal laptop PC as of April 25, 2006. Achieved longtime drive of about 9 hours by standard battery. A prolonged drive is realized by the newly developed high-density battery, adoption of power saving CPU, etc. Moreover, the economy mode (ECO) which can extend the durable years of a battery by about 1.5 times was carried.

Non-Use of Specific Chemical Substances*

(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Personal Computer, CF-Y5

Eco-products

EP - 205

OA / IT Equipments

Portable Note PC

Environmentally-conscious portable notebook PC

TOSHIBA CORPORATION Personal Computer & Network Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo 105-8001, Japan

Tel Fax

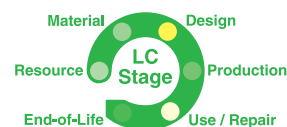
E-mail

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

A1 Global warming

A3 Hazardous substances

B5 Energy saving



Based on the three areas of saving resources, saving energy and the elimination of harmful chemical substances, we have developed a portable notebook PC to work in harmony with the environment. The main topics that have been realized are as follows.

(1) As for resource saving, the amount of paper and CD can be reduced by using an on-line manual and HDD recovery.

(2) As for energy saving, the machine meets the International Energy Star Program standards.

(3) As for the elimination of particular harmful chemical substances, the machine satisfies the RoHS directive, in addition to the early realization of lead-free mounting solder.



dynabook AX

Eco-products

EP - 206

OA / IT Equipments

Portable Note PC

Environmentally-conscious portable notebook PC

TOSHIBA CORPORATION Personal Computer & Network Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo 105-8001, Japan

Tel Fax

E-mail

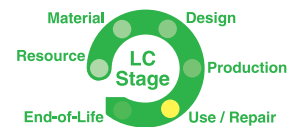
URL <http://www.dynabook.com/>

A1 Global warming

A3 Hazardous substances

B2 Longevity

B5 Energy saving



Based on the three areas of (1) saving resources, (2) saving energy and (3) elimination of harmful chemical substances and (4) extension of the machine's life, we have developed a notebook PC to work in harmony with the environment.

(1) Using an on-line manual and HDD recovery reduces the consumption of paper and CD.

(2) Realization of (a) accurate power control due to the ACPI power-saving standard, (b) peak shift function to automatically switch the power source to the battery at a given time, and (c) conformity to the International Energy Star Program.

(3) A product that satisfies the elimination of particular hazardous substances of the RoHS directive. The early realization of the Halogen, antimony free substrate and mounting technique with lead-free solder.

(4) We are improving weak spots in the product from the design stage using a high acceleration life test. In addition, we are developing a product which is highly durable; relaxation of shock transfer to the inside of the machine, delaying the invasion of water through the keyboard, and so on are being investigated.



Dynabook SS M35

Eco-products

EP - 207

Carriers / Automobiles

Name from code

Environmentally-conscious portable notebook PC

TOSHIBA CORPORATION @ Personal Computer & Network Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo 105-8001, Japan

Tel Fax

E-mail

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



Based on the three areas of (1) saving resources, (2) saving energy and (3) elimination of harmful chemical substances and (4) extension of the machine's life, we have developed a notebook PC to work in harmony with the environment.

(1) Resource saving: Using an on-line manual and HDD recovery reduces the consumption of paper and CD.

(2) Energy-saving: Power consumption on standby of less than 1 watt; conformity to the International Energy Star Program.

(3) Elimination of harmful chemical substances: Rapid realization of the spread of Halogen, Antimony free substrate, and that of the Pb-free soldering in the mounting technique. From September, 2005, shipment of the product which excludes the particular hazardous substances given by the European RoHS directive began.

(4) The enhancement of quiet sound: The noise of the cooling fan was reduced due to the fan's low speed rotation.



Qosmio G30/697HS

Eco-products

EP - 208

OA / IT Equipments

Portable Note PC

Environmentally-conscious portable notebook PC

TOSHIBA CORPORATION Personal Computer & Network Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo 105-8001, Japan

Tel Fax

E-mail

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



Based on the three areas of (1) saving resources, (2) saving energy, (3) elimination of harmful chemical substances and (4) extension of the machine's life, we have developed a notebook PC to work in harmony with the environment.

(1) RESOURCE SAVING: Using an on-line manual and HDD recovery reduces the consumption of paper and CD.

(2) ENERGY SAVING: Realization of the accurate control of power based on the ACPI power-saving standard; function of peak shift to automatically switch the power source to the battery at a given time; conformity to the International Energy Star Program.

(3) ELIMINATION OF HARMFUL CHEMICAL SUBSTANCES: Early realization of the Halogen, Antimony free substrate and mounting technique with lead-free solder; (in addition), a product that satisfies the elimination of particular hazardous substances of the RoHS directive.

(4) MACHINE LIFE EXTENTION: We are improving a weak spots in the product from the design stage using a high acceleration life test. In addition, we are developing a product which is highly durable; relaxation of shock transfer to the inside of the machine, delaying the invasion of water through the keyboard, and so on are being investigated.



dynabook Satellite K15

Eco-products

EP - 209

OA / IT Equipments

Attachments and accessories
of personal computers

IP Telephony System

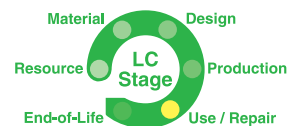
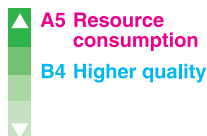
Hitachi Communication technologies, Ltd

6-26-3, Minami-Ohi, Shinagawa-ku, Tokyo, Japan

Tel 81-3-6404-1232 Fax 81-3-6404-0555

E-mail web-adm@hitachi-com.co.jp

URL



You can use your PC on the desk as a telephone by using a soft phone and realizes space-saving.

A telephone on your desk is unnecessary by installation a soft phone.

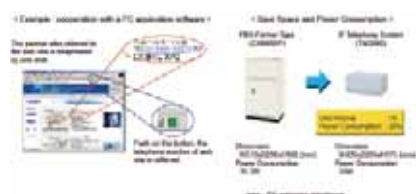
It comes true to save the space of your desk. The telephony server is small and light in comparison with model PABX conventionally, too.

It is possible to put it on 19 inches rack. The power consumption of the server reduces 26%. (at time to implement comparison with our PABX, 100 extension telephones)

The former PABX function is followed. A former telephone, PSTN line are possible, too.

By cooperation with a PC application software, you can dial by just one clicking of a telephone number.

- Soft phone: PC software to realize telephone ability by keeping USB handsets etc, and using it.



IPTOWER-SP

Eco-products

EP - 210

OA / IT Equipments

Magnetic disc equipment

Hard Disk Drive

Hitachi Global Storage Technologies

6-27-18, Minami-Ohi, Shinagawa-ku, Tokyo, Japan

Tel 81- 3-5471-273 Fax

E-mail

URL <http://www.hitachigst.com/portal/site/hgst/>



Hitachi 100-Gigabyte Notebook Hard Drives Offer Advanced Feature Set For Broad Range Of End-User Needs. Low power consumption (Energy efficiency is reduced to 1/20 of the target¹⁾ based on Japanese Energy Saving Law.) RoHS compliant²⁾ (At September 2004) 100GB maximum capacity.

1) The target value: 0.16 W/GB (Category: E, Class: Direct Access Storage Devices)

2) RoHS: DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



Travelstar 5K160

Eco-products

EP - 211

OA / IT Equipments

Optical disc equipment

External Optical Disc Drive

Panasonic Communications Co.,Ltd.

1080 Takano Nagomi-Machi Tamana-Gun Kumamoto Japan

Tel 81-968-86-4385 Fax 81-968-86-4473

E-mail

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

[Product Features]

Portable DVD multi-drive of super multi specifications. In addition to DVD-RAM, DVD-R, DVD-RW, recording to +R, +RW, CD-R and CD-RW is possible.

Designed to cope with discs recorded by DVD recorders.

A variety of software is attached as accessories from video editing to data backup.

[Eco-leaf]

The following environmental information in every life-cycle stage of the product from material manufacturing, product manufacturing, distribution, use, up to disposal will be quantitatively disclosed; Emission load to environment such as global warming, acidification, ozone layer depletion, water pollution, etc.

Consumption load to nature such as depletion of energy and other resources.

[Other Environment Related Information]

Assembly of this product and manufacture of its main components (mounted circuit boards) are carried out in ISO14001 certified plants.

Specified bromine fire retardants (PBB, PBDE) are not used for manufacture of exterior plastic package materials.

Lead solder is not used for mounting main circuit boards.



Portable DVD MULTI Drive

Eco-products

EP - 212

OA / IT Equipments

Hard Disk Drive

Ultra small HDD with advanced resource/energy-saving properties

TOSHIBA CORPORATION Digital Media Network Company

1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001

Japan

Tel Fax

E-mail

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



World's smallest HDD certified by Guinness Book of Records. The HDD is used in applications such as small-sized movie camera and mobile phone with music player. Formatted capacity is increased to 4GB, which is doubled from 1.8 inch model released in 2000 but the weight is reduced to 20% of the former model leading to resource saving. Miniaturization of HDD has contributed to realization of smaller applications and cut down on resources. Power consumption has also been reduced by 40% of 1.8 inch, 2000 model. In energy consumption efficiency, it is only 1/5 of the former model. Measures against hazardous substances are also taken. The small HDD is compliant with RoHS directives which prohibit use of cadmium, lead, mercury, hexavalent chromium, and specific brominated flame retardant.



0.85-inch HDD MK4001MTD

Eco-products

EP - 213

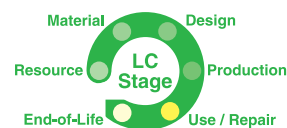
OA / IT Equipments

Printers

Fast & Power Saving, Desktop Colour Laser Printer LBP5000

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo,
Japan
Tel 03-3758-2111 Fax 03-3758-1160
E-mail
URL <http://www.canon.com>

- ▲ B5 Energy saving
- B3 Resource saving
- A3 Hazardous substances
- ▼ A1 Global warming



<Printing speed>

8 ppm in colour & B/W

<First print out time>

20 seconds in colour & B/W

<Energy saving>

Reduced power consumption during stand-by mode and zero warm-up time with Canon's original On-Demand fixing technology

<Resource saving>

Space-saving and convenient maintenance-free with All-in-One cartridge (easily accessible from the front of the printer)

<Elimination of hazardous substances>

RoHS compliant



Laser Beam Printer, LBP5000

Eco-products

EP - 214

OA / IT Equipments

Printers

Energy Saving High Performance Color Laser Printer Ricoh Aficio SP C410DN/C411DN

Ricoh Company, Ltd.

Ricoh BLDG, 8-13-1, Ginza, Chuo-ku,
Tokyo 104-8222 Japan
Tel 81-3-6278-5209 Fax 81-3-3543-9347
E-mail envinfo@ricoh.co.jp
URL <http://www.ricoh.com/environment/>

- ▲ A1 Global warming
- A5 Resource consumption
- B5 Energy saving
- ▼ A5 Resource consumption



Low Cost, Low Environmental Impact, & High Performance Full Color Laser Printer with 25 (C410DN) and 30 (C411DN) images per minute for both full color and black & white printing modes: These latest full color laser printers can stay at Sleep mode while not in use, consuming only 6W.

It takes only 21 seconds to be back to "Print Ready" again from Sleep mode. So, with less waiting time, more energy can be saved. The size of these models is rather small, but the duplex unit is a standard. So, it is possible to save paper by making duplex prints as well as combined prints up to 32 pages into both sides of single sheet of paper.

Print settings for duplex and combined modes are very simple by using Ricoh's unique graphical printer driver screen, resulting in much less mistake to print what you need.

In line with all Ricoh products, these models can comply with EU RoHS requirements in chemical substances and are minimal ozone and noise emissions.



Ricoh Aficio SP C410DN/C411DN

Eco-products

EP - 215

OA / IT Equipments

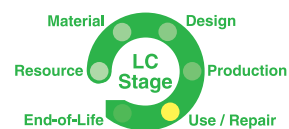
Printers

Inkjet Printer PIXMA MP500, Environmentally conscious products

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku,
Tokyo Japan
Tel 03-3758-2111 Fax
E-mail
URL <http://www.canon.com>

- ▲ A1 Global warming
- B5 Energy saving
- B3 Resource saving
- ▼ A3 Hazardous substances



<Energy Saving>

With the energy-saving technoligis, total usage power consumption was reduced by about 89%, compared with Canon's conventional products.

<Resource Saving>

The compact design reduces the resources the go into making the product. PIXMA MP500 was reduced by about 36% in volume and about 23% in weight, compared with Canon's conventional products.

<Elimination of hazardous substances>

Environmental consideration of the RoHS compliance.



Inkjet Printer PIXMA MP500

Eco-products

EP - 216

OA / IT Equipments

Printers

Inkjet Printer PIXMA MP450, Environmentally Conscious Products

Canon. Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo Japan
Tel 81-3-3758-2111 Fax
E-mail
URL <http://www.canon.com>

- ▲ A1 Global warming
- B5 Energy saving
- B3 Resource saving
- ▼ A3 Hazardous substances



<Energy Saving>

With the energy-saving technoligis, total usage power consumption was reduced by about 88%, compared with Canon's conventional products.

<Resource Saving>

The compact design reduces the resources the go into making the product. PIXMA MP450 was reduced by about 44% in volume and about 50% in weight, compared with Canon's conventional products.

<Elimination of hazardous substances>

Environmental consideration of the RoHS compliance.



Inkjet Printer PIXMA MP450

Eco-products

EP - 217

OA / IT Equipments

Printers

Inkjet Printer PIXMA iP4200, Environmentally Conscious Product

Canon Inc.

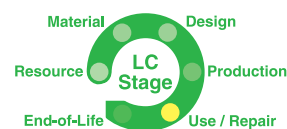
30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo Japan

Tel 81-3-3758-2111 Fax

E-mail

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

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B3 Resource saving
- ▼ A3 Hazardous substances



<Energy Saving>

With the energy-saving technologies, total usage power consumption was reduced by about 64%, compared with Canon's conventional products.

<Resource Saving>

The compact design reduces the resources that go into making the product. PIXMA iP4200 was reduced by about 52% in volume and about 32% in weight, compared with Canon's conventional products.

<Elimination of hazardous substances>

Environmental consideration of the RoHS compliance.



Inkjet Printer PIXMA iP4200

Eco-products

EP - 218

OA / IT Equipments

Printers

Energy Saving Laser Printer Ricoh Aficio AP410/AP410N

Ricoh Company, Ltd.

Ricoh BLDG, 8-13-1, Ginza, Chuo-ku,

Tokyo 104-8222 Japan

Tel 81-3-6278-5209 Fax 81-3-3543-9347

E-mail envinfo@ricoh.co.jp

URL <http://www.ricoh.com/environment/>

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B5 Energy saving
- ▼ A5 Resource consumption



Energy Saving High Performance Black & White Laser Printer with 27 images per minute:

These printers can stay at Sleep mode while not in use, consuming only 4.5W.

It takes less than 12 seconds for warming-up again from Sleep mode.

So, with less waiting time, more energy can be saved. The size of these models is rather small, but the duplex unit is an option. So, it is possible to save paper by making duplex prints as well as grouping prints up to 16 pages into both sides of a single sheet of paper.

Even in such paper saving modes, operation is very simple by using Ricoh's unique graphical printer driver screen, resulting in much less mistake to print what you need.

In line with all Ricoh products, these models have minimal ozone and noise emissions.



Ricoh Aficio AP410/AP410N

Eco-products

EP - 219

OA / IT Equipments

Parts, attachments and accessories of printers

Decolorable Toner (e-blue)

TOSHIBA CORPORATION Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, Japan

Tel 81-3-3457-3743 Fax 81-3-5444-9188

E-mail market@hby.toshiba.co.jp

URL http://www.toshiba.co.jp/efort/product/ink/index_j.htm

▲ **A5 Resource consumption**
 B1 **Recyclability**
 B3 **Resource saving**
 ▼ **B7 Use of recycled materials**



Decolorable Toner(e-blue) – the optimum solution for reducing the volume of paper used in the office toner that can be erased several times will enable the reuse of printer paper in the office. The new paper consumption at office was reduced to 40% by using 'e-blue'.

'e-blue' can reduce office waste and environmental burden.



e-blue

Eco-products

EP - 220

OA / IT Equipments

Input-output systems

CanoScan LiDE 500F, Energy Saving

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan

Tel 03-3758-2111 Fax 03-3758-1160

E-mail

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

▲ **A1 Global warming**
 B5 **Energy saving**
 ▼



With the introduction of the following energy-saving technologies, both operating and stand-by power consumption have been substantially reduced.

(1) Uses a sleep-synchronous system that shuts off power supply to image reading system and motor system during PC sleep.

(2) Uses a low-power LED from conventional fluorescent lamp as a light source of a document reader.

These energy saving technologies have reduced daily power consumption by around 85% in comparison with a conventional machine.



CanoScan LiDE 500F

Eco-products

EP - 221

OA / IT Equipments

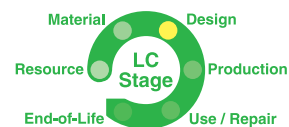
POS Terminal

Environmentally conscious POS Terminal ST-7000 for the users of retailing

TOSHIBA TEC CORPORATION

Oval Court Ohsaki Mark East, 2-17-2,
Higashi Gotanda, Shinagawa-ku, Tokyo, Japan
Tel 81-3-6422-7160 Fax 81-3-6422-7121
E-mail environment@toshibatec.co.jp
URL http://www.toshibatec.co.jp/index_e.htm

- ▲ A3 Hazardous substances
- B1 Recyclability
- B2 Longevity
- ▼ B3 Resource saving



This TOSHIBA product is the newest POS terminal, having the following features from the point of Eco-material view.

- (1) Easy disassembly taking account of the recycle and reuse of the parts.
- (2) Response to upgrading by the separation from the body I/F part based on value lifetime analysis
- (3) Reduction of the environmental hazard substance: Design supposing the abolition of six substances designated by RoHS Use of the halogen-free plastic and the halogen-free printed board
- (4) Improvement of maintenance Adoption of the sliding mechanism for easy replacement of the engine board, the HDD and the battery for back up.



System using ST-7000 with optional devices

Eco-products

EP - 222

OA / IT Equipments

Information recording materials

GeomationForm

Hitachi Software Engineering Co.,Ltd.

4-12-7, Higashishinagawa, Shinagawa-ku, Tokyo, 140-0002 Japan
Tel 81-3-5780-2111 Fax
E-mail
URL <http://hitachisoft.jp/geomation/farm/>

- ▲ B3 Resource saving
- B5 Energy saving



The system corresponding to various business related to agriculture is offered around the field information management linked with map information. In the use of the map, the relation of individual field information not seen is expressed in the sight, and efficiency improvement and the simplification of integrated information use and the business support business are achieved only by the ledger.



GeomationForm

Eco-products

EP - 223

OA Furniture

Information paper

Top-quality clean paper, STACLEAN RC

SAKURAI CO., LTD.

MG Ikenohata Bldg., 1-2-18, Ikenohata, Taito-ku,

Tokyo, 110-0008, Japan

Tel 81-3-3827-4441 Fax 81-3-3827-4321

E-mail

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

- ▲ A3 Hazardous substances
- ▲ A4 Waste
- ▲ B1 Recyclability
- ▼ B4 Higher quality



STACLEAN RC, has a worldwide reputation among engineers in semiconductor, electronics and other industries for top-quality clean paper. STACLEAN RC, used for more than twenty five years in clean rooms, is impregnated with acrylic resin and generate virtually no dust particles, and yet capable for recycling as normal paper. STACLEAN RC does not contain any restricted or banned materials and chemical substances under environmental standard.

We recently add AS STACLEAN, ESD clean paper in our STACLEAN line of products. Users can enjoy very wide variety of STACLEAN product family that is growing and keeps innovating every day.



STACLEAN RC /laser printers and PPC copieres

Eco-products

EP - 224

OA Furniture

Mechanical pencils

Eco-friendly mechanical pencil for general use

Platinum Pen Co., Ltd.

2-5-10, Higashi Ueno, Taito-ku, Tokyo, Japan

Tel 81-3-3831-3412 Fax 81-3-3835-7876

E-mail

URL <http://www.platinum-pen.co.jp/>

- ▲ B1 Recyclability
- ▲ B2 Longevity
- ▲ B3 Resource saving
- ▲ B7 Use of recycled materials



This improved pencil can be used until only 0.5mm of lead remains (Previously, lead needed replaced at 12.4mm) In addition to extending its writing life by 20%, it minimizes waste of pencil lead, making more efficient use of resources. Recycled plastic is used for the barrel, making it environmentally-friendly.



Zeroishin Glamour / mini/MGMQ-100

Eco-products

EP - 225

OA Furniture

Marking pens

Long lasting, refillable highlighter for offices and schools

Tombow Pencil Co.,Ltd.

6-10-12, Toshima, Kita-ku, Tokyo, Japan

Tel 81-3-3912-1181 Fax 81-3-3912-1536

E-mail

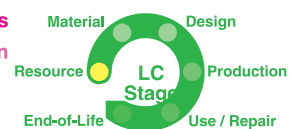
URL <http://www.tombow.com>

▲ **A3 Hazardous substances**

▲ **A5 Resource consumption**

▲ **B3 Resource saving**

▲ **B7 Use of recycled materials**



We help to reduce the environmental burden and help to prevent global warming by using resources effectively. The product reduces waste by using recycled materials.



Twin Highlighter : WA-TC

Eco-products

EP -226

OA Furniture

Pencil lead and holders

Spare leads with case & refill leads made from recycled materials

Tombow Pencil Co.,Ltd.

6-10-12, Toshima, Kita-ku, Tokyo, Japan

Tel 81-3-3912-1181 Fax 81-3-3912-1536

E-mail

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

▲ **A3 Hazardous substances**

▲ **A5 Resource consumption**

▲ **B3 Resource saving**

▲ **B7 Use of recycled materials**



Use of recycled materials helps to prevent global warming, reduces the environmental burden and makes more efficient use of resources.



Recycled Spare Leads : R5-REW

Eco-products

EP - 227

OA Furniture

Correcting tool

W-400, Brush-type correcting fluid to minimize environmental impact

Marujiyu Kasei Co., Ltd

1748, Kamiseka, Ichikawa-cho, Kanzaki-gun,
Hyogo, Japan

Tel 81-790-27-1300 Fax 81-790-27-1303

E-mail factory@misnon.com

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

▲ **A4 Waste**
■ **B2 Longevity**
■ **B7 Use of recycled materials**
▼



This correction fluid uses 100% recycled polymer. The duty cycle of recycled resin is 85% of the total weight of the product. There are no harmful substances in the fluid or recycled resin. The waste fluid generated during on production is implemented with sludge removal, ph control etc, and is drained as treated water which is harmless to the environment.



GANGY MISNON W-400

Eco-products

EP - 228

Apparel / Fabric Product

Shirts

Baby Doll; Nursing wear made with Organic Cotton

MO-HOUSE

480-38, Yamanaka, Tsukuba-shi, Ibaraki, Japan

Tel 81-29-851-7373 Fax 81-29-856-7755

E-mail intl@mo-house.net

URL <http://www.mo-house.net/>

▲ **A1 Global warming**
■ **A3 Hazardous substances**
■ **B3 Resource saving**
■ **B6 Environmental purification**
▼



Nursing wear made with Organic Cotton guaranteed by Japan Organic Cotton Association (JOCA).

Pretty tunic style, with neat square neck-line, and fluffy puff-sleeves. Simply open the two front pieces. The cloth does not hang over baby's face. With its free (large) width, it can be worn during maternity, and can even be worn when the nursing is over.

It is said only 0.2% of cotton is Organic Cotton. This cotton is raised in the U.S.A., the most reliable cotton producing county, mainly in the state of Texas.



Baby Doll Nursing Wear

Eco-products

EP - 229

Apparel / Fabric Product

Dress shirt

Office Uniform after reduction of oil resources use and waste

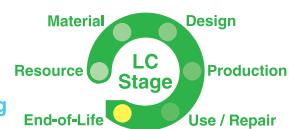
CHIKUMA & Co., Ltd.

3-3-10, Awaji-cho, Chuo-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6222-3289 Fax 81-6-6222-3665

E-mail o-alpha@chikuma.co.jp

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



This garment contains a minimum of 55% PET bottle-recycled polyester, which means it saves oil resources and puts used PET bottles to good use.



Eco-products

EP - 230

Apparel / Fabric Product

Uniform

Office Uniform that saves oil resources and reduces waste

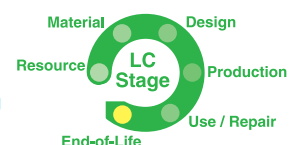
CHIKUMA & Co., Ltd.

3-3-10, Awaji-cho, Chuo-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6222-3289 Fax 81-6-6222-3665

E-mail o-alpha@chikuma.co.jp

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



The cloth is made from material that incorporates at least 55% PET bottle-recycled polyester so it saves oil resources and make use of discarded PET bottles.



Eco-products

EP - 231

Apparel / Fabric Product

Winter uniform

Office uniform that saves oil resources and reduces waste

CHIKUMA & Co., Ltd.

3-3-10, Awaji-cho, Chuo-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6222-3289 Fax 81-6-6222-3665

E-mail o-alpha@chikuma.co.jp

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

▲ A4 Waste

A5 Resource consumption

B3 Resource saving

B7 Use of recycled materials



The clothing is made from material that uses a minimum of 55% PET bottle-recycled polyester. This means it doesn't use oil resources and it reduces waste by using PET bottles.



Eco-products

EP - 232

Commodity / Outdoor Goods / Housing Kit

Virus Washer

Virus Washer – Air Sterilization Unit by Electrolyte (VW-VF10B)

SANYO Electric Co.,Ltd.

1-1,Sanyo-cho,Daito City,Osaka 574-8534, Japan

Tel 81-72-870-7142 Fax 81-72-870-7491

E-mail hira074299@sanyo.co.jp

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

▲ B6 Environmental purification



To prevent the transmission of influenza and other infectious diseases, this unit inactivates airborne viruses for room sterilization by circulating air through a filter immersed in electrolytes supplied by the built-in electrolyte generator.

Features:

- 1) Elimination of more than 99% of airborne viruses/bacteria by the gas-liquid contact method using electrolytes;
- 2) Combination of humidity sensor with DC fan motor enables prevention of excess humidity before/after and during summer;
- 3) Optional kit for a direct connection to local water system available. Daily water replacement and monthly water discharge unnecessary;
- 4) Adoption of DC fan motor enables 2 m3/min – 10 m3/min of wide-range air volumes. Installation in a small room available.



Virus Washer(VW-VF10B)

Eco-products

EP - 233

Commodity / Outdoor Goods / Housing Kit Furniture and fixtures

TARU-MONOGATARI furniture made from whisky casks

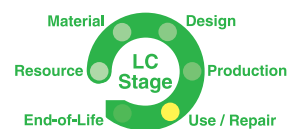
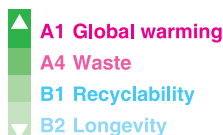
Suntory Limited

2-3-3, Daiba, Minato-ku, Tokyo, Japan

Tel 81-3-5579-1131 Fax

E-mail

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



Casks made from oak trees of could-be-100-year-old are used for as long as 70 years to mature Suntory whisky in the aging cellars, being refilled with freshly distilled new whisky several times. After many years of duty as cradles of whiskies, however, the retired casks had formerly been used wastefully as firewood. Through 20 years of study of trial and error, Suntory had established the technique to change these laudable cradles of whisky into oak-wood-furniture of high-quality and long-life naming the series of furniture "Taru-Monogatari (the Tale of Cask)". We utilize, of course, the material to make small articles such as stationery and even the sawdust turns into the glaze for tasteful ceramics. Through this special technique to revive the forest resources, we may say that the carbon dioxide fixation in the oak trees would last over the centuries. It is possible that "The Tale of Cask" continues on "100 years in the forest, 70 years in the aging cellar and perhaps additional 100 years as furniture".



A Taru-Monogatari Dinner Table and Chairs

Eco-products

EP - 234

Commodity / Outdoor Goods / Housing Kit Furniture and fixtures

Energy-saving bathroom

TOTO Ltd

I-I, Nakashima 2-chome, Kokurakita-ku,

Kitakyushu-shi, Fukuoka, Japan

Tel 81-93-951-2707 Fax 81-93-922-6789

E-mail

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



Wrapping the bathtub with double thermal insulation can keep the bath water warm, similar to the way a thermos retains the heat of drinks. This means another person can use the warm bath water for up to six hours, four times as long as existing products. This means bathwater does not need to be reheated, resulting in energy savings.



KGQ1721

Eco-products

EP - 235

Commodity / Outdoor Goods / Housing Kit

Paper products for daily-use

Rakuchin Poi, cleaning paper for tableware only

HATTORI PAPER MFG.Co.,Ltd.

171-1 Yamadai,kinsei-cho,Shikokuchuo-city,

Ehime,799-0112 Japan

Tel 81-896-58-3005 Fax 81-896-58-3306

E-mail hattori@genki.ne.jp

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



“Rakuchin Poi” wiping paper is a processed paper for the cleaning of tableware not to pour the sauce and oil dirt sticking on plates into the drain. How to use is very simple and only to wipe the dirtied plate with it. Micro-particles that are contained in it scratch the fouling securely. So, it serves eventually to prevent the contamination of the domestic waste water, as well as the generation of slime and smell in the sink and drain. In addition, the amounts of the detergent and the tap water can be saved, because the tableware that was wiped with it is almost clean. “Rakuchin Poi” wiping paper is friendly to the household economy as well as the environment.



Rakuchinpoi

Eco-products

EP - 236

Commodity / Outdoor Goods / Housing Kit

Paper products for daily-use

Rakuchin Poi, disposal sheet for cleaning

HATTORI PAPER MFG.Co.,Ltd.

171-1 Yamadai,Kinsei-cho,Shikokuchuo-city,

Ehime,799-0112 Japan

Tel 81-896-58-3005 Fax 81-896-58-3306

E-mail hattori@genki.ne.jp

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



“Rakuchin Poi” cleaning sheet is suitable to clean the indoor place where the detergent can not be used. The cleaning sheet contains the water that was obtained by electrolyzing a solution of the sodium bicarbonate, which is used as a food additive, and the ion-exchange water. It is therefore safe even if it is used for cleaning the place where the foods may touch directly such as the inner wall of refrigerator and kitchen range. Sticky dirt is removed enough by wiping one time, so wiping twice is unnecessary. In addition, it doesn’t need washing because it is disposable. “Rakuchin Poi” cleaning sheet is a not only environment-friendly, but also human-friendly product.



Rakuchinpoi

Eco-products

EP - 237

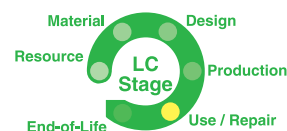
Commodity / Outdoor Goods / Housing Kit

Paper products for daily-use

Universal paper duster: disposable and applicable to various uses.

HATTORI PAPER MFG.Co.,Ltd.

171-1 Yamadai, Kinsei-cho, Shikokuchuo-city,
Ehime, 799-0112 Japan
Tel 81-896-58-3005 Fax 81-896-58-3306
E-mail hattori@genki.ne.jp
URL <http://www.hattoripaper.co.jp>



“Universal paper duster” is a disposable and sanitary duster that can be used at any places in the house. It is a dry-type processed paper that contains micro-particles in it. The duster is convenient to remove the dust on the floor and electrical appliances and also to wipe the window-pane by not using water. In the kitchen relations, the greasy dirt of range and sink can be removed by making the duster wet with a small amount of water. Moreover, the duster that was used for cleaning the toilet can be flushed away because it is water-soluble. “Universal paper duster” is the product that is made on the basis of the environmental consideration and can be applied to various uses.



kami-zoukin

Eco-products

EP - 238

Commodity / Outdoor Goods / Housing Kit

Daily household articles

Cooking sheet: Reduces a waste.

Unicharm Corporation

Sumitomo Fudosan Mita Bldg. WestWin,
Mita 3-5-27, Minato-ku, Tokyo, 108-8575 Japan
Tel 81-3-6722-1041 Fax 81-3-6722-1018
E-mail
URL <http://www.unicharm.co.jp>



This cooking sheet is the first sheet which take in only extra water of vegetables, and protect the freshness.

When you store vegetables with a bag, you spread a sheet under vegetables and absorb only unnecessary water appearing from vegetables and protect vegetables from breeding of bacteria and drying to keep a bag to the moderate humidity.

When you save vegetables in a refrigerator 6°C, mold occurs only in the case of a save bag two weeks later, but when you use this sheet with a save bag, outside leaf changed color a little after two weeks. You can eat it that the inside was edible enough if you take one piece of outside.

In this way it seems to be eaten the vegetables which have been disposed of conventionally by keeping it long the freshness of vegetables and reduces a waste.



Cook Up

Eco-products

EP - 239

Commodity / Outdoor Goods / Housing Kit

Sanitary products

Disposable diaper: Compact size for disposal

Unicharm Corporation

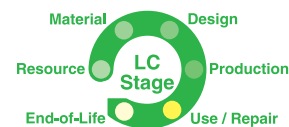
Sumitomo Fudosan Mita Bldg. WestWin,
Mita 3-5-27, Minato-ku, Tokyo, 108-8575 Japan
Tel 81-3-6722-1041 Fax 81-3-6722-1018
E-mail
URL <http://www.unicharm.co.jp>



A4 Waste

A5 Resource consumption

B3 Resource saving



Providing treatment tapes at each side of the diaper makes them more compact for disposal than traditional diapers, substantially reducing the amount of garbage from homes with infants. In addition, the introduction of LIME was found to reduce the amount of raw materials compared with an older product, reducing environmental impact.



男の子用



女の子用

Moony Man

Eco-products

EP - 240

Commodity / Outdoor Goods / Housing Kit

Sanitary products

Sanitary napkin: Waste reduction that considers menstrual blood loss

Unicharm Corporation

Sumitomo Fudosan Mita Bldg. WestWin,
Mita 3-5-27, Minato-ku, Tokyo, 108-8575 Japan
Tel 81-3-6722-1041 Fax 81-3-6722-1018
E-mail
URL <http://www.unicharm.co.jp>



A4 Waste

A5 Resource consumption

B3 Resource saving



This product is sanitary napkin that combine and use "Piece" placed between the groins and "Sheet" applied to the undergarment. The product can exchange only piece with one sheet paved in the undergarment because piece almost absorbs the blood of the menstruation. As a result, it came to be able to reduce the waste at the menstruation largely. About 85% in the weight of the product and about 70% by the amount of piece wrapping use has been reduced compared with a general sanitary napkin. (Comparison with our product for daytime of day when a lot of menstrual bloods are)



SOFY Body Piece

Eco-products

EP - 241

Commodity / Outdoor Goods / Housing Kit

Sanitary products

Disposable diaper: reduced environment impact of 4% than before product

Unicharm Corporation

Sumitomo Fudosan Mita Bldg. WestWin,
Mita 3-5-27, Minato-ku, Tokyo, 108-8575 Japan
Tel 81-3-6722-1041 Fax 81-3-6722-1018
E-mail
URL <http://www.unicharm.co.jp>



This baby diapers use largely improved a production method and new material. We apply this technology to develop the cutting off loss 0 production method. In addition, new product is a better feeling of fitting and dissolved to leak and twist than a before product by changing material, and largely improved product performance. As a result of compared environmental impact with a product in LCA. In this case, we apply LIME (Life cycle Impact assessment Method for Endpoint modeling) which was a Japanese LCIA tool, and having inspected numerical value. It has reduced environment impact of 4% than before product.



Moony M/L

Eco-products

EP - 242

Commodity / Outdoor Goods / Housing Kit

Sanitary products

Disposable diaper: reduced environment impact of 12% than before product

Unicharm Corporation

Sumitomo Fudosan Mita Bldg. WestWin,
Mita 3-5-27, Minato-ku, Tokyo, 108-8575 Japan
Tel 81-3-6722-1041 Fax 81-3-6722-1018
E-mail
URL <http://www.unicharm.co.jp>



When we compare a disposable diaper for adults with a baby disposable diaper, there becomes very much quantity that is disposed of after use greatly. Therefore we divide an outside diaper and an inside diaper. And it absorbs urine an inside diaper. We try to it's smallest, to do a waste by changing only a part of an absorption parts.

In this case, outside diaper "LIFREE" and inside diaper "LIFREE pads" use together that make hard to have become stain with what we changed a diaper structure of an absorption parts. Therefore there became a little change number of times of an outside diaper. (Outside diaper is 5times heavier than inside diaper) As a result of we compared environmental impact with an article in LCA of a product conventionally, and we apply LIME which was a LCIA tool for Japan, and having inspected numerical value, We reduced environment impact of 12% than before product.



Products/Model:Lifree

Eco-products

EP - 243

Commodity / Outdoor Goods / Housing Kit

Sanitary products

Wet tissues: Reduction of a waste by repacked

Unicharm Corporation

Sumitomo Fudosan Mita Bldg. WestWin,
Mita 3-5-27, Minato-ku, Tokyo, 108-8575 Japan
Tel 81-3-6722-1041 Fax 81-3-6722-1018

E-mail

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



You can use the box of SILCOT Wet Tissues repeatedly by having you supplement a refill if the contents disappeared. It leads to reduction of a waste.

In addition, it is the article which considered the universal design which can easily open out with one finger.



SILCOT Wet Tissues

Eco-products

EP - 244

Commodity / Outdoor Goods / Housing Kit

Sanitary products

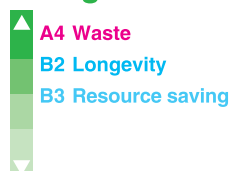
Baby wipes: Largely reduce a waste by using a box repeatedly.

Unicharm Corporation

Sumitomo Fudosan Mita Bldg. WestWin,
Mita 3-5-27, Minato-ku, Tokyo, 108-8575 Japan
Tel 81-3-6722-1041 Fax 81-3-6722-1018

E-mail

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



This article is repackable. We can largely reduce a waste by using a box repeatedly.

Harmful materials do not use it for an article, and it is made by the subject matter that harmful materials do not appear even if you burn it. And it is considered by raising functionality to reduce a waste.



Moony Baby Wipes

Eco-products

EP - 245

Commodity / Outdoor Goods / Housing Kit Toothpaste

Kankyo Yusen Foamless Toothpaste (140g)

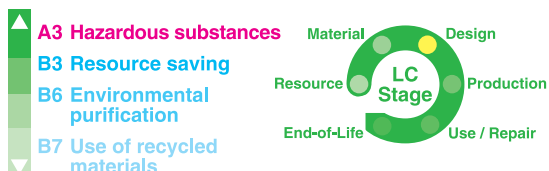
The Seiyu,Ltd.

2-1-1, Akabane, Kita-ku, Tokyo-to, 115-0045, Japan

Tel 81-3-3598-7707 Fax 81-3-3598-7740

E-mail eco@seiyu.co.jp

URL http://www.seiyu.co.jp



Committed to providing environmentally friendly products, Seiyu offers a lineup of ecofriendly products centered on Kankyo Yusen, a private brand of household products and stationery originally developed by Seiyu. Kankyo Yusen Foamless Toothpaste is one of them. This is a toothpaste without synthetic surfactant, preservative, saccharin, coloring, foaming agents. The box is made from recycled paper.



Kankyo Yusen Foamless Toothpaste(140g)

Eco-products

EP - 246

Commodity / Outdoor Goods / Housing Kit Daily household articles

Environmental-friendly dishes designed for out-door leisure, Eco O

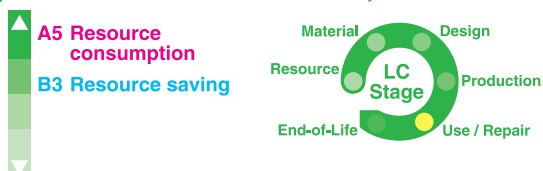
ENTEC Co.,Ltd

375-1, Oseki, Tubame-shi, Niigata, Japan

Tel 81-256-63-3515 Fax 81-256-64-4530

E-mail info@k-entec.co.jp

URL http://www.k-entec.co.jp



Raw materials used for the dish are plants such as corns and potatoes, thereby efficiently reducing global warming influence. Also, the dish needs as low as approximately 4,000 calories when incinerated, causing no contamination of the aright dish is biodegradable, being resolved by natural microorganism under the soil.



Eco One Spoon, fork, and glass

Eco-products

EP - 247

Commodity / Outdoor Goods / Housing Kit

Sanitary pottery, including accessories

Closet stool featuring water, energy, and power savings

TOTO Ltd

I-I, Nakashima 2-chome, Kokurakita-ku,
Kitakyushu-shi, Fukuoka, Japan
Tel 81-93-951-2707 Fax 81-93-922-6789
E-mail
URL <http://www.toto.co.jp>

▲ A1 Global warming
B5 Energy saving
▼



This closet stool features "Tornado Cleaning", which cleans the entire stool with jet water from a nozzle at the back of the stool. While high washing function is maintained, it achieves water savings of up to 54%. In addition, power use to heat the water to wash the hips is reduced to half that needed for existing technology thanks to the "Wonder Wave Cleaning" function which repeats strong and weak spouting more than 70 times a minute. It is an energy-saving design which features a ceramic heater with high-heat-efficiency for a flash water heater that warms water only when needed. In addition, with other energy-saving functions, the electricity cost is more than halved compared with the existing products.



Neorest SD

Eco-products

EP - 248

Commodity / Outdoor Goods / Housing Kit

Sanitary pottery, including accessories

SATIS: lavatory stool featuring water and electrical energy saving.

INAX Corporation

5-1, Koiehonmachi, Tokoname-shi, Aichi, Japan
Tel Fax
E-mail
URL <http://www.inax.co.jp/>

▲ B3 Resource saving
B4 Higher quality
B5 Energy saving
▼



This stool features compact size and energy consumption reduction by 21% and CO₂ emission reduction by 24% compared to existing products. This stool can save water 6 liters for cleaning solid waste and 5 liters for liquid waste are available, thereby realizing about 60% water-saving and about 46% electrical energy-saving compared to existing products through the super energy-saving mode. Additionally, use of detergent is reduced by 72% at cleaning a toilet by pro-guard which features easier cleaning on the toilet surface. The way to hold on the toilet with welding is changed to screw method, so that it is easier to disassemble after discard. The stool is easier to be recycled because of the marking of plastic materials.



SATIS, GBC-901S/BW1, DV-218-R/BW1 etc

Eco-products

EP - 249

Commodity / Outdoor Goods / Housing Kit

Sanitary pottery, including accessories

e-Modern: Faucet designed with water saving in mind

INAX Corporation

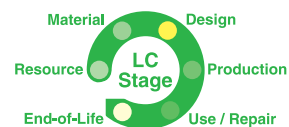
5-1, Koiehonmachi, Tokoname-shi, Aichi, Japan

Tel Fax

E-mail

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

▲ B3 Resource saving
B4 Higher quality
▼



This faucet is equipped with "Eco Dial", which has newly developed water saving function to prevent water from running freely. All you have to do is to choose "eco mode" of "Eco Dial", and you can save water up to 50%.



LF-E340SC/SE etc

Eco-products

EP - 250

Commodity / Outdoor Goods / Housing Kit

Sanitary pottery, including accessories

Sensor Equipped Stall Urinal featuring water and energy saving

INAX Corporation

5-1, Koiehonmachi, Tokoname-shi, Aichi, Japan

Tel Fax

E-mail

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

▲ B3 Resource saving
B4 Higher quality
B5 Energy saving
▼



This Sensor Equipped Stall Urinal includes the power generation function that effectively converts spouting power into electrical energy. Accordingly, this urinal using 1 to 2 liters of water depending of the condition of use results in the effect about 70% water-saving compared to existing products.



Sensor Equipped Stall Urinal, AWU-506RAMP/BN8

Eco-products

EP - 251

Commodity / Outdoor Goods / Housing Kit

Sanitary pottery, including accessories

Automage:automatic faucet considering water and energy saving

INAX Corporation

5-1, Koiehonmachi, Tokoname-shi, Aichi, Japan

Tel Fax

E-mail

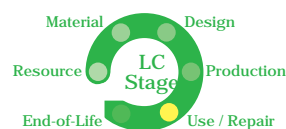
URL <http://www.inax.co.jp/>



B3 Resource saving

B4 Higher quality

B5 Energy saving



This automatic faucet includes the self-power generation function that converts effectively spouting power into electrical energy, thereby operating with the energy from this self-power generation. Additionally, because of structure of tiny mist spouting, splashing of water around the faucet is less and you can wash your hands well with less water.



Automatic faucet, AM-91K etc

Eco-products

EP - 252

Commodity / Outdoor Goods / Housing Kit

Sanitary pottery, including accessories

Water and power-saving tankless toilet; 'eshell'

Matsushita Electric Works, Ltd.

1048, Kadoma, Kadoma-shi, Osaka, Japan

Tel 81-6-6908-4896 Fax 81-6-6908-7193

E-mail

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



A5 Resource consumption

B3 Resource saving

B4 Higher quality

B5 Energy saving



Power-saving hygiene toilet seat instantly heating water and seat + Water-saving toilet system = No.1 eco toilet

[Power-saving]

-The world's first instant heating system that does not need the electric power for heat retention

- The power-saving of about 75% is achieved compared with the conventional products because the toilet seat is instantly heated by the lamp heater only when entering the rest room and the water is also instantly heated by a high-efficiency ceramic heater.

[Water-saving]

-Adopted unique 'turn-trap flushing' system where the trap pipe rotates upside down

-Since this flushing system uses gravity, the required amount of water is reduced to about 40% of 10 years ago (13L -> 6L for high flush and 4.5L for low flush).

The power saving and water-saving performance is No.1 among tankless toilets in Japan.



eshell :CH45M2MWS

Eco-products

EP - 253

Commodity / Outdoor Goods / Housing Kit

Sanitary pottery, including accessories

Claytan Dual Flush 4.5 / 3 Litres WC

Claytan Ceramic Pte Ltd
269 Kaki Bukit Ave 1, Shun Li Industrial Park,
416069 Singapore
Tel +65 6841 7950 Fax +65 6841 9130
E-mail ccsg@claytangroup.com
URL

▲ B3 Resource saving



The production of ceramic sanitaryware began in 1952 at the JPC factory.

Thereafter, Clay Industries Sdn Bhd (CISB) was set up in 1965 to focus on manufacturing only sanitaryware products. Claytan's features a wide range of Water-saving WC suite with dual flush of 4.5/3 litres.



Eco-products

EP - 254

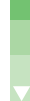
Commodity / Outdoor Goods / Housing Kit

Metal sanitary ware

Water-saving shower head attachment

TOTO Ltd
1-1, Nakashima 2-chome, Kokurakita-ku,
Kitakyushu-shi, Fukuoka, Japan
Tel 81-93-951-2707 Fax 81-93-922-6789
E-mail
URL <http://www.toto.co.jp>

▲ A1 Global warming
B5 Energy saving



This shower allows you to start and stop the water flow by simply pushing the shower head button. This avoids continuous running of water while you are washing your hair etc, resulting in significant savings in water and gas. In addition, since a thermostatic faucet automatically adjusts the water temperature, it avoids the waste of water while you are waiting for the temperature to adjust.



TMF40WQS

Eco-products

EP - 255

Commodity / Outdoor Goods / Housing Kit

Metal sanitary ware

water and electricity saving automatic faucet

TOTO Ltd

1-1, Nakashima 2-chome, Kokurakita-ku, Kitakyushu-shi,
Fukuoka, Japan

Tel 81-93-951-2707 Fax 81-93-922-6789

E-mail

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



A1 Global warming

B5 Energy saving



The automatic faucet is economical because it saves water thanks to its automatic spout and stop sensor.

Installing hydroelectric power units within the faucet enables water energy to be used effectively and the mechanism saves electricity. In addition, an automatic faucet can be installed without electrical work.



TEL71AX

Eco-products

EP - 256

Commodity / Outdoor Goods / Housing Kit

Metal sanitary ware

2 LITRES / MINUTE AUTOMATIC SHUT-OFF BASIN TAP

Steldor Pte Ltd

135 Kaki Bukit Avenue 1, Shun Li Industrial Park, 416002
Singapore

Tel +65 6744 2829 Fax +65 6744 4969

E-mail info@steldor.com.sg

URL www.steldor.com



A5 Resource consumption

B3 Resource saving

B4 Higher quality

B6 Environmental purification



Docol uses Hydro-Mechanic Actuation System for assurance of immediate and complete opening of the faucet, stable performance, at any pressure range and ensuring minimum water waste. According to Sabesp (Water Authority of Sao Paulo), a dripping faucet can waste up to 46 litres of water over a 24-hour period. This is the same amount a person needs to perform his/her daily needs (according to WHO). Leakage is one of the great causes of water loss.



DOCOL-PressMatic 110-P

Eco-products

EP - 257

Commodity / Outdoor Goods / Housing Kit

Metal sanitary ware

Integrated Regulator for Shower

Rigel Technology (S) Pte Ltd
No. 12 Kaki Bukit Techpark 2, 415948 Singapore
Tel +65 6844 0660 Fax +65 6844 0112
E-mail sales@rigel.com.sg
URL www.rigel.com.sg

▲ A5 Resource consumption
B1 Recyclability
B3 Resource saving



The Shower Head comes with an integrated regulator that allows a constant water flow rate of 2 Litres/min. It has a small Semi-Hemisphere Shape without sharp edges, Vandals' Proof feature, Brass Coated Body with Chromed Surface Finish and a Wide Spread Washing Angle.



RIGEL 269

Eco-products

EP - 258

Commodity / Outdoor Goods / Housing Kit

Metal sanitary ware

ECOSAVE™ Water-Saving Tap Device

JVL Engineering Pte Ltd
Blk 5041 Ang Mo Kio Industrial Park 2 #01-495,
569544 Singapore
Tel +65 6483 0880 Fax +65 6483 4928
E-mail ecosave@jvl.com.sg
URL www.jvl.com.sg

▲ A5 Resource consumption
B3 Resource saving
B5 Energy saving
B6 Environmental purification



ECOSAVE™ is a unique and patented range of water-saving devices, developed by JVL Engineering Pte Ltd, Singapore, that is able to save on water consumption by as much as 50% and more! ECOSAVE™ devices are easily installed onto taps, showers and hoses without the need of plumbing assistance.

ECOSAVE™ devices ensure that, even though less water is being utilized, the user does not experience any decrease in water pressure or that less water is being consumed.

Materials:

- Brass with Nickel plating
- Stainless Steel net

(In compliance with WHO Guidelines for Drinking Water Quality, 1993 and with AS/NZS 6400:2005 Clause 2.6.3 & AS/NZS 3662:2005 Clauses 5.4.1 to 5.4.3)



T-D-0325-BF-TC19

Eco-products

EP - 259

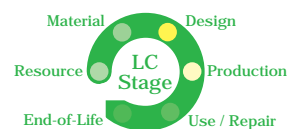
Commodity / Outdoor Goods / Housing Kit

Metal sanitary ware

ECOSAVE™ Water-Saving Showerhead

JVL Engineering Pte Ltd
Blk 5041 Ang Mo Kio Industrial Park 2 #01-495,
569544 Singapore
Tel +65 6483 0880 Fax +65 6483 4928
E-mail ecosave@jvl.com.sg
URL www.jvl.com.sg

- ▲ A5 Resource consumption
- B3 Resource saving
- B5 Energy saving
- ▼ B6 Environmental purification



ECOSAVE™ is a unique and patented range of water-saving devices, developed by JVL Engineering Pte Ltd, Singapore, that is able to save on water consumption by as much as 50% and more! ECOSAVE™ devices are easily installed onto taps, showers and hoses without the need of plumbing assistance.

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- Brass with Nickel plating
- Stainless Steel net

(In compliance with WHO Guidelines for Drinking Water Quality, 1993 and with AS/NZS 6400:2005 Clause 2.6.3 & AS/NZS 3662:2005 Clauses 5.4.1 to 5.4.3)



XJY-9713B-C

Eco-products

EP - 260

Commodity / Outdoor Goods / Housing Kit

Metal sanitary ware

ECOSAVE™ Constant Flow Regulator (Showhead)

JVL Engineering Pte Ltd
Blk 5041 Ang Mo Kio Industrial Park 2 #01-495, 569544
Singapore
Tel +65 6483 0880 Fax +65 6483 4928
E-mail ecosave@jvl.com.sg
URL www.jvl.com.sg

- ▲ A5 Resource consumption
- B3 Resource saving
- B5 Energy saving
- ▼ B6 Environmental purification



ECOSAVE™ is a unique and patented range of water-saving devices, developed by JVL Engineering Pte Ltd, Singapore, that is able to save on water consumption by as much as 50% and more!

ECOSAVE™ devices are easily installed onto taps, showers and hoses without the need of plumbing assistance.

ECOSAVE™ devices ensure that, even though less water is being utilized, the user does not experience any decrease in water pressure or that less water is being consumed.

Materials :

- Brass with Nickel plating
- Stainless Steel net

(In compliance with WHO Guidelines for Drinking Water Quality, 1993 and with AS/NZS 6400:2005 Clause 2.6.3 & AS/NZS 3662:2005 Clauses 5.4.1 to 5.4.3)



CFR-02-1234

Eco-products

EP - 261

Commodity / Outdoor Goods / Housing Kit

Gas ovens

Energy-saving residential-use gas cooking stove 'exe+S'

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp>



Our company has long been working to expand the assortment of residential-use gas cooking stoves installed with high-efficiency burners. This product features burners that greatly increase the thermal efficiency by lessening the flame over-flow from the bottom of pots and pans. It attains a high total thermal efficiency of 55.6%. As such, it acts to conserve energy and reduce CO₂ emissions. It also has a top made of glass for easy cleaning. Furthermore, for increased safety, all three burners are equipped with sensors to prevent over-heating, and the two front burners, with sensors to detect the absence of pots and pans on the burners and prevent lighting in that case. For higher levels of convenience, there is also a function for voice notification to confirm settings and notify users of misoperation.



HR-P873B-VXABHL(R)

Eco-products

EP - 262

Commodity / Outdoor Goods / Housing Kit

Gas ovens

Energy-saving residential-use gas cooking stove

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp/>



Our company has long been working to expand the assortment of residential-use gas cooking stoves installed with high-efficiency burners.

This product features internal-multiple-flameport burners that greatly increase the thermal efficiency by directing flames inward to lessen the flame over-flow from the bottom of pots and pans. It attains a high total thermal efficiency of 55.6%. As such, it acts to conserve energy and reduce CO₂ emissions. Improvements were hardly confined to the burners; the broiler, too, has a higher thermal efficiency as compared to former models, thanks to a change in the inner coating. In addition, the top is made of glass and easy to clean. Furthermore, for increased safety, burners are automatically extinguished when seismic tremors above a prescribed intensity are detected. For higher levels of convenience, there is also a function for voice notification to confirm settings and notify users of misoperation.



RN-P873-DXHBHL(R)

Eco-products

EP - 263

Commodity / Outdoor Goods / Housing Kit

Gas ovens

Energy-saving residential-use gas cooking stove

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp/>

- ▲ B5 Energy saving
- B4 Higher quality
- A1 Global warming
- ▼ B3 Resource saving



Our company has long been working to expand the assortment of residential-use gas cooking stoves installed with high-efficiency burners.

This product features burners that greatly increase the thermal efficiency by lessening the flame over-flow from the bottom of pots and pans. It attains a high total thermal efficiency of 55.6%. As such, it acts to conserve energy and reduce CO₂ emissions. It also has various features for easy cleaning, including a top made of glass, a burner structure sealed with heat-resistant packing to prevent the infiltration of grime into the range, and coverage of the broiler mesh with grime-resistant fluoroc ceramic film. In design, we offer a variety selection of colors to coordinate with kitchens.



HR-P873A-XEBHL(R)

Eco-products

EP - 264

Commodity / Outdoor Goods / Housing Kit

Gas ovens

Energy-saving residential-use gas cooking stove

Tokyo Gas Co., Ltd
1-5-20 Kaigan, Minato, Tokyo Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp/>

- ▲ B5 Energy saving
- B4 Higher quality
- A1 Global warming
- ▼ B3 Resource saving



Our company has long been working to expand the assortment of residential-use gas cooking stoves installed with high-efficiency burners. This product features internal-multiple-flameport burners that greatly increase the thermal efficiency by directing flames inward to lessen the flame over-flow from the bottom of pots and pans. It attains a high total thermal efficiency of 55.6%. As such, it acts to conserve energy and reduce CO₂ emissions. In addition, the top is made of glass and easy to clean. In design, steps were taken to match the preferences of various customers by offering a choice of three soft colors and using a lot of curved lines.



RN-PC863A-XIHR

Eco-products

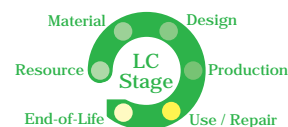
EP - 265

Commodity / Outdoor Goods / Housing Kit Gas ovens

Energy-saving residential-use gas cooking stove

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp/>

- ▲ B5 Energy saving
- B4 Higher quality
- A1 Global warming
- ▼ B3 Resource saving



Our company has long been working to expand the assortment of residential-use gas cooking stoves installed with high-efficiency burners. This product features internal-multiple-flameport burners that greatly increase the thermal efficiency by directing flames inward to lessen the flame over-flow from the bottom of pots and pans. It attains a high total thermal efficiency of 55.6%. As such, it acts to conserve energy and reduce CO₂ emissions. In addition, the top is made of glass and easy to clean. Furthermore, for increased safety, all two burners are equipped with a timer to address neglect to extinguish burners, a device to prevent flame failure, and a function for lowering the flame and automatically extinguishing when the pot or pan is removed from the burners. To facilitate use even by the aged, the control panel has large buttons and letters, color-based differentiation, and other elements deriving from universal design.



RN-PS862-XHL(R)

Eco-products

EP - 266

Commodity / Outdoor Goods / Housing Kit Gas water boilers

Household energy-saving latent heat recovery-type heater

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL http://www.tokyo-gas.co.jp

- ▲ B5 Energy saving
- A1 Global warming
- B3 Resource saving
- ▼ A5 Resource consumption



Our company has developed a high-efficiency water heater system that recovers previously wasted latent heat contained in the exhaust's water vapor. With this system, water heating efficiency is improved from about 80%(at most) to about 95%, and the efficiency of a unit used for room heating is also increased from about 80% to about 89%. This system contributes to energy savings and to the reduction of CO₂ emissions by cutting gas consumption by(up to) about 13%.



TP-S824RFWA-RA

Eco-products

EP - 267

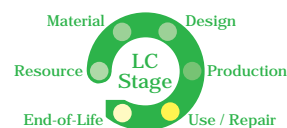
Commodity / Outdoor Goods / Housing Kit

Gas and oil appliances

Fuel cell co-generation system for residential use

Tokyo Gas Co., Ltd
1-5-20 Kaigan, Minato, Tokyo Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp>

▲ B5 Energy saving
▲ A1 Global warming
B3 Resource saving
A5 Resource consumption



Our company has developed residential cogeneration systems based on Polymer Electrolyte Fuel Cells (PEFC). Jointly developed with Ebara Ballard Corporation is fueled by hydrogen extracted from city gas to supply electricity and hot water.

Compared with conventional thermal power plant and hot water boiler, these systems contribute to energy savings by up to 31% and to the reduction of CO₂ emissions by up to 45% with its high efficiency. (Electrical efficiency:33%, Heat recovery efficiency:45% in high heat value)



Eco-products

EP - 268

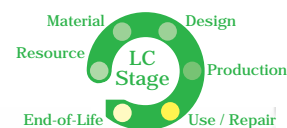
Commodity / Outdoor Goods / Housing Kit

Gas and oil appliances

Fuel cell co-generation system for residential use

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp/>

▲ B5 Energy saving
▲ A1 Global warming
B3 Resource saving
A5 Resource consumption



Our company has developed residential cogeneration systems based on Polymer Electrolyte Fuel Cells (PEFC). Jointly developed with Matsushita Electric Industrial Co., Ltd., is fueled by hydrogen extracted from city gas to supply electricity and hot water. Compared with conventional thermal power plant and hot water boiler, these systems contribute to energy savings by up to 31% and to the reduction of CO₂ emissions by up to 45% with its high efficiency. (Electrical efficiency:33%, Heat recovery efficiency:45% in high heat value)



Eco-products

EP - 269

Commodity / Outdoor Goods / Housing Kit

Gas and oil appliances

Prior Eco-Jozu: highly efficient central heating boiler.

Osaka Gas Co., Ltd.
4-1-2, Hiranomachi, Chuo-ku, Osaka-shi,
Osaka, Japan
Tel 81-6-6205-4605 Fax 81-6-6202-1040
E-mail
URL <http://www.osakagas.co.jp>

▲ A1 Global warming
B5 Energy saving



Employing a heat exchanger of latent heat recovery type, the system reutilizes the heat of combustion gas which used to be wasted. Achieving high heat efficiency of 95% in hot water supply (compared with 80% by conventional type) and 89% in space heating (compared with 80% by conventional type), it is such an energy-saving product. With smaller energy consumption, Eco-Jozu has reduced annual CO₂ emission by 224 kg.



Eco-products

EP - 270

Commodity / Outdoor Goods / Housing Kit

Gas and oil appliances

EcoWill - energy-saving gas cogeneration system

Osaka Gas Co., Ltd.
4-1-2, Hiranomachi, Chuo-ku, Osaka-shi, Osaka,
Japan
Tel 81-6-6205-4605 Fax 81-6-6202-1040
E-mail
URL <http://www.osakagas.co.jp>

▲ A1 Global warming
B5 Energy saving



EcoWill is an energy-saving gas cogeneration system which generates power with clean natural gas and the exhaust heat from power generation provides hot water supply and space heating. EcoWill has been successful in reducing the primary energy consumption by 20% and CO₂ emission by 30% as it utilizes the exhaust heat from power generation for hot water supply and space heating. The system supports the comfortable living while contributing to the environmental conservation.



Eco-products

EP - 271

Commodity / Outdoor Goods / Housing Kit

Radiators and unit heaters

Insultec

Multi Sindo (Singapore) Pte Ltd
1 Goldhill Plaza, #02-19 Singapore 308899
Singapore
Tel +65 6252 3583 Fax +65 6260 0795
E-mail guy@multi-sindo.com
URL www.multi-sindo.com



Insultec 1 is a heat re-radiating membrane is highly durable and flexible, allowing it to move with the substrate. Insultec 1 fills and bridges hairline cracks and can be applied to a wide variety of materials such as concrete, brick, asphalt, timber, clean or primed fibro and properly primed metals. The Insultec 1 membrane treatment adds longer life to the substrates over which it is used. Its heat insulating ability is remarkable with reports, during excessive temperature periods, interior temperatures have been lowered by 15 °C and more. Insultec 1 is environmentally friendly product. Insultec is a comprehensive protective coating which through its heat rejection properties helps promote higher energy savings in air conditioned structures. This in turns helps protect the environment and reduces greenhouse gas emissions.



Insultec 1 Heat Rejection Coating

Eco-products

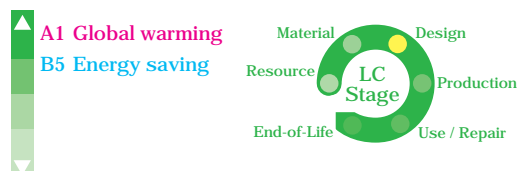
EP - 272

Commodity / Outdoor Goods / Housing Kit

Solar systems

Solar Hot Water Heaters

Connections International Pte Ltd
22 Jalan Selaseh, 808443 Singapore
Tel +65 6483 1031 Fax +65 6483 5343
E-mail egbert@connections.com.sg
URL www.connections.com.sg



In view of the abundant solar energy freely available in the tropics (1,600kwh per sq. metre per year) we believe that harnessing the solar energy is the best way in meeting today's energy needs. SOLAR HEATERS will not only benefit the global environment but is cost effective to customers in their electricity savings. Solar Hot Water Heaters is use for bathing, cooking, washing, heating of pools, and other hot water applications.

Edwards and Thermomax use the latest Solar Absorber technology material TINOX (titanium oxide) for their solar collectors. TINOX absorbs 95% solar radiation and minimize energy loss with an emission of only 5%. Once the solar energy is converted into heat, the energy remains captured in the TINOX absorber which heats the water. Efficiency of TINOX solar collectors has reached 80% and it works even on cloudy and rainy days.

Solar Commercial Hot Water Systems are installed in Singapore which include the Changi International Airport Services Ltd (CIAS) flight kitchen currently the largest solar hot water system in South East Asia.



EDWARDS MODEL L305 -
SOLAR HOT WATER HEATER

Eco-products

EP - 273

Commodity / Outdoor Goods / Housing Kit

Metal sashes and doors

AVANTOS: front door designed to fit for the idea of ECO-material

TOSTEM CORPORATION

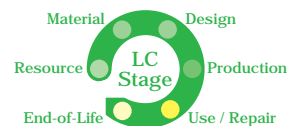
1-1, Ojima 2-chome, Koto-ku, Tokyo, Japan

Tel 81-3-3638-8187 Fax 81-3-3638-8352

E-mail shizumurat1@exc.tostem.co.jp

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

- ▲ A3 Hazardous substances
- A5 Resource consumption
- B1 Recyclability
- ▼ B4 Higher quality



AVANTOS is basically the so-called "flash door" comprising one frame and two boards, but it is modified with the heat insulating material. The material used is the form of polyurethane or polystyrene and the form doesn't contain Freon gas (designated species of chlorofluorocarbons and their substitutes). The flame window, if installed, is a double-layer type glass window with an air-layer of 19mm in thickness. Our factory makes the efficient use of resources; for instance, the scraps of hard-type vinyl chloride resin that generated in the factory are reused as the core material of the front door product.



Eco-products

EP - 274

Commodity / Outdoor Goods / Housing Kit

Thermal insulating window

Aluminum composite insulating window; energy-saving, fire-proof

TOSTEM CORPORATION

1-1, Ojima 2-chome, Koto-ku, Tokyo, Japan

Tel 81-3-3638-8187 Fax 81-3-3638-8254

E-mail

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

- ▲ B5 Energy saving
- B4 Higher quality
- B2 Longevity
- ▼



The product is a composite structure insulating window frame, which uses aluminum material (with durability and fireproof functions) for outside and resin material (with thermal insulation and ornamental design functions) for inside. The product contributes to energy saving by reducing air-conditioner's load at a residential house with a help of double glazed glass. When saved amount of energy is converted into carbonic acid gas, a high-insulation/airproof house using Symphony can reduce carbonic acid gas by approximately 960 kg a year per house in contrast to a conventional house. Thanks to these effects, increased carbonic acid gas by increased materials of the product (such as for sash, glass, and thermal insulation) can be offset within approximately 1.6 years, thus showing enough efficiency in terms of LCA standard. Furthermore, to improve its recyclability, the product has a simple disassemble structure where aluminum/resin materials are fixed with our own "Type₂ Eco-Label", based on our internal standard.



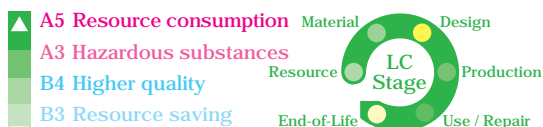
Eco-products

EP - 275

Commodity / Outdoor Goods / Housing Kit Elevators

Environmentally-friendly elevator without machine room

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310
Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>



The "AXIEZ" elevator does not require a machine room, allowing rooms needed for existing elevators to be removed. The control panel and traction motor, which were previously installed in a machine room, have been downsized and can be installed in the space between the shaft wall and the elevator car. It has been downsized by 28% and uses 60% less power compared with our previous products (at 1983). AXIEZ also reduces environmentally toxic substances by reducing the use of vinyl chloride (PVC) and by using water based paint which does not contain VOCs.



Machine-Room-Free Elevator

Eco-products

EP -276

Commodity / Outdoor Goods / Housing Kit Water Purifier

SALUSER, New Type of Water Purifier Attached to the Main Tap

HANITSU TRADE Co., Ltd.
Morikawa Bldg. 2F, 1-30-6, Nishigotanda, Shinagawa-ku, Tokyo, Japan
Tel 81-3-5437-6721 Fax 81-3-5437-6722
E-mail
URL



SALUSER's cartridge, utilizing activated carbon and special ceramics extracted from natural ores, removes bacteria, red rust, residual chlorine, and even carcinogenic trihalomethanes from tap water. The purified water is safe, free of chlorine smell, and good-tasting. SALUSER also creates clean and safe home water environment by suppressing the propagation of bacteria and slime on the water system surfaces. SALUSER can also prevent scales on the water pipe or the water heater, and extend the life of such equipment. As it is attached to the main water pipe, SALUSER provides safe, healthy and tasty water not just to your kitchen tap but also to all other water systems in your house including bathroom and toilet.



Water Purifier SALUSER SR2H1

Eco-products

EP - 277

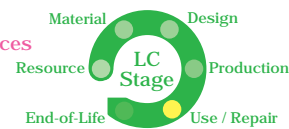
Commodity / Outdoor Goods / Housing Kit

Miniature generators

Environmentally-friendly Photovoltaic modules

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310
Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- B6 Environmental purification
- ▼ B4 Higher quality



We have started mass production of photovoltaic modules "MR series" with lead-free solder ahead of our industry competitors. Approximately 864g of lead solder is used per house for a conventional photovoltaic module^{*1}. Our module does not include any lead in the solder^{*2}. This product not only reduces possible environmental impact but also improves conversion efficiency as the basic function of photovoltaic battery.

*1: Per house (for 3kW system): assuming 24 modules.

*2: Quantity of lead required for soldering joints.



Photovoltaic module

Eco-products

EP - 278

Commodity / Outdoor Goods / Housing Kit

Miniature generators

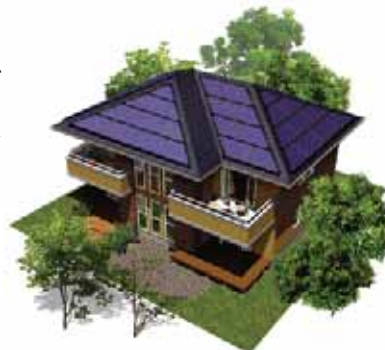
Environmentally-friendly Photovoltaic Power System

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

- ▲ A1 Global warming
- ▲ A3 Hazardous substances
- B6 Environmental purification
- ▼ B5 Energy saving



1. By combining five types of module shapes, rooftop installations can handle more cells.
2. With 94.5% energy conversion efficiency, can make use of power generated without waste.
3. Completely lead-free connections, including conducting wires and electrode covers.



Photovoltaic battery system

Eco-products

EP - 279

Commodity / Outdoor Goods / Housing Kit

Wiring devices and supplies

High performance wiring duct "Purasukon System"

Matsushita Electric Works, Ltd.
1048, Kadoma, Kadoma-shi, Osaka, Japan
Tel 81-6-6908-1131 Fax
E-mail
URL <http://www.mew.co.jp>



1. The power points can be easily shifted or augmented.
2. The weight of main body is reduced by about 30% compared with that of conventional model by changing its structure and manufacturing system.
3. The industry's first: Material of insulation is changed to flame retardancy ABS from PVC.



High performance wiring duct "Purasukon System" DH17009W

Eco-products

EP - 280

Commodity / Outdoor Goods / Housing Kit

Kitchen ware

Dishwasher: money-saving and water saving

TOTO Ltd
1-1, Nakashima 2-chome, Kokurakita-ku, Kitakyushu-shi,
Fukuoka, Japan
Tel 81-93-951-2707 Fax 81-93-922-6789
E-mail
URL <http://www.toto.co.jp>



This dishwasher achieves a high-repressure jet with the minimum of water by reducing the nozzle size and installing a rolling ball. As a result, it provides saving in both water and gas, equivalent to 810 bathtubs of water a year and 94,000yen a year in cost reduction, compared with handwashing.



EUD510

Eco-products

EP - 281

Commodity / Outdoor Goods / Housing Kit

Household electric appliances

Eco-friendly water heater for residential use

Tokyo Electric Power Company
1-1-3, Uchisaiwai-cho Chiyoda-ku, Tokyo, 100-8560, Japan
Tel 81-3-4216-1111 Fax 81-3-4216-3479
E-mail kawashima.toshiyuki@tepco.co.jp
URL <http://www.tepco.co.jp/en/index-e.html>



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.



CO₂ refrigerant heat pump water heater

Eco-products

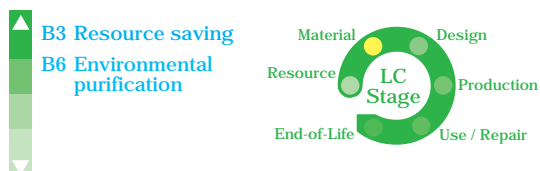
EP - 282

Commodity / Outdoor Goods / Housing Kit

Switches

Dual Flush Features

Rigel Technology (S) Pte Ltd
No.12 Kaki Bukit Techpark 2, 415948 Singapore
Tel +65 6844 0660 Fax +65 6844 0112
E-mail sales@rigel.com.sg
URL www.rigel.com.sg



Dual flush button feature allow for Full Flush of not more than 4.5Litres and Half Flush of not more than 3Litres.



RIGEL AFS 101CRDF

Eco-products

EP - 283

Commodity / Outdoor Goods / Housing Kit

Container Support Wood for Safety Choking

LHT Holdings Limited

No. 27 Sungei Kadut Street 1, 729335 Singapore

Tel +65 6269 7890 Fax +65 6367 4907

E-mail enquiry@lht.com.sg

URL www.lht.com.sg



Our Technical wood will act as alternative of natural wood. Suitable for container Support Wood with higher strength and able cut to customer requirement sizes. All our Technical Wood does not require fumigation or heat treatment. Ensure able to clear all country quarantine. The quality is better than natural wood. The advantages of the Container Support Wood for choking the container gate.

- 1.) No cracks
- 2.) No pest
- 3.) Low moisture
- 4.) High nailing holding power
- 5.) No wastages
- 6.) Fast turnaround time
- 7.) Precision of sizes
- 8.) Does not require fumigation or heat treatment. ISPM15 compliance.



Eco-products

EP - 284

Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

Dunnages for Sea Freight support purpose

LHT Holdings Limited

No.27 Sungei Kadut Street 1, 729335 Singapore

Tel +65 6269 7890 Fax +65 6367 4907

E-mail enquiry@lht.com.sg

URL www.lht.com.sg



The LHT Technical Wood dunnages is a brilliant outcome of waste wood recycling innovation. Wood waste is being crushed and mechanically shaped into a wide range of specially design recycled wooden products. The LHT Technical Wood dunnages is not only environmentally friendly but also cost effective. It is strong due to its high density and is consistent in texture and colour. In addition, LHT Technical Wood is chemical and pest resistant, fire retardant and is low in moisture content. Technical Wood is also a trademark of LHT Holdings Limited. Technical Wood are also Green Label Products awarded by Singapore Environment Council and Innovation award by Senoko Power Of Singapore.



Eco-products

EP - 285

Commodity / Outdoor Goods / Housing Kit ECR/RFID Pallet for FMCG Industry

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail thomasyeo@ecrpallet.com
URL www.ecrpallet.com

Miscellaneous wood products

- ▲ A1 Global warming
- ▲ A4 Waste
- ▲ B4 Higher quality
- ▼ B6 Environmental purification



Kim Hiap Lee Co. Pte Ltd a subsidiary of LHT Holdings Limited, a pallet leasing company which lease the Efficiency Consumer Response (ECR)/ Radio Frequency Identification (RFID) pallets to Fast Moving Consumer Goods (FMCG) industry. The ECR/RFID pallet is also a maintenance-free finished product and is certified to the ISO 6780 'General-purpose flat pallets for through transit of goods - Principal dimensions and tolerances' and SS 334 'Specification for Timber Pallets'.

The benefits of the ECR/RFID pallet rental scheme helps customer to reduce

- 1)capital investments
- 2)warehouse storage costs
- 3)pallet maintenance costs
- 4)exchangeable & share assets etc..

With the RFID tagging to the ECR pallets, it helps to identify the rightful customer gives accurate tracing, verification of endorsement in receiving, lower inventory and reduce manpower in stock-take.



Eco-products

EP - 286

Commodity / Outdoor Goods / Housing Kit Greenflo Flooring, Doors and Door frame system

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.greenflo.com

- ▲ A1 Global warming
- ▲ A4 Waste
- ▲ B4 Higher quality
- ▼ B6 Environmental purification



In 1999, LHT Holdings Limited developed the world first Greenflo Doors & Flooring system.

Greenflo doors are made using high density Technical Wood topped with specially designed door skin which enhances its durability and stability. It rated E1 standard core material to give green environment. Greenflo flooring is making using high density Technical Wood as the base and topped a 100% grade solid wood veneer. The Greenflo products have eliminated the natural wood defects, such as environment friendly, no cracks, pest free, low moisture etc. Greenflo Products are also Green Label Products award by Singapore Environment Council (SEC).



Eco-products

EP - 287

Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

IPPC Box

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg

▲ A1 Global warming
▲ A4 Waste
▲ B4 Higher quality
▲ B6 Environmental purification



Yet another value-added product by LHT, the IPPC box is made from environmentally-friendly processed wood that is ISPM No15 compliant. It does not require any fumigation or heat treatment and it is light-weight and convenient for packaging and shipping. LHT believes in investing for the quality and efficiency. Which is why the design of the IPPC box is well designed with highly quality Technical wood and efficient mode of does it yourself assembly. The IPPC Box able to collapsible to save transportation cost, man powers and storage charges etc. By ensuring more controlled and consistent assembly standard, customers can be assured of precision and quality of every box. This is suitable for Dangerous good
Example : Chemical etc



Eco-products

EP - 288

Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

IPPC Pallet

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg

▲ A1 Global warming
▲ A4 Waste
▲ B4 Higher quality
▲ B6 Environmental purification



According to International Standards for Phytosanitary Measures (ISPM) No. 15 "Guidelines for Regulating Wood Packaging Material in International Trade" of International Plant Protection Convention (IPPC). Wood packaging made of wholly of wood-based products such as plywood, particle board, oriented strand board or veneer that have been using glue, heat and pressure or a combination thereof should be considered sufficiently processed to have eliminated the risk associated with the raw wood. All our IPPC pallets are made of process wood and conform to ISPM No.15. IPPC Pallets is made of LHT Technical Wood and original tropical hardwood fibres that undergo a high-pressure and high-temperature steaming process. Hence it share similar characteristics of natural solid wood but has the added advantages of being pest and fungus-resistant in accordance to the international standard. The Technical Wood enhances its performance in being fire and water resistant. The moisture content of lower than 10% means strengthened stability and hence the further reduction of thickness swelling.



Eco-products

EP - 289

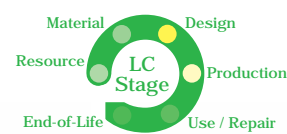
Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

Mould Pallets

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg

▲ A1 Global warming
A4 Waste
B4 Higher quality
B6 Environmental purification
▼



LHT Mould Pallets are the result of shaping the crushed chips into various forms with specially designed moulds. Through such versatility in usage, we are able to enhance our products to suit diverse need. All the Technical wood moulded pallets are IPPC ISPM15 compliance our mould pallet is nest-able and rack-able by adding on our LHT Technical wood planks. These add on features are also convenience and handle well by conveyor movement safely. Moulded pallets are able to do stacking in between on another pallets without damages of any cargoes purpose.



Eco-products

EP - 290

Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

Technical Wood Made by Waste Wood

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg

▲ A1 Global warming
A4 Waste
B4 Higher quality
▼ B6 Environmental purification



The LHT Technical Wood is a brilliant outcome of waste wood recycling innovation. Wood waste is being crushed and mechanically shaped into a wide range of specially design recycled wooden products. The LHT Technical Wood is not only environmentally friendly but also cost effective. It is strong due to its high density and is consistent in texture and colour. In addition, LHT Technical Wood is chemical and pest resistant, fire retardant and is low in moisture content. Technical Wood is also a trademark of LHT Holdings Limited.



Eco-products

EP - 291

Commodity / Outdoor Goods / Housing Kit

Technical Wood Beams

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg



The best solutions for all kinds of USA pallets with cut holes feature. The quality is better than natural wood. The advantages of the Technical wood blocks

- 1.) No cracks
- 2.) No pest
- 3.) Low moisture
- 4.) High nailing holding power
- 5.) No wastages
- 6.) Fast turnaround time
- 7.) Precision of sizes
- 8.) Does not require fumigation or heat treatment. ISPM15 compliance.



Eco-products

EP - 292

Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

Technical Wood Blocks

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg



The quality is better than natural wood. The advantages of the Technical wood blocks are

- 1) No crack
 - 2.) No pest
 - 3.) Low moisture
 - 4.) High nailing holding power
 - 5.) No wastages
 - 6.) Fast turnaround time
 - 7.) Precision of sizes
 - 8.) Does not require fumigation or heat treatment. ISPM15 compliance.
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Eco-products

EP - 293

Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

Technical Wood Pallets

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg

▲ A1 Global warming
▲ A4 Waste
▲ B4 Higher quality
▼ B6 Environmental purification



Technical Wood Pallets is made of original tropical hardwood fibres that undergo a high-pressure and high-temperature steaming process. Hence it share similar characteristics of natural solid wood but has the added advantages of being pest and fungus-resistant in accordance to the international standard. The Technical wood enhances its performance in being fire and water resistant. The moisture content of lower than 10% means strengthened stability and hence the further reduction of thickness swelling. The quality and supply of LHT Technical Wood pallet is stable and produced base on the required measurement density and other specifications. This is also helps to reduce wastage and keep production costs low and stable. This is no further process of kiln dry is necessary. Our Technical Wood pallets are made of process wood and conform to ISPM No.15. Thus does not require fumigation or heat treatment. This is able to clear all country quarantine without questioning.



Eco-products

EP - 294

Commodity / Outdoor Goods / Housing Kit

Miscellaneous wood products

Technical Wood Planks

LHT Holdings Limited
No.27 Sungei Kadut Street 1, 729335 Singapore
Tel +65 6269 7890 Fax +65 6367 4907
E-mail enquiry@lht.com.sg
URL www.lht.com.sg

▲ A1 Global warming
▲ A4 Waste
▲ B4 Higher quality
▼ B6 Environmental purification



The LHT Technical Wood is a brilliant outcome of waste wood recycling innovation. Wood waste is being crushed and mechanically shaped into a wide range of specially design recycled wooden products. The LHT Technical Wood is not only environmentally friendly but also cost effective. It is strong due to its high density and is consistent in texture and colour. In addition, LHT Technical Wood is chemical and pest resistant, fire retardant and is low in moisture content. Technical Wood is also a trademark of LHT Holdings Limited.

The quality is better than natural wood. The advantages of the Technical wood blocks

- 1) No cracks
- 2) No pest
- 3) Low moisture
- 4) High nailing holding power
- 5) No wastages
- 6) Fast turnaround time
- 7) Precision of sizes
- 8) Does not require fumigation or heat treatment. ISPM15 compliance.



Eco-products

EP - 295

Building and Civil Engineering

Plastic products

Spectrally Selective Solar Control Films / Safety & Security Films

V-KOOL (S) Pte Ltd

12 Jalan Kilang Barat #01-01 Globamatrix Building,
159354 Singapore

Tel +65 6276 6282 Fax +65 6276 7271

E-mail info@v-kool.com.sg

URL www.v-kool.com.sg



Engineered by V-KOOL, IQue offers an extensive range of applied films for the architectural market. Combining high performance solar control with high visible light transmission, IQue architectural films can reject as high as over 98% of infrared rays responsible for heat build-up while letting in over 73% of visible light. 60% of the total solar energy is prevented from entering the interior, thereby reducing air-conditioning loads and achieving significant savings in energy bills. Visible clarity also means that daylight can be "harvested", reducing artificial lighting requirements in buildings significantly. IQue also offers Safety & Security films which are easily applied onto any existing glass surface to hold broken glass shards in the event of breakage. It holds broken glass in place greatly reducing the likelihood of glass being propelled at high speeds into interior areas. Results from the Bomb Blast Mitigation Test have demonstrated the effectiveness of IQue Safety & Security films in mitigating glass fragment hazards when subjected to blast loads. Our films have met the stringent US General Services Administration (GSA) testing requirements.



Eco-products

EP - 296

Building and Civil Engineering

Glued laminated timber

Laminated wood of Aomori HIBA for building material use

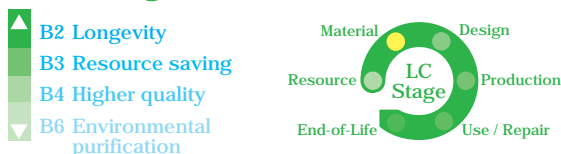
Kodate Lumber Inc.

127-20, Sengari, Aburakawa, Aomori-shi, Aomori,
Japan

Tel 81-17-788-8125 Fax 81-17-788-8127

E-mail kodate-mokuzai@kodate.co.jp

URL <http://kodate.co.jp/>



The development of wood resources has a possibility to destruct the global environment, so it is much interested. In general, it takes 30 years or more for a tree to grow up to the size from which usable wood is cut out, even if the tree is a species that has a large growth rate. As for Aomori HIBA, a long period of 200 to 300 years is necessary to grow. So, the effective use of the limited resource is important, and the most effective method is to use the laminated wood. (HIBA is a kind of Japanese cypress tree and grows in Aomori prefecture in Japan.) Aomori HIBA contains about 1% Aomori HIBA oil, and the oil contains 2% "Hinokitiol". "Hinokitiol" is isopropyl-tropolone ($C_{10}H_{12}O_2$). It has anti-bacterial and worm-killing powers; therefore, the wood of Aomori HIBA does not easily rot and doesn't allow white ants to come closer to it. We may therefore say that Aomori HIBA is a long life material that can be used without special rot-proof treatment. Because of its long life, Aomori HIBA has been used not only for the foundation and pillars of private house, but also in the structures of shrine and temple.



Eco-products

EP - 297

Building and Civil Engineering

Particle board, Glued laminated timber

Woodchip-board [Artificial soil for re-vegetation]

Obayashi Corporation

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, Japan

Tel 81-3-5769-1322 Fax 81-3-5769-1978

E-mail hamai.kunihiko@obayashi.co.jp

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

▲ A1 Global warming

A4 Waste

B1 Recyclability

B7 Use of recycled materials



This product recycles woodchips from trees that have been cut down and abandoned after land formation. A grout coating ensures that the chips combine firmly, producing a woodchip board with outstanding durability. It has consecutive voids, providing an environment where plants can grow even in severe conditions such as acid soil or concrete walls.



tip-board (500*500*30mm)

Eco-products

EP - 298

Building and Civil Engineering

Miscellaneous wood products

Fire rated timber door (Environmental friendly products attribute to ISO 14000)

Singco Pte Ltd

17 Tractor Road, 627975 Singapore

Tel +65 6265 1874 Fax +65 6262 2738

E-mail singco@singnet.com.sg

URL www.singco.com.sg

▲ B2 Longevity

B4 Higher quality

B6 Environmental purification



Triboard - a special managed forest pine trees to compress into fine and solid panel board with fire resistance infilled. Its origin from Newzealand and has been widely used in the world. The most significant features of this product is a combination of three layers of top & bottom MDF (Medium Density fibre) and the compressed wood in the middle. The MDF board enables smooth surfaces to receive finishing like wood veneer and plastic lamination and maintaining hardwood feel when touching.



SB45 - Up to 60 mins of fire resistance door

Eco-products

EP - 299

Building and Civil Engineering

Paint

Building exterior paint invented with energy conservation in mind

Nagashima Special Paint Co., Ltd.
2-1-5-8F, Arakawa, Arakawa-ku, Tokyo, Japan
Tel 81-3-5615-5411 Fax 81-3-5615-5410
E-mail honsha@nspg.co.jp
URL <http://www.nspg.co.jp>

▲ B5 Energy saving



Coating with "Miracool" reflects sunlight about 90%, which curb the rise of the temperature at building roof and well. In addition, it drastically reduces heat quantity of 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 making building's cooling load reduced. Not only for energy conservation of building itself, it can also be helpful for mitigating the heat island phenomenon, an extraordinary high temperature in the urban area as a whole, as it is able to control the absorption of solar energy. We can provide "Miracool way" for asphalt-paved road, other than the one for building.



Miracool

Eco-products

EP - 300

Building and Civil Engineering

Fabrication of finished plastic products

Non-Freon spray-on thermal insulating material 'Ceramilite-eco'

Obayashi Corporation, Technical research Institute
640, Shimokiyoto 4-chome, Kiyose-shi, Tokyo, Japan
Tel 81-424-95-0970 Fax 81-424-95-0908
E-mail
URL <http://www.obayashi.co.jp/>

▲ A1 Global warming
▲ A4 Waste
B5 Energy saving
B7 Use of recycled materials



In this construction method, We use spray-on thermal insulating material on-site. It does not use Freon-gas, Freon-gas substitute or VOCs which cause 'sickhouse'syndrome. It also contributes to environmental conservation by using recycled products from fractured styrene foam waste as an aggregate for adding adiabaticity. Moreover, because Ceramilite-eco and Ceramilite-ecoG does not cause explosive burning like Polyurethane foam does, it obtained high safety against fire. This method received a prize of Ministry of Land, Infrastructure and Transport Government on the 1st Eco-products award 2004.



Spraying on Ceramilite-Eco

Eco-products

EP - 301

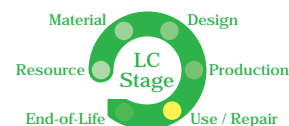
Building and Civil Engineering

Concrete products for roads

Pavement block "NOXER" for preventing air pollution by photo-catalysis

Mitsubishi Materials Corporation
19F WEST OFS 1-5-1, Ohtemachi, Chiyoda-ku, Tokyo,
100-8117 Japan
Tel 81-3-5252-5331 Fax 81-3-5252-5344
E-mail noxer@mmc.co.jp
URL
<http://www.mmc.co.jp/english/product/construct/index.html>

▲ A2 Air pollution
A3 Hazardous substances
▼ B6 Environmental purification



NOXER is a pavement block that has a function to decompose harmful substances by oxidation in the surface layer of concrete block. 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 ray in the sunlight. The formed active oxygen oxidizes the harmful substances, and decomposes them.



Chigasaki City

Eco-products

EP - 302

Building and Civil Engineering

Concrete products

Concrete Crab-Panel

Kajima Cooperation
3-7-1, Nishi-Sinjuku, Sinjuku-ku, Tokyo, Japan
Tel 81-3-5321-7322 Fax 81-3-5321-7328
E-mail sakurano@kajima.com
URL
http://www.kajima.co.jp/tech/env_planning/seitaikei/seitaikei03.html

▲ B6 Environmental purification



Crab-Panel is a concrete panel, which capable of creating an abundant of living space and also improving habitat condition for aquatic creatures.

Recovering food chain of coastal area: Conventional concrete revetment is unable to provide a sustainable habitat for living creatures (especially crabs which live near water), as a result decreasing of the coastal resources occurred. Crab-Panel is developed to overcome this situation.

Worth points

This panel is established in front of the existing revetment or retaining wall.

Coarse surface of the panel could allow algae grow densely on it.

Joint of the panel is a suitable part for crabs to hide and move around.

Holes are set on the panel, which were allowed the crabs burrow and hibernate during winter.

To reduce the light reflection, surface color of the panel is adjusted. Surface color could be adjusted to harmonize the surrounding.



Crabs on Concrete Crab-Panel

Eco-products

EP - 303

Building and Civil Engineering

Miscellaneous cement products

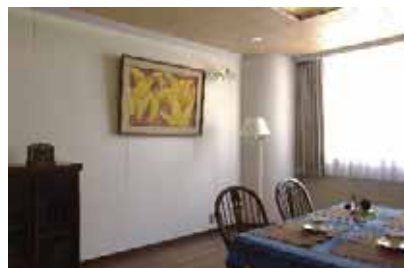
Building material "MOISS" having symbiosis with the environment.

Mitsubishi Materials Corporation
19F WEST OFS 1-5-1, Ohtemachi, Chiyoda-ku,
Tokyo, 100-8117 Japan
Tel 81-3-5252-5331 Fax 81-3-5252-5344
E-mail
URL <http://www.mmc.co.jp/english/product/construct/index.html>

- ▲ A5 Resource consumption
- B1 Recyclability
- B4 Higher quality
- ▼ B6 Environmental purification



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 proof-stress 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 silicic acid compound.



MOISS is used for the interior material

Eco-products

EP - 304

Building and Civil Engineering

Building brick

Recycled non-burned brick

Tokyo Electric Power Environmental Engineering CO. INC.
4-6-14, Shibaura, Minato-ku, Tokyo, 108-8537,
Japan
Tel 81-3-3452-4748 Fax 81-3-3452-4617
E-mail eigyoun-honbu@mail.tee-kk.co.jp
URL <http://www.tee-kk.co.jp>

- ▲ A1 Global warming
- A4 Waste
- B1 Recyclability
- B7 Use of recycled materials



"Earthen Bricks" are non-burned bricks using recycled materials from the by-products and waste products discharged from businesses and local autonomies. Recycled material accounts for over 80% of the total ingredients. Furthermore CO₂ emission is reduced by about 40% with this product, compared with conventional burned bricks thanks to a new technology called "non-burned caking technology", which enables densification and caking with air-drying. This product plays an important part in building a recycling-based society with zero emissions.



Earthen Bricks/SS,SC

Eco-products

EP - 305

Building and Civil Engineering

Structural clay products

SOIL CERAMICS made of recyclable materials

INAX Corporation

5-1, Koiehonmachi, Tokoname-shi, Aichi, Japan

Tel Fax

E-mail

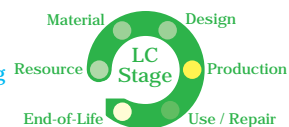
URL <http://www.inax.co.jp/>



A5 Resource consumption

B3 Resource saving

B5 Energy saving



These are blocks that are made from quarrying abolishment clay and others. These blocks are symbiosis materials which can be recycled and return to the soil after the use. Moreover, more than 50% energy-saving for cement and 80% for ceramics at production are realized because of high-pressure steam curing process with no burning. These blocks contribute to energy-saving and low environmental load.



SOIL CERAMICS, SOIL-300SB/12E etc

Eco-products

EP - 306

Building and Civil Engineering

Interior tile

ECOCARAT: interior material automatically controls humidity

INAX Corporation

5-1, Koiehonmachi, Tokoname-shi, Aichi, Japan

Tel Fax

E-mail

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



A5 Resource consumption

B4 Higher quality

B5 Energy saving



"ECOCARAT" automatically controls humidity of a room where it is used by absorbing moisture in the air when it gets humid and giving off moisture when it gets dry. It also has the function of absorbing VOC that would cause sick house syndrome, providing much better environment for our health. This is the first product approved as the construction material decreasing formaldehyde concentration in the domestic industry. In addition, we have reduced energy consumption and CO₂ emission with the low-temperature firing and recycled glass waste and other waste material.



ECOCARAT, ECO-275NET/RO1 etc

Eco-products

EP - 307

Building and Civil Engineering

Tile

SANDROCK: Made by porous ceramics

INAX Corporation

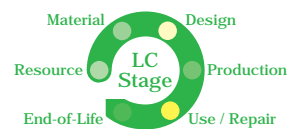
5-1, Koiehonmachi, Tokoname-shi, Aichi, Japan

Tel Fax

E-mail

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

- ▲ B2 Longevity
- B3 Resource saving
- B7 Use of recycled materials



Made by porous ceramics, high water permeability returns rain water to soil. Avoids underground drought, and lighten the input to the river. Gives soft walking feel and absorbs heat of road surface temperature. Using 92% of recycled materials.



SANDROCK permeability

Eco-products

EP - 308

Building and Civil Engineering

Steel materials

Waste-soil-free Steel Tube Pile

Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111 Japan

Tel 81-3-4416-6111 Fax 81-3-4416-6793

E-mail chiky-kan@sumitomometals.co.jp

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

- ▲ A4 Waste
- B1 Recyclability
- B4 Higher quality



Since it penetrates in rotary fashion and generates no surplus excavation soil at all, the Geo Wing Pile is an environmentally-friendly foundation pile. Since it is easily withdrawn in reverse, it may be deployed and redeployed at will. The leading end of the Geo Wing Pile is a closed-off cone and is provided with three wings on the steel tube near the tip whose diameter be freely defined within a range 1.5 to 1 2.0 times the diameter of the steel tube. Geo Wing Pile much faster than conventional rotary piles when aligning the center of the pile, and the three wings are designed to give improved penetration.



Geo Wing Pile

Eco-products

EP - 309

Building and Civil Engineering

Steel materials

Pollutant Groundwater Run-off-free Impermeable Pile

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

▲ A4 Waste
■ B4 Higher quality
▼



By welding the splice junction of the SM-J pile with our proprietary steel material, Sumitomo Metals has developed a lateral perfect impermeable method that may be utilized as a vertical wall preventing the runoff of pollutants into groundwater that is seen in offshore and onshore waste disposal facilities and soil pollution. When applied disposal in offshore land fills, double impermeability may be effected by using a box-shaped J pile, draining it out inside and welding the junction, after which it is not only simple to inspect and maintain the impermeability, but the box space may also be used to monitor water quality.



SM-J Pile

Eco-products

EP - 310

Building and Civil Engineering

Power tools

Cordless Impact Driver

Hitachi Koki Co., Ltd.
15-1, Konan 2-chome, Minato-ku, Tokyo, Japan
Tel 81-3-5783-0630 Fax 81-3-5783-0713
E-mail
URL <http://www.hitachi-koki.com/powertools/network/japan.html>

▲ A5 Resource consumption
■ B4 Higher quality
■ B5 Energy saving
▼



Ultra-compact body with the strongest tightening torque and speed of its class.

Hitachi procures a 30% improvement in tightening speed and a 13% reduction in power consumption thanks to a highly efficient impact mechanism (compared with the conventional model WH12DH).

Case less rare-earth magnet motor and replaceable carbon brushes reduce servicing frequency by 1/2 and servicing cost by 1/3.

One-touch detachable nickel-metal-hydride batteries are provided.



DB3DL MCK

Eco-products

EP - 311

Building and Civil Engineering

Elevators

Machine-Room-Less Elevator

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://www.mitsubishielectric.co.jp/>

- ▲ B3 Resource saving
- B5 Energy saving
- A3 Hazardous substances
- ▼ A2 Air pollution



This elevator saves spaces in the elevator shaft to allow for more flexibility in building design.

Material:

Uses plastic made primarily from corn in a portion of the control panel.

Energy:

Uses inverter for lighting to reduce electric power consumption by as much as 35%.

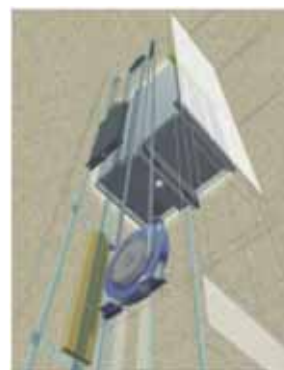
Regenerative electric power from the elevator reused to cut electric power consumption by about 20% when equipped with the optional "EL-Save".

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.

Formaldehyde density at or less than the prescribed level (0.0001g/m³).



AXIEZ series

Eco-products

EP - 312

Building and Civil Engineering

Showcases for refrigeration

An Environmentally-Conscious Showcase

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://www.mitsubishielectric.co.jp/>

- ▲ B5 Energy saving
- A5 Resource consumption
- A3 Hazardous substances
- ▼ A1 Global warming



This showcase for grocery stores simultaneously achieves both energy efficiency and stable temperature control.

Material:

The structure of the air passages has been simplified by optimizing the air curtain to reduce resource consumptions by 10%.

Energy:

Annual energy consumption by the refrigeration unit reduced by 28% by adopting inverter control, evaporation temperature control in line with showcase operating conditions, and a DC brushless motor that emits minimal heat.

Toxicity:

Uses R404A refrigerant, which has an ozone depletion potential of 0.



LiveMate Eco series

Eco-products

EP - 313

Building and Civil Engineering

Air conditioners

Heart Pump Water Heater for business use

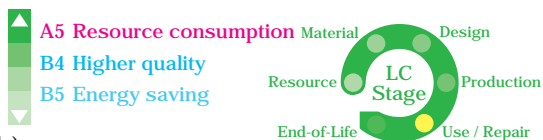
Hitachi Home & Life Solutions, Inc.

2-15-12, Nishi-Shinbashi, Minato-ku, Tokyo, Japan

Tel 0120-3121-11 Fax

E-mail

URL <http://www.kandenfan.Hitachi.co.jp> (Japanese only)



Enabling High power and efficient hot-water supply with PAM technology.

Enabling High power and saving energy with Hitachi unique PAM¹⁾-control technology.

Achieved the highest industry ratings with heating power of 23KW and COP²⁾ rating of 4.6.

Compact design integrating the heat pump equipment and small support tank enables space-saving.

1)PAM: Pulse Amplitude Modulation

2)COP: Coefficient of Performance



RHK-23SG

Eco-products

EP - 314

Building and Civil Engineering

Air conditioners

Eco-friendly multiple air conditioning system and replacing technology

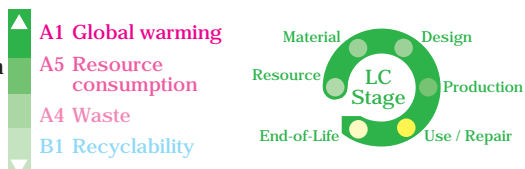
Mitsubishi Electric Corporation

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

Tel 81-3-3218-2238 Fax 81-3-3218-2465

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

URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>



"Replace Multi" is the air conditioning system which is specifically designed to enable the replacement of existing multi systems utilising existing suitable pipe work. It allows upgrading to the most efficient systems available from Mitsubishi Electric. It will clean the existing pipe work during commissioning, removing any deposits that would ordinarily mean that the disruption and time. And energy consumption is reduced by 34% when comparing to our product 10 years before.



REPLACE MULTI Y Series

Eco-products

EP - 315

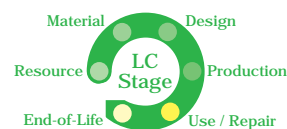
Building and Civil Engineering

Air conditioners

Eco-friendly multiple air conditioning system

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo,
100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL
<http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

- ▲ A1 Global warming
- B5 Energy saving
- A3 Hazardous substances
- ▼ A2 Air pollution



"City Multi" VRF R410A system, adopting advanced refrigeration & control technology, achieves high performance and ultimate design flexibility.

1) Adopting R410A highly efficient inverter compressor, COP (energy consumption efficiency) upgraded by about 15% comparing to the current energy saving type (R407C).

2) Temperature control and management are possible from system controller, with prohibiting some function (ex. temperature / change mode) of local remote controller. It contributes for efficient air conditioning operation such as preventing excessive cooling at summer time.



City Multi VRF R410A system

Eco-products

EP - 316

Building and Civil Engineering

Air conditioning and household equipment

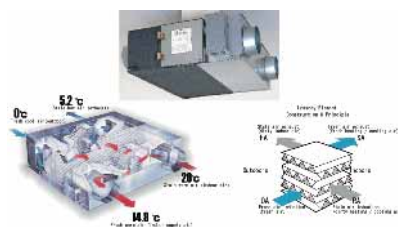
Energy-saving high efficiency Heat Exchange unit for ventilating

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL
<http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

- ▲ A2 Air pollution
- B5 Energy saving
- A1 Global warming



"Lossnay" is the name of Heat-Exchange technology. The secret to the unmatched comfort provided Lossnay core is the cross-flow, plate-fin structure off the heat-exchange unit. A diaphragm made of a specially processed paper fully fresh air is introduced to the indoor environment. The superior heat-transfer and moisture permeability of the special paper assure highly effective total heat exchange (temperature and humidity) when inducted and exhausted air supplies cross in the Lossnay core.



LGX-RX(4) series

Eco-products

EP - 317

Building and Civil Engineering

Photoelectric converter devices

Bifacial Photovoltaic Solar Module

Hitachi, Ltd Power System PV Business Project
1-18-13, Soto-Kanda, Chiyoda-ku, Tokyo, Japan
Tel Fax
E-mail hitachi-pv@pis-hitachi.co.jp
URL <http://www.pi.hitachi.co.jp/solazure/index.html>

▲ A1 Global warming
B4 Higher quality
B5 Energy saving
▼



New Photovoltaic Technology, High efficiency of electric power generation by both sides. Hitachi original B3 Cell¹⁾ is bifacial photovoltaic solar cell, which has same surface design on both sides. Bifacial system can generate electric power more than 1.3 times as mono facial system. Bifacial vertical system has not dependence of yearly-generated energy on any direction. Glass-glass type module can be natural lighting and high reliability, spread the use of structural component.

1) B3Cell: Bifacial Cell with Boron Diffused Back Surface Field



HB3M-48

Eco-products

EP -318

Building and Civil Engineering

Unit housing

Developing Environmentally Considerate Housing

Toyota Motor Corporation
1, Toyota-cho, Toyota-shi, Aichi, Japan
Tel 81-565-23-1341 Fax 81-565-23-5754
E-mail satoshi_aida@mail.toyota.co.jp
URL <http://www.toyota.co.jp>

▲ A1 Global warming
B5 Energy saving
▼



The SINCE Cada series launched in Japan in April 2004 is a form of environmentally considerate housing with standard specifications based on next-generation energy-saving standards.*The layout, which allows air from a courtyard to circulate via the staircase and blocks out the fierce heat of the afternoon sun in summer while drawing in the sun's warmth from the south in winter, is part of a design for coexistence with nature.

*Next-generation energy-saving standards: Hermetically sealed and well insulated housing able to reduce by 20% the amount of energy needed for heating and air conditioning as a means of reducing CO₂ emissions



SINCE Cada

Eco-products

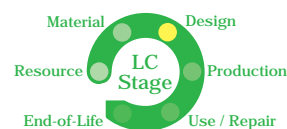
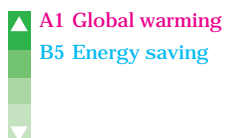
EP - 319

Building and Civil Engineering

Residential house

Zero-utility-cost Houses

Sekisui Chemical Co., Ltd.
2-3-17, Toranomom, Minato-ku, Tokyo, Japan
Tel Fax
E-mail kankyo@sekisui.jp
URL <http://www.sekisui.co.jp/>



Combination of the above mentioned technologies can realize zero utility cost. While utility cost/year at an ordinary residential house amounts to 226,000 yen, that at highly heat insulated house adopting highly effective hot water unit, all electrification and mounting the photovoltaic generation system of 5.5 kW capacity amounts to minus 1,000 yen.

Annual CO₂ emission as environmental value can be reduced to 580 kg from 3090 kg of an ordinary residential house.

Evaluating by life cycle cost, the initial costs increase by approximately 2.6 million yen in total in order to equip the house with these systems, but considering the increased costs to be depreciated by the reduction of the utility charges, they can be repaid by approximately 13 years, which may be able to be proposed to possible users as economical advantages.

This house is becoming an important housing model, leading to the expansion of renewable energy and to the reduction of CO₂ emissions in Japan.



Eco-products

EP - 320

Building and Civil Engineering

Reuse of Used Houses

Reuse of Used Houses: Reuse System House

Sekisui Chemical Co., Ltd.
2-3-17, Toranomom, Minato-ku, Tokyo, Japan
Tel Fax
E-mail kankyo@sekisui.jp
URL <http://www.sekisui.co.jp/>



In the Reuse System House, customers may partly trade in their used Sekisui Heim for a new Sekisui Heim or a Two-U Home. The used Sekisui Heim will be disassembled and returned to the plant, inspected, repaired as necessary and rebuilt into new modules. It is a very important system to complete the circle of our resource-recycling housing system. Steel structural components, lumber, plaster board and glass panes are reused resulting in a substantial reduction of waste, while the roofing, the installations and the interior fixtures and decorations will be renewed. 2 years have passed since the start of this system and we have pursued the following improvements:

+Increase of component reuse rate More than 85% by weight of the building body is now reusable, including the reuse of flooring underlay boards.



Eco-products

EP - 321

Building and Civil Engineering

Rainwater storage

Rainwater storage/Infiltration & re-use system

Sekisui Chemical Co., Ltd.
2-3-17, Toranomom, Minato-ku, Tokyo, Japan
Tel Fax
E-mail kankyo@sekisui.jp
URL <http://www.sekisui.co.jp/>

- ▲ A1 Global warming
- B1 Recyclability
- B2 Longevity
- ▼ B4 Higher quality



To solve this environmental problem which is floods or a shortage of water or global warming, our system (CrossWave, RainStation) is useful. Our system stored rainwater underground is able to control flow volume into sewers and rivers and to reuse the rainwater.

- Saving water (Global Warming, Energy Saving) To reuse the stored rainwater vastly decrease the consumption of reticulated fresh water. For example, if a 1,000m³ rainwater storage tank is set up in a shopping center used by 5,000 people a day, and collected rainwater is used to flush the toilets, the amount of reticulated water used decrease its 45%. And energy saving by load reduction of water purification plant is enabled. In addition, it can be lower temperature of the ground by sprinkling.
- Prevent a flood Our system stored rainwater underground to control flow the rainwater out.
- Excellent durability (Longevity, Recyclability) The material has an excellent durability, and is thus suitable for long-term use. The materials are recyclable. In addition, a RainStation automatically collects contaminants such as sand through its water-flow control structure.



above: "Cross Wave" below: "Rain Station"

Eco-products

EP - 322

Building and Civil Engineering

Insulating panel for residential houses

Energy/resource-saving oriented insulating panel

TOSTEM CORPORATION
1-1, Ojima 2-chome, Koto-ku, Tokyo, Japan
Tel 81-3-3638-8187 Fax 81-3-3638-8254
E-mail
URL <http://www.tostem.co.jp>

- ▲ B2 Longevity
- B4 Higher quality
- A1 Global warming
- ▼ B5 Energy saving



The insulating panel not only contributes to energy-saving through load reduction of air-conditioners at residential houses, but also promotes high durability of the houses through its earthquake-proof panel structure. Its insulation materials deploy "non-CFC forming polyurethane", which uses carbonic acid gas with ozone layer depletion coefficient 0 and global warming coefficient 1. In consideration of measures against sick house, the materials also use OSB(oriental stand board) with F four stars(F [four stars]) grade which emits least formaldehyde. The product is selected as one of the products with our own "Type₂ Eco-Label", based on our internal standard.



Eco-products

EP - 323

Building and Civil Engineering

Continuous subterranean diaphragm wall members

Continuous subterranean diaphragm wall members for urban areas

Nippon Steel Corporation
2-6-3, Otemachi, Chiyoda-ku, Tokyo, Japan
Tel 81-3-3275-5144 Fax 81-3-3275-5979
E-mail kankyo@hq.nsc.co.jp
URL <http://www0.nsc.co.jp/kankyou/index.html>

- ▲ A4 Waste
- ▲ A5 Resource consumption
- ▲ B5 Energy saving
- ▼ B6 Environmental purification



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.



Eco-products

EP - 324

Building and Civil Engineering

Wet pavement system

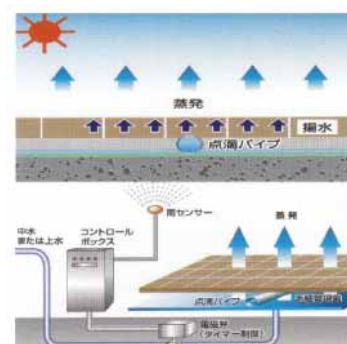
Sidewalk 'Wet' pavement system to counter heat island phenomenon

OBAYASHI CORPORATION (Technical Research Institute)
640, Shimokiyoto 4-chome, Kiyose-shi, Tokyo, Japan
Tel 81-424-95-1040 Fax 81-424-95-1260
E-mail komiya.hidetaka@obayashi.co.jp
URL <http://www.obayashi.co.jp/>

- ▲ A1 Global warming
- ▲ B5 Energy saving



The "wet pavement" system (water sprinkling road system), can reduce summer daytime temperature of road surfaces by approximately 25 degree Celsius lower than asphalt pavement. The wet pavement surface reduces sunlight reflection, relieving both heat and glare. A dripping water supply pipe provides a continuous cooling effect even if fine weather continues for several days. Water quantity required is 5-6 m/m for a typical fine day in summer.



Wet Pavement System (Uchimizu-Pave)

Eco-products

EP - 325

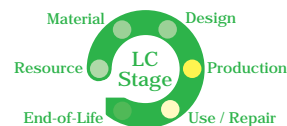
Building and Civil Engineering

Growth media

ZUPERMIX by ZinCo

ZinCo Singapore Pte Ltd
7500A Beach Road, Unit 16-315, The Plaza,
199591 Singapore
Tel +65 6396 7220 Fax +65 6396 8592
E-mail admin@zinco.com.sg
URL

- ▲ A1 Global warming
- B5 Energy saving
- B6 Environmental purification
- ▼ B7 Use of recycled materials



Since its founding in 1957, Germany, ZinCo is the world's leader in green roof landscape technology; its brand name is synonymous with quality, high performance and environmentally friendly roof greenery and landscape. In its quest to reduce urban heat island effect (which also contributes to global warming), ZinCo consistently brings to the market place products that embraces nature. At the heart of roof greenery, is the growth media, or substrate. Through intensive R&D efforts, ZinCo successfully developed Zupermix a growth media whose main ingredient is recycled clay bricks and roof tiles, or briefly, construction wastes. Blending it with a small dose of volcanic minerals that are abundantly found in SE Asia, an excellent, highly inorganic, granular and lightweight growth media that is suitable for the tropical vegetation is formulated. It provides sufficient aeration, water retention, drainage, nutrients and cosy environment for a thriving landscape. Aesthetically, Zupermix provides a reddish-brown rustic tone to the landscape architecture.



ZinCo green roof using Zupermix as growth media and Growth Media, Zupermix

Eco-products

EP - 326

Building and Civil Engineering

Hot Water System

'ROTEX' Smart Hot Water System

Aumada Pte Ltd
118 Lorong 23 Geylang, #06-02 SCN Industrial Building, 388402 Singapore
Tel +65 6287 3976 Fax +65 6846 4774
E-mail derrick@aumada.com.sg
URL

- ▲ B3 Resource saving
- B4 Higher quality
- B5 Energy saving
- B6 Environmental purification



The calorifier itself is entirely made of plastic. The inner and outer walls are of impact and shock resistant polypropylene (PP). The space between is filled with high-insulating foam. Thus achieving very good heat insulation values and low surface losses. The calorifier is uniquely filled with storage water when putting into operation. This water only serves for heat storage. The stored water can be heated in various ways:

- By waste heat from air conditioners, compressors, generators or others
- By the power of the sun, directly with solar collector panels
- Natural gas heaters: flow through or condensing boilers like A1 and GCU
- By means of heat pumps: air-to-water, water-to-water
- LPG heaters: flow through or condensing boilers like A1 and GCU
- Electric immersion heater up to 36 kW

The hot water (domestic water) is heated up in a PE-X or Stainless Steel INOX pipe heat exchanger, which is totally surrounded by storage water. The hot water is not stored in a large-capacity tank, like with most other calorifiers, but is always led through a pipe. In large-capacity tanks, there is the danger of bacteria's to grow in slow-flowing areas.



Rotex Sanicube

Eco-products

EP - 327

Building and Civil Engineering

Paint

INSULADD-Insulating Additives and Paint

Winzone International Pte Ltd

Maxwell House, 20 Maxwell Road #03-11, 069113
Singapore

Tel +65 6720 0668 Fax +65 6720 0676

E-mail info@winzone.com.sg

URL www.winzone.com.sg

▲ A1 Global warming

A5 Resource consumption

B3 Resource saving

B5 Energy saving



INSULADD is developed in 1996 by our Principal, Tech Traders Inc, with NASA through an exchange program. It is powdered insulating paint additive formulated for use with interior and exterior paints. Designed to mix with any ordinary or latex house paint, industrial coating, roof coating, epoxy, urethane, or high temperature paint to achieve remarkable energy efficiency through superior insulation! Applied to save the buildings owners as much as 20% on their cooling or heating costs! The adhesion, useful service life, properties, coverage or color of your paint will NOT be affected by INSULADD.

Bestzone Marketing and Enterprise Pte Ltd is the sole distributor of INSULADD in the Southeast Asia region and is proudly marketed by Winzone International Pte Ltd.



Eco-products

EP - 328

Machines and Equipments

Chemically treated environment protecting equipment

MU AERATOR® : an innovative diffuser for wastewater treatment

MU COMPANY LTD.

18-8, Ueno-Koen, Taito-ku, Tokyo, Japan

Tel 81-3-3828-7090 Fax 81-3-3823-2890

E-mail muc@mu-company.com

URL www.mu-company.com/

▲ A3 Hazardous substances



MU AERATOR® an unique diffuser for treatment of industrial wastewater and sewage, is regarded as an ideal solution to many bottlenecks the conventional diffusers inherited. Existing diffusers used for the purpose nowadays are generally of less efficiency in oxygen dissolving rate, consequently require many aeration tanks of huge sizes. Electricity consumption is substantial for mixing and agitation of the water. In case of tubular diffusers or disc/plate diffusers, they are suffered from growth of sludge or bacteria on the surface of membrane which causes clogging of the system. Cost to remove these adhesive materials is expensive. MU AERATOR® is quite different. With efficient air-liquid contact, this diffuser carries out aeration and chemical reaction simultaneously. (1) Highly efficient MU MIXER® installed to ensure high air-liquid contact. (2) No moving part anywhere in the device. (3) Simple structure, no clogging thus maintenance free. (4) No pile of sludge on the bottom of tank because of high air lift effect. (5) Approx. 20% of electricity saved. (6) Piping works can be done on the land, no hindrance to production lines.



MU AERATOR® :
a diffuser in operation

Eco-products

EP - 329

Machines and Equipments

Power Boiler

Babcock-Hitachi K.K.
4-14-1, sotokannda, chiyoda-ku, tokyo, Japan
Tel 81-3-5209-7000 Fax 81-3-5209-7761
E-mail
URL <http://www.bhk.co.jp/english/>

Water boilers



Description of Products

The power boiler is specifically designed for use in thermal power plants. It is a supercritical, once through, sliding pressure unit, fueled by pulverized coal.

Development Concept

The original 1997 concept has been improved in the current design by enhancing the steam conditions 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 rationalized to significantly reduce mass and allow optimization of the physical characteristics of many components.



Power Boiler

Eco-products

EP - 330

Machines and Equipments

95kW electricity co-generation package for energy/cost save & green environment

EBARA CORPORATION
11-1 Hneda Asahi-cho, Ohta-ku. Tokyo 144-8510 Japan
Tel 81-3-3743-6111 Fax 81-3-3743-6589
E-mail webmaster@ebara.com
URL www.ebara.co.jp

Turbines



Micro Gas Turbine, TA100 produces 95kW electricity & 155kW heat power in case of hot water co-generation, with total efficiency over 70%. It brings 15% energy save and 26% CO₂ cut compared with those of usual equipment. Thermal power of TA100 can be changed to hot water/steam with a boiler or to chilled water with a chiller, or can be used directly for drying process. TA100 is applicable for natural gas or low BTU gas like digestion gas.



Ebara Micro Gas Turbine TA100 Co-generation Package

Eco-products

EP - 331

Machines and Equipments

Crushers

Self-run-type wood crusher BR80T-2

Komatsu Ltd.

2-3-6 Akasaka, Minato-ku, Tokyo, 107-8414, Japan

Tel 81-3-5561-2646 Fax 81-3-3582-8332

E-mail kankyo@komatsu.co.jp

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

- ▲ A4 Waste
- A5 Resource consumption
- B3 Resource saving
- ▼ B7 Use of recycled materials



BR200T-2 is a full model-changed version of the BR200T-1 that made it possible to process a large amount of felling materials and demolition-wood-materials. As for BR200T-2, its hydraulic efficiency improved with a newly adopted hydraulic system in which twin-hydraulic mortars had been used for the hammer mill. Crush capacity has also been large owing to the enlargement of the inside diameter of tab. And, the material charge area enlarged because discharge direction of the discharge conveyor was altered. The capacity for the layout of the workspace becomes large thereby. In addition, BP200T-2 machine carries an hydraulic reversing-fan that was mounted in BR120T to prevent the blocking that happens at the radiator-grille and its surroundings.



Mobile Tub Grinders BR200T-2

Eco-products

EP - 332

Machines and Equipments

Crushers

Self-run-type wood crusher, BR80T-1

Komatsu Ltd.

2-3-6 Akasaka, Minato-ku, Tokyo, 107-8414, Japan

Tel 81-3-5561-2646 Fax 81-3-3582-8332

E-mail kankyo@komatsu.co.jp

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

- ▲ A4 Waste
- A5 Resource consumption
- B3 Resource saving
- ▼ B7 Use of recycled materials



Komatsu put on sale the product BR80T-1 that is small construction equipment for the small work-spot's work such as pruning of the park trees. BR80T-1 adopted the horizontal feeder which is advantageous for the crush of long-size woods. The high-efficiency crush is realized by the aid of the hydraulic drive cutter and the conveyor that controls the feed rate on the basis of the amount of waste wood. Weight and dimensions are 6 ton in weight, 6270mm in length, 1960mm in width, and 2395mm in height. The body is compact, so the crush work is possible even in a narrow work-spot.



Mobile Tub Grinders BR80T-1

Eco-products

EP - 333

Building and Civil EnginMachines
and Equipments

Equipment for construction
and mining

Advanced technology of diesel engine for reducing environmental load, ecot-3

Komatsu Ltd.

2-3-6 Akasaka, Minato-ku, Tokyo, 107-8414, Japan

Tel 81-3-5561-2646 Fax 81-3-3582-8332

E-mail kankyo@komatsu.co.jp

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

- ▲ A2 Air pollution
- ▲ A1 Global warming
- ▼ B5 Energy saving



Since 2006, Tier 3 emission standards are enforced in Japan, US and Europe. Its largest focus is the reduction of NO_x (nitrogen oxide). In order to reduce NO_x, it's necessary to lower the combustion temperature. However, the combustion at lower temperatures promotes the formation of particulate matter, and it makes fuel economy worse.

In the development of diesel engines, the simultaneous reduction of NO_x and particulate matter is most desired. Along with it, what is asked for is to improve the fuel consumption, which realizes the reduction of running cost of user's machine. Komatsu developed main components of the body such as engine and hydraulic equipment in own factories. All of the electronic control technology is also in the same situation. By making the most of its strength in production, and by combining it to the latest technology, Komatsu succeeded in the development of new engine technology. This new engine technology is going to mount on our new goods hereafter. Here, "ecot 3" is short for "ecology & economy-technology". In Komatsu, we call our advanced technology for diesel engine "ecot 3".



Tier 3-compliant engine which incorporates Komatsu's advanced engine technology

Eco-products

EP - 334

Machines and Equipments

Foundry equipment

Highly Viscous Liquid Processing Technology

Hitachi., Ltd.

1-18-13, Soto-Kanda, Chiyoda-ku, Tokyo, Japan

Tel Fax

E-mail

URL <http://www.pi.hitachi.co.jp/sanpu/index.html>

- ▲ B7 Use of recycled materials
- ▲ A1 Global warming
- ▼ B5 Energy saving



Biodegradable plastics production process based on development, demonstration and scale up technology for various engineering plastic production process. The early realization of biodegradable plastics production process based on various experiences and reliable demonstration pilot plant. Quick utilization and commercialization of biodegradable plastics products based on reliable scale up technology. Realization of suitable production process based on reliable highly viscous liquid processing technology.



Highly Viscous Liquid Processing Technology

Eco-products

EP - 335

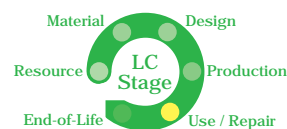
Machines and Equipments

Auxiliary equipment

Fully Electric Injection Molding Machine

Toyo Machinery & Metal Co., Ltd.
523-1, Fukusato, Futamicho, Akashi-shi, Hyogo, Japan
Tel 81-78-943-7474 Fax 81-78-943-7222
E-mail se-g@toyo-mm.co.jp
URL <http://www.toyo-mm.co.jp/>

▲ A5 Resource consumption
B4 Higher quality
B5 Energy saving



Minimum Energy and Utility Consumption.
The Si-III series consumes approximately one-third of the electricity which ordinary hydraulic machines necessitate.
When it comes to cooling water, the water consumption will be one-tenth that required by hydraulic machines.
In conclusion, the running cost is tremendously low, saving you a lot of utilities.



Si-680 IIIW

Eco-products

EP - 336

Machines and Equipments

Auxiliary equipment

Vertical and Fully Electric Disc Molding Machine

Toyo Machinery & Metal Co., Ltd.
523-1, Fukusato, Futamicho, Akashi-shi, Hyogo, Japan
Tel 81-78-9437474 Fax 81-78-9437222
E-mail se-g@toyo-mm.co.jp
URL <http://www.toyo-mm.co.jp/>

▲ A5 Resource consumption
B4 Higher quality
B5 Energy saving



Minimum Energy and Utility Consumption.
Space efficiency, work efficiency, and time efficiency. Efficiency improvement is requested in all respects as for the molding machine now.
The ET series is a new and powerful rotary molding machine equipped with an advanced function in a compact body only of type.



ET-80VR2

Eco-products

EP - 337

Machines and Equipments

Vacuum pumps

EI-D Series energy-saving type power supply unit

Shimadzu Corporation

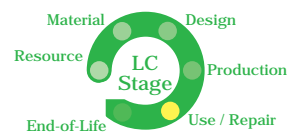
1, Nishinokyo-kuwabara-cho, Nakagyo-ku, Kyoto-shi,
Kyoto, Japan

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

E-mail kksitu@group.shimadzu.co.jp

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

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▼ B4 Higher quality
- ▼ B5 Energy saving



Turbo-molecular pump is vacuum pump which make up clean ultra-high vacuum by carrying out the molecular -level exhaust by means of high-speed rotation of turbine blade. The new-model power supply unit (EI-D Series) achieved its weight reduction with the help of a new control circuit which comprises DSP(Digital Signal Processor) and HIC(Hybrid IC) and of the high-density packaging technology. In comparison with our previous-model product, the volume and the weight reduced by 50%, respectively. The maximum power consumption also reduced by 30% by installing the new-model power supply unit.



EI-D Series pump power supply

Eco-products

EP - 338

Machines and Equipments

Pumps and pumping equipment

Water-cooled type pump controller makes energy-saving for existing pumps

EBARA CORPORATION

11-1 Haneda Asahi-cho, Ohta-ku,Tokyo 144-8510
Japan

Tel 81-3-3743-6111 Fax 81-3-3743-6589

E-mail webmaster@ebara.com

URL www.ebara.co.jp

- ▲ A5 Resource consumption
- ▼ B4 Higher quality
- ▼ B5 Energy saving



1. Energy-saving running "Hzfree"controller equips speed dial adjustable required pump speed, which makes energy-saving 35% possible.
2. Since the pumping liquid functions as water-cooling, maintenance of cooling fan or similar is not required.



Ebara "Hzfree" Controller model EECF

Eco-products

EP - 339

Machines and Equipments

Pumps and pumping equipment

Inverter control compressor

Hitachi Industrial Equipment Systems., Ltd.
3, Kanda-Nehoricho, Chiyoda-ku, Tokyo, Japan
Tel 81-3-4345-6045 Fax 81-3-4345-6910
E-mail
URL <http://www.hitachi-ies.co.jp/products/cmp/middle/oilfree/dspv.htm>

▲ A5 Resource consumption
B4 Higher quality
B5 Energy saving



Power reduction of 15%.
Because it is a pressure constancy control, the set pressure can be set low compared with loading/unloading control machine.



Inverter control compressor

Eco-products

EP - 340

Machines and Equipments

Air compressors

Air Compressor (Package Oilfree Bebi-con Dryer built in Model)

Hitachi, Ltd.
1-18-13, sotokanda, chiyoda-ku, tokyo, Japan
Tel 81-3-3258-1111 Fax
E-mail
URL <http://www.hitachi.co.jp/Div/apd/en/index.html>

▲ A1 Global warming
B4 Higher quality



Description of Products
Equipment that intakes air and supplies oil-free dry compressed air.

Development Concept

1. Increases air capacity through optimal design.
2. Reduces noise through partial rigidity.
3. Achieves the refrigerant whose modulus of rupture is 0 in the cool dryer.



POD-7.5MA

Eco-products

EP - 341

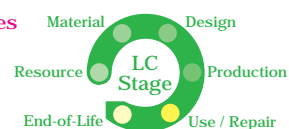
Machines and Equipments

Filters

Compact water treatment system using combination OZONE & MEMBRANE

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo,
100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

- ▲ A3 Hazardous substances
- A4 Waste
- B6 Environmental purification
- ▼ B3 Resource saving



Compact water purification equipment, using the combination of ozone treatment and membrane filtration, enables to supply high quality water.

Quality : Strong disinfection power of ozone (pathogenic protozoa such as Cryptosporidium), deodorization, decolorization and COD reduction.

Compact : All functions of a water treatment plant are installed on a single base, which can be transported by a cargo truck.

Eco-friendly : Exhaust ozone is treated into oxygen



Packaged Ozone using water filter

Eco-products

EP - 342

Machines and Equipments

Chemically treated environment protecting equipment

High Sensitive Oil Odor Sensor

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL
<http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

- ▲ A3 Hazardous substances
- B6 Environmental purification
- A4 Waste
- ▼ B1 Recyclability



The introduction of a quartz resonator system has made it possible for the system to sense oil via odor at a degree that is nearly undetectable by humans, being able to do so in only 15 minutes.



High Sensitive Oil Odor Sensor

Eco-products

EP - 343

Machines and Equipments

Catalytic PFC Resolver

Hitachi, Ltd.

3-1-1, saiwai-cho, hitachi-city, ibaraki-ken Japan

Tel 81-294-21-1111 Fax

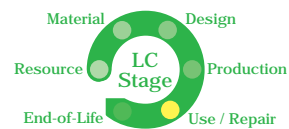
E-mail

URL <http://www.pi.hitachi.co.jp/rd-jpn/field/industrialsys/syokubai/>

Chemically treated environment protecting equipment

▲ A1 Global warming

▲ A2 Air pollution



This resolver has a capability of resolving 99% or more of greenhouse gas (PFC gas) from semiconductor factories through the proprietary catalyst technology. PFC (Perfluoro Compound): Compound whose warming factor is several thousands times larger than carbon oxide (CO₂). Development Concept Recalcitrant greenhouse gas (PFC gas) is resolved efficiently at low temperature to prevent global warming.



CD200

Eco-products

EP - 344

Machines and Equipments

Gas Meter

Hitachi, Ltd

1-18-13, sotokanda, chiyoda-ku, tokyo Japan

Tel 81-3-3258-1111 Fax

E-mail

URL <http://www.hitachi.co.jp/Div/apd/en/index.html>

Chemical machinery and its equipment

▲ A5 Resource consumption

B3 Resource saving

B5 Energy saving



Description of Products

Gas meter for gas stations.

Development Concept

Lightening Energy saving



AB26LA-T

Eco-products

EP - 345

Machines and Equipments

Chemical machinery and its equipment

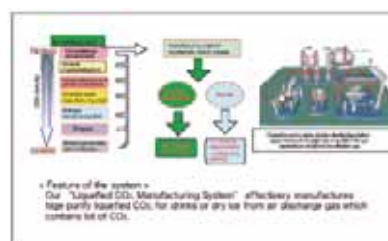
Liquefied CO₂ Manufacturing System

Hitachi Industries co., Ltd
9-7, Ikenohata 2-chome, Taito-ku, Tokyo, Japan
Tel 81-3-5814-5611 Fax 81-3-5814-5627
E-mail
URL <http://www.hitachi-hic.com>

▲ A2 Air pollution
B7 Use of recycled materials



Carbon dioxide for the beverage and the dry ice are manufactured from CO₂ discharged into atmosphere. Atmospheric discharges CO₂ of the ammonia manufacturing plant exhaust gas and the beer brewery fermentation gas, etc. are collected and they are recycled. High purity (99.99vol% or more) liquefaction carbon dioxide for the beverage is manufactured by using the preprocessing and the refinement technology. The running cost (electricity, cooling water, compression air, and steam) has been improved by 19% compared with its own the past.



Future of the system

Eco-products

EP - 346

Machines and Equipments

Industrial machinery and equipment

ECO-SYUGUN-1

Meiwa Kosakusho Co., Ltd.
4123, Senda-cho, Fukuyama-shi, Hiroshima, Japan
Tel 81-84-955-2122 Fax 81-84-955-3597
E-mail meiwa@kk-miw.com
URL <http://www.kk-miw.com>

▲ B1 Recyclability



ECO-SYUGUN-1 comes to crush between the gear and the gear like the dried cuttlefish squid when he or she turns on a used PET bottle from the drinking mouth. It is cut out to have gone out and cuts out the ring and the label with the cutter.

When the machine is characterized, it reduces, the transportation cost is decreased greatly, and easily separating and the label becomes possible. It becomes a former radical that makes pet flakes of the high quality.



ECSG-1

Eco-products

EP - 347

Machines and Equipments

General industrial machinery and equipment

High-Efficient absorption chiller with two-stage absorption and evaporation

EBARA CORPORATION

11-1 Haneda Asahi-cho, Ohta-ku.

Tokyo 144-8510 Japan

Tel 81-3-3743-6111 Fax 81-3-3743-6589

E-mail webmaster@ebara.com

URL www.ebara.co.jp

- ▲ A1 Global warming
- B4 Higher quality
- B6 Environmental purification



Ebara's two-stage absorption and evaporation cycle type dual absorption chiller "RFW model" is developed in line with the market demand for high efficiency chillers and received the Japan Machinery Federation's (JMF) fiscal 2005 award for superior energy-saving machinery.

The RFW Series features the world's highest-level steam consumption rate of 3.5kg/h per USRT. Steam consumption decreases more than 20% with comparing to conventional chiller. Standard specification corresponding large temperature difference decreases water flow and also power consumption of water pump more than 30%.

The refrigerating capacity is 1864kW{530USRT} ~ 5274kW{1500USRT} per unit and system up to 10549kW{3000USRT} could be configured by installing 2 RFW units side-by-side.



Ebara Steam Absorption Chiller RFW model

Eco-products

EP - 348

Machines and Equipments

Miscellaneous general industrial machinery and equipment

Bio Composting Machine

ETAM Holdings Pte Ltd

92 Kaki Bukit Industrial Terrace, 416171 Singapore

Tel +65 6744 1123 Fax +65 6744 1055

E-mail

URL

- ▲ A4 Waste
- B1 Recyclability
- B6 Environmental purification
- B7 Use of recycled materials



EP RANGE OF MACHINES

Description :

- Provides an alternative to existing food & organic waste disposal system by composting cycle of 3-5hours
- OZONE System which treat the exhaust air before releasing to the atmosphere
- Run on 3 phase 15Amp electrical supply, fully stainless steel constructor, equip with Grinder, Pulper, Mixer & Ozone Generator
- Design for industrial use - huge capacity treatment of organic food waste by means of Bio Organism (on Bio Material)

Bio Material :

Is a mixture of Rice husk, Wood chip, Saw dust & Micro organism. Its medium is inoculated in our laboratory - Make in Singapore

3R Effects :

RUDUCE - Collection cycle to Incineration, Landfill / Transportation

REUSE - As Fertilizer

RECYCLE - Food Waste into Rich Compost

Business Advantages :

- Eliminates Manpower
- Reduce Transportation Cost
- Pollution from transportation
- Zero Landfill
- Incineration cost & on the spot treatment of organic food waste
- Up to 800kg - 1000kg daily composting



EP - 100 & RS-150
(Patent File no: 200603819-4)

Eco-products

EP - 349

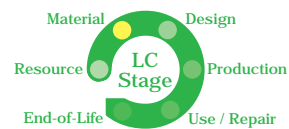
Machines and Equipments

Industrial machinery and equipment

pipi-tarou

Meiwa Kosakusho Co., Ltd.
4123, Senda-cho, Fukuyama-shi, Hiroshima, Japan
Tel 81-84-955-2122 Fax 81-84-955-3597
E-mail meiwa@kk-miw.com
URL <http://www.kk-miw.com>

▲ B1 Recyclability



Pipi Taro enters the nylon bag minuting determining that a used pp band is put in the turning on entrance with the cutter. Because the PP band that is bulky is minuting determined when the machine is characterized, it becomes easy to handle, and the transportation cost is decreased sharply. The PP band that minute determines it is recycled and revives again as PP band.



Eco-products

EP - 350

Machines and Equipments

Showcases for refrigeration

Open refrigerated Display with Inverter

Toshiba Carrier Corporation
12-32 Konan2-chome, Minato-ku, Tokyo, 108-0075
Japan
Tel 81-3-5781-7878 Fax 81-3-5781-7852
E-mail
URL <http://toshiba-carrier.co.jp/>

▲ A5 Resource consumption
B5 Energy saving



The open refrigerated display, is used for selling the beverages in the supermarket, was adapted the high efficiency DC twin rotary compressor and the inverter control system. The drain heater, that is for evaporating the drain water from evaporator, heated the all drain water in the previous model. In this model, the drain water will be evaporated by the exhausted air once, after that over-flowed water will be evaporated by the drain heater. So we decreased the power consumption 64% (Cold only model) , 43%(Hot & Cold model) compare than the last model. On the other hand, the HFC refrigerant R-410A (ODP is zero refrigerant) is used in this model.



SH-321DJS

Eco-products

EP - 351

Machines and Equipments

Large capacity scroll Compressor

Hitachi Appliances, Inc.

1-16-1, Kaigan, Minato-ku, Tokyo, Japan

Tel 81-543-35-4265 Fax 81-543-35-4287

E-mail ecology@cm.shimizu.hitachiacs.co.jp

URL

A Next Generation High COP¹⁾ Compressor Using R410A²⁾. Improved coefficient of performance (COP) by 11% (CO₂ emission reduced by 11% when the unit is installed)

Adopted a vector control inverter

Adopted a new shape asymmetrical lap with the original oil circulation system

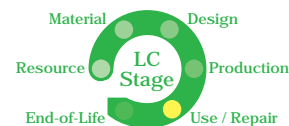
High reliability due to a high precision bearing system

1) COP: coefficient of performance

2) R410A: a substitute refrigerant that does not contain chlorine and does not destroy the Ozone layer

Refrigerators and air conditioning apparatus

- ▲ A3 Hazardous substances
- ▲ A5 Resource consumption
- ▼ B5 Energy saving



Eco-products

EP - 352

Machines and Equipments

Highly effective motor

Hitachi Industrial Equipment Systems Co., Ltd.

3, Kanda-Nehoricho, Chiyoda-ku, Tokyo, Japan

Tel 81-3-4345-6045 Fax 81-3-4345-6910

E-mail

URL <http://www.hitachi-ies.co.jp/index.htm>

(Japanese)

Three-phase induction motors

- ▲ A5 Resource consumption
- ▲ B4 Higher quality
- ▲ B5 Energy saving



New highly effective motor that contributes to conservation of energy in various machines.

The optimization of the core shape that is the heart of the motor and making the material high-level are advanced to a past, highly effective motor further, and the loss is decreased about 20-30% (compared with our standard motor). The stator coil temperature has been decreased at about 10-20°C by the effect of a high cooling of a reasonable design and the aluminum alloy frame of Electricity Division.



TFO-K

Eco-products

EP - 353

Machines and Equipments

Miniature generators

Highly effective mini-Hydroelectric Generator

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.htm>



Until recently, large-scale dams were required for hydroelectricity projects. However, Mitsubishi Electric has developed and is now manufacturing a compact hydroelectric power generation system that operates effectively with a small water flow and requires a height difference of only several meters. Water flows previously not thought applicable for hydropower production such as small rivers, industrial-use water, water pipelines and even sewage lines, can now be utilized to produce electricity. One hydropower plant with an electricity output of 100kW can result in a CO₂ emissions reduction of 626t per year.



Mini-Hydroelectric Generator

Eco-products

EP - 354

Machines and Equipments

Standard transformers

High-Efficiency Oil-Filled transformer for industrial use

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>



High-efficiency oil-filled transformer EX series, (which conforms to energy saving standard of 2006) contributes to energy saving, reducing 60% overall loss by using original reduced-loss design technologies. Since the reduced-loss allows cutback of radiation fins and realizes a major downsizing of the product, it requires 20% less installation space than standard products. Moreover, its iron cores, coils, and structural parts are made from recyclable materials to ensure effective use of resources. (Recycle ratio is 93%)



EX series

Eco-products

EP - 355

Machines and Equipments

Standard transformers

High-Efficiency Oil-Filled transformer for industrial use

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>



1. "High-efficiency oil-filled transformer TX series" conforms to the Energy saving standard of Top-Runner method.
2. Its iron cores, coils, and structural parts are made from highly recyclable materials.
3. Achieved 93% of Recycle ratio, metal parts and mineral oil are recycled.



TX series

Eco-products

EP - 356

Machines and Equipments

Distribution Transformer

6kV transformer "Top-Runner-Series" that reduce the operating loss by approx. 40%

TOSHIBA CORPORATION
Social Infrastructure Systems Company
1-1, Shibaura 1-Chome, Minato-Ku, Tokyo 105-8001 Japan
Tel 81-3-3457-4320 Fax
E-mail 81-3-5444-9278
URL



They are "Top-Runner-Series" distribution transformers which capacity are 10-2000kVA, primary voltage are 6.6kV and secondary voltage are below 440V. There are two types of transformers, one is oil-immersed type used in general and the other is cast-resin-type used for less flammable feature.

Adopting high performance core material and low loss core construction can reduce no-load loss. In addition, adopting copper conductor and optimizing coil insulation system can reduce load loss. "Top-Runner-Series" transformers reduce the operating loss by approximately 40% without increasing the size and also reduce the sound pressure level by 5 to 8 dB(A).



6.6kV/210V-300kVA Cast Resin Transformer and 6.6kV/210V-300kVA Oil Immersed Transformer

Eco-products

EP - 357

Machines and Equipments

Monitor and control equipment

Finger Vein Authentication systems

Hitachi, Ltd.

6-23-15, Minamiooi, Shinagawa-ku, Tokyo,

140-8570 Japan

Tel Fax

E-mail

URL <http://www.hitachi.co.jp/Prod/comp/fingervein/>



B4 Higher quality

B5 Energy saving



In the information age, protection of personal information and corporate assets is key to building a safe and secure society. Among prevailing security methods, biometrics promises to be the most effective solution of the future. At Hitachi, we have successfully developed a high-precision, user-friendly biometrics technology that uses the vein patterns of a finger to authenticate an individual's identity. Our cutting-edge finger vein authentication solution is designed for a wide range of applications, including access control for ATMs, PCs, airports, automobiles, and home or office buildings. In the various aspects scenes of your daily life, your finger will be the key to your peace of mind.



Finger Vein Authentication systems

Eco-products

EP - 358

Machines and Equipments

Switchgear

7.2kV gas insulation switchgear without generation of hazardous substances.

Toshiba Corporation Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-ku Tokyo 105-8001, Japan

Tel 81-3-3457-4320 Fax 81-3-5444-9278

E-mail

URL



A1 Global warming

A3 Hazardous substances

B3 Resource saving



This product is an environment-conscious switchgear, which realized a 45% reduction of the volume, a 30% reduction of the weight and a 20% reduction of the emission of global warming CO₂ gas, in comparison with our company's previous products. Taking account of 3R environmental items, namely reduction of hazardous substance, reuse of waste, and recycling of resource, the ECO electric wire and the non-vinyl chloride materials were used. The use of halogen-free materials leads to decrease the generation of the hazardous substances such as the RoHS- derivative ones. Weld-less flame is re-usable. In addition, the waste information on the product has been arranged into a document, which is being opened to make the classification on scrapping easy.



Circuit breaker 2 stage feeder panel(VUHE type)

Eco-products

EP - 359

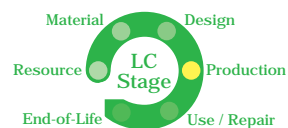
Machines and Equipments

Switchgear

Global environment-conscious 24/36kV solid-insulated switchgear.

Toshiba Corporation Social Infrastructure
Systems Company
1-1, Shibaura 1-Chome, Minato-ku Tokyo 105-8001,
Japan
Tel 81-3-3457-4320 Fax 81-3-5444-9278
E-mail
URL

▲ A1 Global warming
B3 Resource saving



This product is a cubicle-type solid-insulated switchgear (SIS) that used the insulator of molded epoxy-resin instead of sulfur hexafluoride (SF6) gas. It is a new type switchgear and has smaller size, lighter weight and better environmental performance in comparison with the previous gas-insulation switchgear (C-GIS). The SIS has realized SF6 gas-free by using a molded main circuit and molded conductors of high performance epoxy-resin, and by adopting vacuum valves for circuit and contact breakers. In addition, it used a balance type electromagnetic mechanism for the operation of the breakers. Thereby, the number of the parts and the energy of opening/shutting were reduced, and high performance and miniaturization were realized.



Solid insulated switchgear

Eco-products

EP - 360

Machines and Equipments

Relay switches, switchboards, electrical control equipment

Eco-friendly accurate Energy measuring unit

Mitsubishi Electric Corporation
2-7-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8310 Japan
Tel 81-3-3218-2238 Fax 81-3-3218-2465
E-mail eqd.eco@pj.MitsubishiElectric.co.jp
URL
<http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

▲ B5 Energy saving
A1 Global warming
B3 Resource saving



"EcoMonitorPro" accurately measures the electric power consumption of each facility or production line in factories or buildings. By collecting and analyzing measured data, it pinpoints the energy consumption required to produce one product in a specific process - as well as the cause of wasteful stand-by power. This equipment identifies points where further energy savings are possible, helping users to save energy. Furthermore, it contributes to the reduction of environmental impact through its compact size, low resource consumption, module structure, and low power consumption.



EcoMonitorPro EMU2-RD7-C

Eco-products

EP - 361

Machines and Equipments

Super-Compact 7.2 kV Switchgear

Hitachi, Ltd.

1-18-13, Soto-Kanda, Chiyoda-ku, Tokyo, Japan

Tel Fax

E-mail sse@pis.hitachi.co.jp

URL

http://www.pi.hitachi.co.jp/sse/products01/equipment/2005838_15209.html

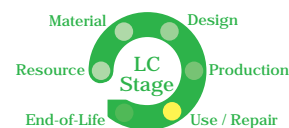
High-voltage switchgear for the steady supply of electricity at 6,000 volts to offices from power lines.

We succeeded in reducing installation space by one-third through employing advanced insulation technology, resulting in a lighter product (66% compared with previous models) and concomitant resource savings.

The use of a modular design also enables the sharing of materials, greater reusability, and greater transportability.

Power transformers

▲ A5 Resource consumption
B4 Higher quality
B5 Energy saving



Super-Compact 7.2 kV Switchgear

Eco-products

EP - 362

Machines and Equipments

Amorphous transformer

Hitachi Industrial Equipment Systems., Ltd.

3, Kanda-Nehoricho, Chiyoda-ku, Tokyo, Japan

Tel 81-3-4345-6045 Fax 81-3-4345-6910

E-mail

URL http://www.hitachi-ies.co.jp/products/trans/amo_oil/index.htm

Power transformers

▲ A5 Resource consumption
B4 Higher quality
B5 Energy saving



All losses were achieved and the decrease to about the maximum 38% was achieved.

Amorphous alloys is a solid of non-crystal made from cooling from the state of Melting rapidly. The no-load loss (eddy current disadvantage + disadvantage of hysteresis) can be decreased to about 1/5 compared with the silicon Steel.



Amorphous transformer

Eco-products

EP - 363

Machines and Equipments

Air conditioners

High performance, energy-saving air conditioner

DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6374-9304 Fax 81-6-6373-4380

E-mail kankyo@daikin.co.jp

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

▲ A1 Global warming
B5 Energy saving
▼



Daikin's SUPER MULTI NX with DC inverter offers top-class energy savings, quiet operation, and a wide range of models to provide you with maximum comfort while respecting homes and people. Furthermore, the newly designed wall-mounted type D series won the prestigious Good Design Award in Japan.



Eco-products

EP - 364

Machines and Equipments

Air conditioners

High performance, energy-saving air conditioner

DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, Japan

Tel 81-6-6374-9304 Fax 81-6-6373-4380

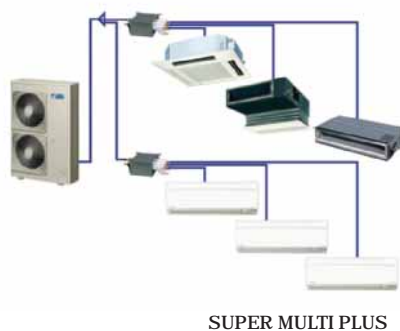
E-mail kankyo@daikin.co.jp

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

▲ A1 Global warming
B5 Energy saving
▼



Daikin's new Super Multi Plus D series is now connectable to up to 9 indoor units and offers you a richer choice of indoor units to coordinate with each room décor. Advanced technology from Daikin has improved COP and reduced sound levels to suit today's modern living environment.



Eco-products

EP - 365

Machines and Equipments

Air conditioners

High performance, energy-saving air conditioner

DAIKIN INDUSTRIES, LTD.
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka-shi, Osaka, Japan
Tel 81-6-6374-9304 Fax 81-6-6373-4380
E-mail kankyo@daikin.co.jp
URL <http://www.daikin.co.jp>

▲ A1 Global warming
■ B5 Energy saving
▼



[Energy savings]
Saves up to 70% of power consumption than standard model.
Install the latest original technique, Reluctance DC Motor, which
was awarded the IEE prize of Promotion and Advancement.
[Quiet operation]
The industry's top class quiet design by using Hybrid aerofoil fan
(for outdoor units).
A new Night quiet mode is incorporated (for outdoor units).



Super Inverter 70

Eco-products

EP - 366

Machines and Equipments

Air conditioners

High performance, energy-saving air conditioner

DAIKIN INDUSTRIES, LTD.
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka-shi, Osaka, Japan
Tel 81-6-6374-9304 Fax 81-6-6373-4380
E-mail kankyo@daikin.co.jp
URL <http://www.daikin.co.jp>

▲ A1 Global warming
■ B5 Energy saving
▼



To respond precisely to customer needs, a lineup of outdoor units
is available with power ranging from 5 to 48 HP. Up to 40* indoor
units can be individually controlled in a single refrigerant piping
system. The system also can air condition each room individually,
which is ideal for the constantly changing occupancy of a typical
building.

* Using 48 HP outdoor unit.



VRV II Series

Eco-products

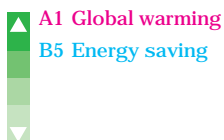
EP - 367

Machines and Equipments

Air conditioners

High performance, energy-saving air conditioner

DAIKIN INDUSTRIES, LTD.
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka-shi, Osaka, Japan
Tel 81-6-6374-9304 Fax 81-6-6373-4380
E-mail kankyo@daikin.co.jp
URL <http://www.daikin.co.jp>



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.



VRV II-S Series

Eco-products

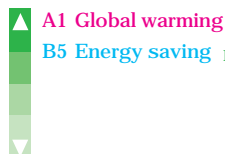
EP - 368

Machines and Equipments

Air conditioners

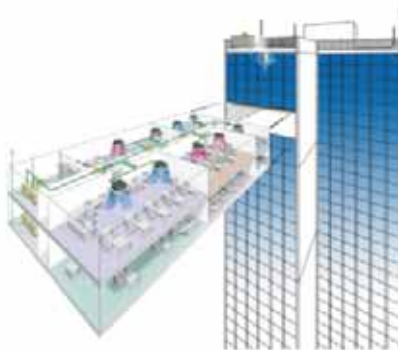
High performance, energy-saving air conditioner

DAIKIN INDUSTRIES, LTD.
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka-shi, Osaka, Japan
Tel 81-6-6374-9304 Fax 81-6-6373-4380
E-mail kankyo@daikin.co.jp
URL <http://www.daikin.co.jp>



A water cooled intelligent individual air conditioning system suitable for tall multistoried 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.



VRV-WII

Eco-products

EP - 369

Machines and Equipments

Air conditioners

Clathrate Hydrate Slurry (CHS) Latent Heat Air-Conditioning System

JFE Engineering Corporation
1-1-2, Marunouchi, Chiyoda-ku, Tokyo Japan
Tel 81-3-3217-3912 Fax 81-3-3214-9650
E-mail
URL <http://www.jfe-eng.co.jp/>



Clathrate hydrate slurry (CHS) latent heat air-conditioning system uses CHS instead of water, which brings highly effective energy-saving properties. CHS is a mixed solid-liquid fluid composed of fine particles of clathrate hydrates and an aqueous solution. Advantages include high thermal density at 5-12degC, excellent heat storage/transportation, and heat transfer properties. In comparison with conventional chilled water transportation, pumping power consumption can be reduced by up to 80%. In comparison with ice, the energy required to produce cooling can be reduced by 40% and direct transportation to room air-conditioning units is possible.



Energy saving air-conditioning system

Eco-products

EP - 370

Machines and Equipments

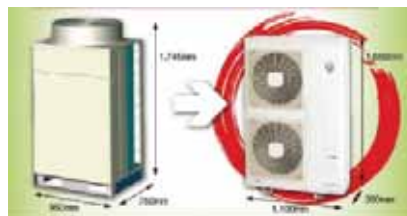
Air conditioners

Hi inverter IVX

Hitachi Appliances, Inc.
Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome,
Minato-ku, 105-8410 Japan
Tel Fax
E-mail
URL <http://www.hitachi-ap.co.jp/products/business/ac/tatujin/index.html>



Average COP4.86 (50.112 types) of industry-leading was achieved. "Individual driving function" to drive two or more indoor units independently with one outdoor unit is standard installed in the model more than 80 types. Air-conditioning that there is no uselessness in the indoor load is achieved, and the comfort and conservation of energy have been improved.



Hi inverter IVX

Eco-products

EP - 371

Machines and Equipments

Air conditioning and household equipment

Freezing/refrigerating/air-conditioning sysytem

DAIKIN INDUSTRIES, LTD.
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka-shi, Osaka, Japan
Tel 81-6-6374-9304 Fax 81-6-6373-4380
E-mail kankyo@daikin.co.jp
URL <http://www.daikin.co.jp>

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B3 Resource saving
- ▲ B5 Energy saving



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.



CONVENI-PACK

Eco-products

EP - 372

Machines and Equipments

Medical X-ray equipment

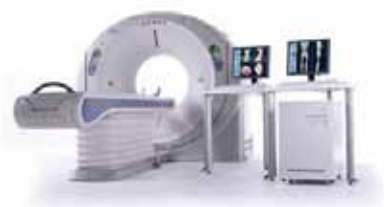
Environmentally conscious X-ray CT Systems for medical institution

TOSHIBA MEDICAL SYSTEMS CORPORATION
1385, Shimoishigami, Otawara-shi, Tochigi, 324-8550
Japan
Tel Fax
E-mail
URL <http://www.toshiba-medical.co.jp/tmd/>

- ▲ A4 Waste
- ▲ B3 Resource saving



Our company works hard to provide medical instruments of "friendly to human, also friendly to the environment" to the people in the world. As for X-ray computed tomography system "TSX-101A", a new unit, a new user-interface and a new image-reconstruction method were developed. Thereby, machine time per person for the inspection has been reduced to less than half in comparison with that of the previous system. Power consumption per function and machine weight were also reduced to 50%, respectively. Furthermore, we are developing new medical software in order to reduce the exposure of body to X-ray.



X-ray CT Systems Aquilion(TSX-101A)

Eco-products

EP - 373

Machines and Equipments

X-ray equipment

Environment-friendly X-ray CT scanner for users and patients

TOSHIBA MEDICAL SYSTEMS CORPORATION
1385, Shimoishigami, Otawara-Shi, Tochigi 324-8550,
Japan
Tel Fax
E-mail
URL <http://www.toshiba-medical.co.jp/tmd/>

▲ A4 Waste

▲ B3 Resource saving

▲ B5 Energy saving



We are always making efforts to offer people-friendly and also environment-friendly medical products to the people in the world. As for X-ray CT scanner, we have developed a new-type machine unit and a new method of image reconstruction, and thereby, reduced the machine time for a patient to less than half in comparison with that of the previous products. Moreover, the power consumption is decreased by 51% for one inspecting function, and the machine weight is decreased by 34%. In addition, we have realized to reduce the exposure dose to patients by developing new software.



X-ray CT Systems Asteion(TSX-021B)

Eco-products

EP - 374

Machines and Equipments

X-ray equipment

X-ray diagnostic system of circulatory organ for medical institution

TOSHIBA MEDICAL SYSTEMS CORPORATION
1385, Shimoishigami, Otawara-Shi, Tochigi 324-8550
Japan
Tel Fax
E-mail
URL <http://www.toshiba-medical.co.jp/tmd/>

▲ A4 Waste

▲ B3 Resource saving

▲ B5 Energy saving



We are always making efforts to offer people-friendly and also environment-friendly medical products to the people in the world. As for angiography system, by design optimization and shortening of inspection time, both weight of the machine and the electric power consumption per one function have respectively been reduced by 20%. Reduction of hazardous substances is being carried out; No FRP cover is used and Pb-free solder is used, etc. In addition, using new type of filter is reducing the exposure dose to patients.



Angiography System

Eco-products

EP - 375

Machines and Equipments

Medical electronic instrument and equipment

Magneto cardiograph System MC-6400

Hitachi High-Technologies Corporation
1-24-14, Nishi-Shinbashi, Minato-ku, Tokyo, Japan
Tel 81-3-3504-7211 Fax
E-mail contact@nst.hitachi-hitec.com
URL http://www.hitachi-hitec.com/science/medical/mc_6400.html (Japanese)

▲ A5 Resource consumption
B4 Higher quality
B5 Energy saving



This device safely examines heart activity without using X-rays, ultrasound or strong magnetic fields.

By improving insulation to reduce helium evaporation, we have achieved a 50% reduction over earlier models in the amount of liquid helium required to cool the superconducting sensors, which accounts for the majority of running costs. Size and mass of the system were also reduced by 41% and 12% respectively.



Hitachi High-Technologies Corporation MC-6400

Eco-products

EP - 376

Machines and Equipments

Medical electronic instrument and equipment

Hitachi High-resolution FEB Measuring Unit

Hitachi High-Technologies Corporation.
1-24-14 Nishi Shimbashi, Minato-ku, Tokyo Japan
Tel 81-3-3504-7111 Fax 81-3-3504-7123
E-mail
URL <http://www.hitachi-hitec.com/global/>

▲ B4 Higher quality



Description of Products

CD-SEM (semiconductor limit dimension measuring unit, electron microscope for measurement)

Development Concept

Improved resolution Reduced measuring time per work piece



S-9380

Eco-products

EP - 377

Commodity / Outdoor Goods / Housing Kit

Medical electronic instrument and equipment

Opto-topography Equipment

Hitachi Medical Corporation

4-14-1, sotokanda, chiyoda-ku, tokyo, Japan

Tel 81-3-3526-8880 Fax 81-3-3526-8810

E-mail

URL <http://www.hitachi-medical.co.jp/english/index.htm>

▲ B4 Higher quality



Description of Products

Equipment for observing the brain activities by measuring the brain blood flow volume through the near infrared light safe to human body.

Development Concept

The number of workpieces is increased, maintaining the product quality and power consumption equivalent to those of conventional products.



ETG-4000

Eco-products

EP - 378

Machines and Equipments

Electronic microscopes

Hitachi Tabletop Microscope TM-1000

Hitachi High-Technologies Corporation

1-24-14 Nishi Shimbashi, Minato-ku, Tokyo, 105-8717 Japan

Tel 81-3-3504-7111 Fax 81-3-3504-7123

E-mail

URL http://www.hitachi-hitec.com/global/em/tab/tab_index.html

▲ B5 Energy saving
B4 Higher quality



A compact tabletop microscope invites you to the stereoscopic micron world.

Energy-saving design and size.

Easy to use - like a digital camera.

No coatings required for observing a non-conductive sample.

Stereoscopic morphological observation with greater depth of focus.



TM-1000

Eco-products

EP - 379

Machines and Equipments

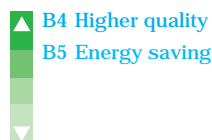
Displays

StarBoard T-17SXL

Hitachi Software Engineering Co.,Ltd.
4-12-7,Higashishinagawa,Shinagawa-ku,
Tokyo 140- 0002, Japan
Tel 81-3-5780-2111 Fax
E-mail

URL <http://hitachisoft.jp/starboard-asia-oceania/products/index.html>

The T-17SXL is a compact, interactive SXGA resolution LCD display that complete with the StarBoard Software suite of presentation and collaboration tools brings exceptional clarity to interactive presentations, meetings, lessons and lectures. Inject a new life into your presentation!New T-17SXL Panel with SXGA resolution uses interactive TFT technology and comes with a 17 inches screen. The high-resolution screen - 1280 x 1024 pixels with 16,20,000 colours and great contrast, provides a highly accurate interactive surface, ideal for demonstrating lesson points precisely. With eight hardware function buttons, added for your comfort and flexibility, no time



T-17SXL

Eco-products

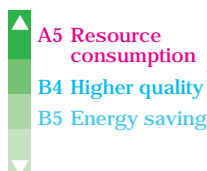
EP - 380

Machines and Equipments

Electro acoustic transducers

Super low Wow & Flutter brushless DC motor for business machine

Nihon Servo, Ltd.
7, Kanda-Midoyo-cho, Chiyoda-ku, Tokyo, Japan
Tel Fax
E-mail
URL <http://www.japanservo.jp/>



High-density windings with Multi-piece Stator Core makes Miniaturization & High Efficiency.
High density windings with Multi-piece Stator Core produces ;
Reduce volume 25% Reduce copper loss 20% Improve radiation of heat 50%
Ten poles & Twelve slots structure produces; 0.05% wow & flutter at 2000r/min.



DC motor

Eco-products

EP - 381

Machines and Equipments

Switching power supplies

HIVERTER-UP201i(UNIPARA)

Hitachi, Ltd.

5-2-1, oomika-cho, hitachi-shi, ibaraki-ken Japan

Tel 81-294-53-1111 Fax

E-mail

URL [http:](http://www.hitachi.co.jp/Div/ise/upshp/m_l/m_l03/m_l03_in.html)

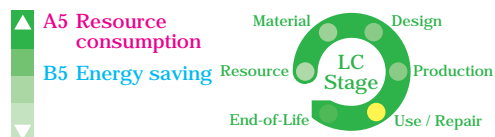
[//www.hitachi.co.jp/Div/ise/upshp/m_l/m_l03/m_l03_in.html](http://www.hitachi.co.jp/Div/ise/upshp/m_l/m_l03/m_l03_in.html)

Description of Products

UPS protects important equipment such as facilities of data centers against instantaneous power failure. Depending on the scale of equipment, a maximum of 6 UPS's can be connected in parallel to provide the power supply capacity.

Development Concept

Reduction of environmental load and economy through high efficiency, compact and lightweight. High expandability based on unit parallel design.



HIVERTER-UP201i(UNIPARA)

Eco-products

EP - 382

Machines and Equipments

Railroad cars

Monorail System

Hitachi, Ltd.

1-18-13, Soto-Kanda, Chiyoda-ku, Tokyo, 101-8608

Japan

Tel 81-3-4564-9485 Fax 81-3-4564-4608

E-mail

URL http://www.hitachi-rail.com/products/monorail_system/overview/index.html



Railways are a complex combination of various parts including the trains, track, track switches, substations, substation supervising system, signals, communication systems, operation control systems, etc. Hitachi has four decades of experience supplying all of these products individually and as a fully integrated monorail system to meet the demands of urban environments.



Monorail System

Eco-products

EP - 383

Machines and Equipments

Marine engines

Environmental-friendly large two-stroke diesel engine ME/ME-C

KAWASAKI HEAVY INDUSTRIES, LTD.

1-1, Higashikawasaki-cho 3-chome, Chuo-ku, Kobe
Japan

Tel 81-78-682-5340 Fax 81-78-682-5558

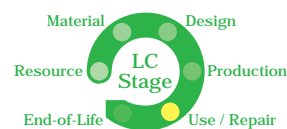
E-mail

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

▲ A1 Global warming

▲ A2 Air pollution

▲ B5 Energy saving



This next generation computerized diesel engine enabled flexible control according to the situation by changing the control method of fuel injection, opening and closing of exhaust valve, and cylinder lubricating oil injection from conventional mechanical control to electronic control. This reduced NO_x emission discharged during a sailing in port area as well as fuel consumption and CO₂ emission during an ocean voyage. Besides, it enabled to cut down on oil consumption and control the emission of particulate matter.



KAWASAKI MAN B&W 7S60ME-C Engine

Eco-products

EP - 384

Machines and Equipments

Analytical instruments

GC-2014, energy-saving type high-performance Gas Chromatograph

Shimadzu Corporation

1, Nishinokyo-kuwabara-cho, Nakagyo-ku, Kyoto-shi,
Kyoto, Japan

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

E-mail kksitu@group.shimadzu.co.jp

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

▲ A1 Global warming

▲ B4 Higher quality

▲ B5 Energy saving



"GC-2014" is a gas chromatograph considering high performance and environmental loading. By the following improvement: (a) use of a transformer-less switching power supply, (b) miniturization of parts by using high performance, high-density integrated circuit, and (c) decrease in the number of parts, the energy consumption in the stand-by condition reduced by 68% of that for the previous-type apparatus.



Gas Chromatograph GC-2014

Eco-products

EP - 385

Machines and Equipments

Analytical instruments

Environmentally conscious Ultrasound System for medical institution

TOSHIBA MEDICAL SYSTEMS CORPORATION

1385, Shimoishigami, Otawara-shi,

Tochigi, 324-8550 Japan

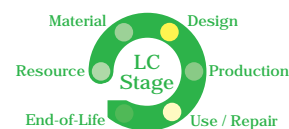
Tel Fax

E-mail

URL <http://www.toshiba-medical.co.jp/tmd/>

▲ A4 Waste

■ B3 Resource saving



Our company works hard to provide medical instruments of "friendly to human, also friendly to the environment" to the people in the world. As for our diagnostic ultrasound system "XARIO", a 33% saving of the resources has been achieved by means of the large-scale FPGA, the structural design and the consolidation of functions. In addition, the reduction of environmental hazard substances has been conducted; for example, disuse of polyvinyl chloride-make cover and use of Pb-free solder, etc. We also succeeded to reduce 33% of the power consumption per function by the use of a high-speed CPU and the reduction of starting time.



Diagnostic Ultrasound System Xario
(SSA-660A)

Eco-products

EP - 386

Machines and Equipments

Analytical instruments

Environmentally conscious MRI Systems for medical institution

TOSHIBA MEDICAL SYSTEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi,

324-8550 Japan

Tel Fax

E-mail

URL <http://www.toshiba-medical.co.jp/tmd/>

▲ A4 Waste

■ B3 Resource saving



Our company works hard to provide medical instruments of "friendly to human, also friendly to the environment" to the people in the world.

As for magnetic resonance imaging system "MRT-2003", 56 % is reduced for the weight per function by developing a short-axis magnet and a moving bed.

The power consumption per function was reduced to 58% of that of the previous system by applying the high-speed photographing technique, the optimization design and so on. Furthermore, the decrease of the wastes has been promoted by the reuse of the spare parts and by the extension of parts life. The reduction of the environmental hazard substance is also being carried out; for example, 20% of weight reduction of the FRP-making bed cover was achieved. Moreover, in order to suppress a great deal of machine noise during the inspection, an original noise-suppressor was developed. It can remove 90% of the noise to the patient. With "the sensation of opening" given by the shortened axis, the decrease of the machine noise will help the patient relax.



MRI Systems Vantage (MRT-2003)

Eco-products

EP - 387

Machines and Equipments

Analytical instruments

Environment-friendly sample inspection apparatus for medical institution

TOSHIBA MEDICAL SYSTEMS CORPORATION
1385, Shimoishigami, Otawara-Shi, Tochigi 324-8550,
Japan
Tel Fax
E-mail
URL <http://www.toshiba-medical.co.jp/tmd/>

▲ A4 Waste

▼ B3 Resource saving



We are always making efforts to offer people-friendly and also environment-friendly medical products to the people in the world. As for biochemical analyzer, resource saving of 15% has been achieved by use of the technique that can reduce "carry over". In this case, "carry over" means drug-in quantity from one sample to the next sample in the sample probes. In addition, the reduction of hazardous substances is being carried out by use of Pb-free solder and consumption of chemical reagents is also decreased by reduction of minimum quantities of the reaction liquids.



Biochemical Analyzer TBA-c16000

Eco-products

EP - 388

Machines and Equipments

Measuring instruments

MT8510B has a function to check the quality of third-generation mobile phones.

Anritsu Corporation
5-1-1 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan
Tel 046-223-1111 Fax
E-mail
URL <http://www.anritsu.co.jp>

▲ A1 Global warming

▼ A5 Resource consumption

B3 Resource saving

B5 Energy saving



This MT8510B Service Tester has a function to check the quality of third-generation mobile phones, and is mainly used by mobile phone retailers and repair shops. It simplifies and shortens the testing procedure by allowing communication quality and performance tests to be performed with simple pushbutton operation. The integration of functions from multiple units into a single unit has shrunk the circuit scale, leading to reduced power consumption and lighter housing. As a result, in the new unit we achieved 63% less power consumption and 74% less weight than the preceding model.



Service Tester MT8510B

Eco-products

EP - 389

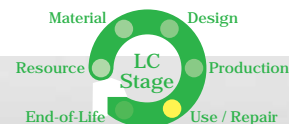
Machines and Equipments

Measuring instruments

EC2060A is a switch required for optical IP networks.

Anritsu Corporation
5-1-1 Onna, Atsugi-shi, Kanagawa, 243-8555, Japan
Tel 046-223-1111 Fax
E-mail
URL <http://www.anritsu.co.jp>

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B3 Resource saving
- ▼ B5 Energy saving



This EC2060A Compact L2SW is small, lightweight and power-efficient, with excellent durability for use in outdoor environments. It is a switch required for optical IP networks for such outdoor facilities as monitoring cameras and wireless LAN base stations. We have developed this product as the layer 2 switch incorporated in the monitoring system adopted by administrative bodies such as the Ministry of Land, Infrastructure and Transport. Use of small components and high-density mounting greatly cuts housing size. Use of stainless steel reduces the need for painted parts, and improves its recyclability. Adoption of unified power circuits, low-power-consumption components and highly efficient power supply lowers power consumption. As a result, we achieved a 77% reduction of volume, 43% less weight and 46% less power consumption than the preceding model. In addition, we adopted lead-free soldering in the production process.



Compact L2SW EC2060A

Eco-products

EP - 390

Machines and Equipments

Waste management, Energy recover

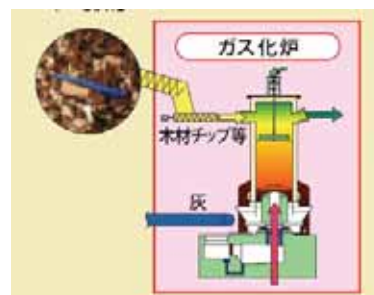
JFE woody biomass gasification system

JFE Engineering Corporation
1-1-2, Marunouchi, Chiyoda-ku, Tokyo, Japan
Tel 81-3-3217-3912 Fax 81-3-3124-9650
E-mail
URL <http://www.jfe-eng.co.jp/>

- ▲ A1 Global warming
- ▲ A4 Waste
- ▲ B5 Energy saving



Sending hot air into the upper layer of an incinerator effectively can create and maintain a stable flame just above the garbage layer and obtain ideal combustion, coming off a significant reduction in the amount of exhaust gas. By combining an incinerator and ash handling system, energy efficiency is improved by exploiting the heat of ash and recovering waste heat generated in an ashhandling furnace. Incinerated ash is molded to slag that can be used for base course material and aggregate.



Eco-products

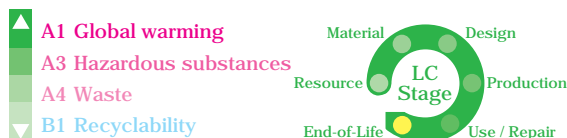
EP - 391

Machines and Equipments

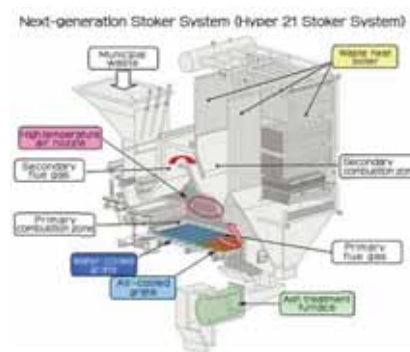
Waste management, Energy recover

Hyper 21 Stoker Sytem

JFE Engineering Corporation
1-1-2, Marunouchi, Chiyoda-ku, Tokyo, Japan
Tel 81-3-3217-3912 Fax 81-3-3214-9650
E-mail
URL <http://www.jfe-eng.co.jp>



1. Reduced exhaust gas (leading to reduced equipment size): 30% decrease
2. Reduced NO_x: 20% decrease
3. Reduced dioxins: Concentrations at boiler exit: 50% decrease, Concentrations at stack exit: less than 0.01ng-TEQ/Nm³
Total dioxin emissions: less than 0.5g-TEQ/ton of waste
4. Reduced operating cost: 30% decrease
5. Increased electrical power surplus (for sale): 20% increase
6. Reduced landfill: substantial decrease



Eco-products

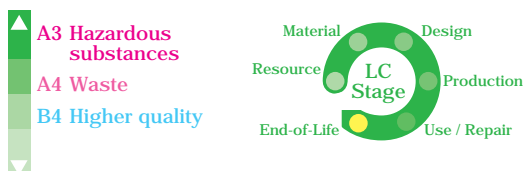
EP - 392

Machines and Equipments

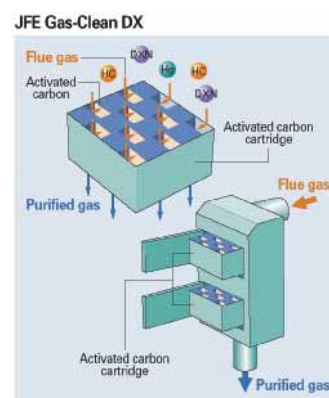
Waste management, Energy recover

JFE Gas Clean DX

JFE Engineering Corporation
1-1-2, Marunouchi, Chiyoda-ku, Tokyo, Japan
Tel 81-3-3217-3912 Fax 81-3-3214-9650
E-mail
URL <http://www.jfe-eng.co.jp/>



JFE Gas-Clean DX uses a cross-flow method in which the flue gas and activated carbon are placed in contact in a bed-shaped cartridge filled with granular activated carbon, which has an excellent thermal conduction property. This substantially improves contact efficiency with the activated carbon, making it possible to reduce the installation area to less than 1/5 that with the conventional technology while maintaining the same removal performance. Because the system does not have a drive section, there is no danger of fire, greatly improving routine operation and maintenance work and allowing worry-free use.



Eco-products

EP - 393

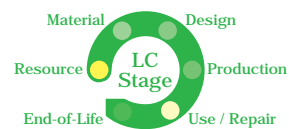
Machines and Equipments

Waste management, Water management, Energy recover

Revolutionary Compactor

Aggregates Engineering Pte Ltd
No. 15 Benoi Place, 629933 Singapore
Tel +65 6861 6809 Fax +65 6862 4246
E-mail info@aggregates.com.sg
URL

▲ A4 Waste
B1 Recyclability
B3 Resource saving
B5 Energy saving



Benefits of the Revolutionary Compactor:

- It Removes excess liquids in the waste stream.
- Helps to reduce the energy required to incinerate or process.
- Reduces the volume of the materials by means of compaction.
- Reduction Volumes of up to 60 : 1
- Reduction of volumes would mean extensive savings on transport and handling costs.



Eco-products

EP - 394

Machines and Equipments

Energy system

Commercial-use gas engine co-generation system

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp/>

▲ B5 Energy saving
A1 Global warming
B3 Resource saving
A5 Resource consumption



Gas co-generation systems efficiently extract electrical and thermal energy from city gas and attain a high total energy efficiency. The high total efficiency of the systems helps to curtail CO₂ emissions and contributes to the customer's economic efficiency. This is a landmark commercial-use model of the smallest size in Japan, and was developed to facilitate the use of such systems in a wider range of fields.

Customers using this system can greatly reduce their energy costs by lowering their purchase of utility power and city gas charges for boilers.

With a total efficiency of at least 80% (a rate that could only be attained with cogeneration) and its effective use of energy, the system reduces CO₂ emissions to about two-third of the conventional level, and therefore has been given high ratings in the environmental aspect as well.

Because the model is compact, it does not take up much space. In addition, it does not require a high initial investment. These features are behind the spread of easy use among many customers.



Eco-products

EP - 395

Machines and Equipments

Energy system

New refrigerant high-efficiency gas heat pump

Tokyo Gas Co., Ltd
1-5-20, Kaigan, Minato-ku, Tokyo, Japan
Tel 81-3-5400-7671 Fax 81-3-3432-5509
E-mail kosho@tokyo-gas.co.jp
URL <http://www.tokyo-gas.co.jp/>

▲ B5 Energy saving
▲ A1 Global warming
▲ B3 Resource saving
▲ A5 Resource consumption



Our company developed a new refrigerant high-efficiency gas heat pump together with equipment manufacturers and commenced sales of it in April 2005. The COP* was increased by 15% relative to that of the conventional equipment and is on the order of 1.5 (the average of the cooling and heating modes), the highest level in the field. The product therefore offers its customers a lower running cost and a higher energy-saving merit. Concern for the global environment is further evidenced by the utilization of refrigerants that do not deplete the ozone layer.

* COP; Coefficient Of Performance. A higher COP indicates a higher efficiency.



Eco-products

EP - 396

Machines and Equipments

Energy system

Omni-directional and hybrid wind power generation system using wind and solar energy

TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION
(Nissay Aroma Square) 37-1, Kamata 5-Chome, Ota-ku, Tokyo 144-8721 Japan
Tel 81-3-5714-3682 Fax 81-3-5714-3816
E-mail
URL <http://www.toshiba-tpsc.co.jp>

▲ A1 Global warming
▲ A5 Resource consumption
▲ B3 Resource saving
▲ B5 Energy saving



The EWF-400 wind turbine can produce 400W of electricity at 12m/s of the specified wind speed. The annual average of the wind speed is 4m/s in Kanto area, so the generation of 20 to 30W can be expected.

In order to catch the change of wind direction smoothly, the vertical-shaft wind turbine is adopted. The generation system is equipped with a double brake system which consists of an electrical brake and a mechanical brake. The former works with the regenerative braking power and the latter prevents an abrupt increase of the rotation when the blades of wind turbine are exposed to gust of wind. Furthermore, supposing an emergent case in which the electrical control function doesn't work, a fail-safe mechanism (centrifugal trigger, the Patent of our company) is equipped.

In order to enhance the reliability of the generation system, it was equipped with an 110W solar cell. When its battery is full-charged, it can provide the electricity to light a 15W bulb for 8 hours everyday during 5 days, under the conditions of no sunshine and no wind.



WIND FLOWER EWF-400

Eco-products

EP - 397

Machines and Equipments

Energy system

Small-scale hydro-power generation system Hydro - eKIDS™ using renewable energy

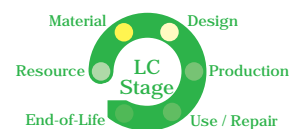
TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION

36-5, Tsurumichuo 4-chome, Tsurumi-ku,
Yokohama-shi, Kanagawa, 230-8691 Japan
Tel 81-45-500-7342 Fax 81-45-500-7599

E-mail

URL <http://www.toshiba-tpsc.co.jp>

- ▲ A1 Global warming
- ▲ A2 Air pollution
- B6 Environmental purification
- ▼ B7 Use of recycled materials



Five kinds of the standard unit (S3/S3C, SS, S, M, and L) are available. Their outputs are 1 ~ 200kW depending on the flow rate of 0.3 ~ 3.5m³/s and the head drop of 2 ~ 15m. The feature of the standard unit is easy installation, small space and simple structure of pipe-in type. In comparison with large-scale power systems, the running cost is cheap and the service life is long. The standard unit is therefore economical when used in the long run.

Although the major power system is operated by using fossil fuel, our unit is derived with renewable hydro-energy. So, the emission of CO₂-gas is almost neglected and the consumption of resources is significantly suppressed. Moreover, our units do not need a large-scale barrage or a dam that gives a negative environmental impact. The merit of a small-scale system like this is to use various water sources: the water and sewage, the water for agricultural use, the water for industrial use, the industrial waste water and the river maintenance and discharge.

The system is useful as a dispersed power source and it can contribute to the reduction of the green house gas and also to the energy-saving.



Hydro-eKIDS S type

Eco-products

EP - 398

Machines and Equipments

Energy system

Multi-crystalline Photovoltaic Module

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://www.sharp.co.jp/>

- ▲ B1 Recyclability
- B2 Longevity
- B3 Resource saving
- B5 Energy saving



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.



Products/Model: Photovoltaic Module ND-153AU

Eco-products

EP - 399

Machines and Equipments

Energy system

Thin-Film Photovoltaic Module

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://www.sharp.co.jp/>

▲ B3 Resource saving
B5 Energy saving
B2 Longevity
▼



This module includes photovoltaic thin film silicon with a thickness of 2μm, which was born from a state-of-the-art nanotechnology. The module has a good design with a black outside surface where no wiring appears. Its superior thermal characteristic enables 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 cell.



Products/Model: Thin Film Photovoltaic Module NA-851WP

Eco-products

EP - 400

Machines and Equipments

Energy system

Design, supply, install and service / maintenance of PV power products & systems

Prosolar Pte Ltd
221A Upper Thomson Road, 574353 Singapore
Tel +65 6245 3439 Fax +65 6245 4393
E-mail
URL www.prosolarco.com

▲ B2 Longevity
B3 Resource saving
B5 Energy saving
B6 Environmental purification
▼



PROSOLAR is a Singapore set-up company with core competences in Renewable Energy businesses.

Our core business is to provide services in relation to Design, supply, install and service / maintenance of PV power products & systems

Energy is fundamental to our society - it powers our homes, businesses, and industries. However, we must use it wisely, in order to preserve our environment.

Today, you have the ability and the interest to choose clean, low-impact energy option, including renewable energy such as solar energy.

PROSOLAR provides complete technical assistance and the finest equipment when utilizing solar power to insure a successful project. We have everything you need.



Eco-products

EP - 401

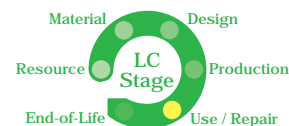
Machines and Equipments

Exhaust Gas Purification

Clean Systems Technology (S) Pte Ltd
Blk 21, #03-165 Kallang Basin Ind Estate,
Kallang Avenue, 339412 Singapore
Tel +65 6396 0616 Fax +65 6298 9221
E-mail bhgoh@cscclean.com.sg
URL www.csccleansys.com

Abatement, Scrubbers, Toxic Gas Purifier,
Clean Systems.

- ▲ A1 Global warming
- ▲ A2 Air pollution
- ▲ B1 Recyclability
- ▼ B5 Energy saving



CLEANSORB® Technology- Direct Conversion of Hazardous Gases to Stable Salts by Chemical Granulates.

- Intrinsic Reactivity at Ambient Temperature
- Applicable to all Semiconductor Gases
- No Energy or Water Requirement
- Purification to below Detection Limits.

CS CLEAN SYSTEMS guarantees outlet concentrations less than the TLV specification for the individual gas, based on proprietary "CLEANSORB" dry chemisorption technology.

Plasma Destruction of PFCs.

- CF4 Destruction Efficiency > 99%
- Fits Directly onto Exhaust Pump
- SEMATECH-Tested
- Low Running Costs.

The PCS generates an RF plasma to decompose unused PFCs into ions and free radicals as they enter the exhaust pump. Water vapour is added to ensure conversion to HF, which is removed in a standard CLEANSORB dry absorber system.



CLEANSORB

Eco-products

EP - 402

Machines and Equipments

MU REACTOR, a Stripping Tower for expelling O₂ & CO₂ gases

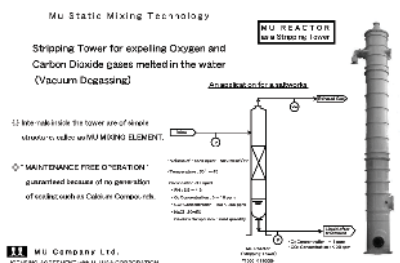
MU Company Ltd.
18-8, Uenokouen, Taito-ku, Tokyo 110-0007
Japan
Tel 81-3-3828-7090 Fax 81-3-3823-2890
E-mail muc@mu-company.com
URL www.mu-company.com/

Stripping Tower

- ▲ B3 Resource saving



MU REACTOR, a Stripping Tower, is developed to expel O₂ and CO₂ gases melted in the water, with help of Vacuum. Our device has many advantages compared to the conventional process, i.e., smaller in equipment size, almost nil of maintenance costs. First unit is presently in operation for table salt manufacturing, treating brine with 20% salt content. Column itself is fabricated by FRP, which is anti-corrosion material and less expensive compared to conventional Packed Tower usually built by special steel with rubber lining. Rated treatment capacity is 150~250 M3/hr. Provided the brine contains 5~10 ppm O₂ and 100~200 ppm CO₂, this tower will surely bring down these figures to 1 ppm O₂ and 20 ppm CO₂ respectively. Static mixers installed inside the column give brine no room for staggering, which brings drastic reduction of maintenance costs.



Stripping Tower for O₂ and CO₂ gases removal

Eco-products

EP - 403

Machines and Equipments

Chemically treated environment protecting equipment

MU SCRUBBER, fighting for clean air against air pollution

MU COMPANY LTD.

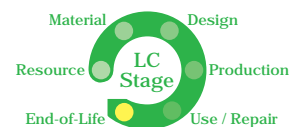
18-8, Ueno-Koen, Taito-ku, Tokyo, Japan

Tel 81-3-3828-7090 Fax 81-3-3823-2890

E-mail muc@mu-company.com

URL www.mu-company.com/

▲ A2 Air pollution



Since January 1983, MU COMPANY LTD. has concentrated in the area of industrial waste gas and wastewater treatment. With our proprietary static mixing technology patented in USA, EC, China, Czech, India and Japan, we have successfully supplied many MU SCRUBBERS, one of our major products, to meet the needs of customers for treating exhaust gases generated from manufacturing lines of various industries. We are now enjoying customers' reputation thanks to the high efficiency of our devices, as our system has contributed to remarkable reduction of production and maintenance costs. Special features of MU SCRUBBER are:

1-Maintenance free, because of no adhesion of solid materials on the internals. 2-Space saving, because of compact design. 3-Respondent to wide ranges of raw gases to be treated, i.e., 100% raw gas down to 1 ppm. after treatment.

Some examples of applications; 1-Odour treatment facilities for rendering plants 2-Desulfurization and dust removal of stack gases 3-Removal of Silica compounds (ex. SiCl_4 , SiHCl_3 , SiF_4) in exhaust gas by hydrolysis process. 4-Recovery of HCl gas of high concentration.



Odour control device for rendering plant

Eco-products

EP - 404

Others

Elemental feeds

Feed grade L-Lysine

AJINOMOTO CO., INC.

15-1, Kyobashi 1-Chome, Chuo-ku, Tokyo, Japan

Tel 81-3-5250-8140 Fax 81-3-5250-8270

E-mail izuru_shinzato@ajinomoto.com

URL http://www.ajinomoto.com/aan

▲ A3 Hazardous substances

A4 Waste

B4 Higher quality

B6 Environmental purification



Feeds for livestock animals are mainly composed of vegetable ingredients such as corn, wheat, and soybean meal. Most proteins in such vegetable ingredients do not necessarily have the optimal amino acid profile for muscle protein synthesis by animals. The insufficient supply of a certain amino acid may lead not only to inferior growth but also to increased excretion of nitrogen to the environment because of less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in catabolism of amino acids. Supplementation of L-lysine, which is in general the 1st limiting amino acid in pigs and the 2nd limiting in chickens, can contribute 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.



L-Lysine Monohydrochloride Feed Grade

Eco-products

EP - 405

Others

Feed grade L-Threonine

AJINOMOTO CO., INC.

15-1, Kyobashi 1-Chome, Chuo-ku, Tokyo Japan

Tel 81-3-5250-8140 Fax 81-3-5250-8270

E-mail izuru_shinzato@ajinomoto.com

URL <http://www.ajinomoto.com/aan>

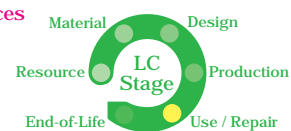
Elemental feeds

▲ A3 Hazardous substances

■ A4 Waste

■ B4 Higher quality

▼ B6 Environmental purification



Feeds for livestock animals are mainly composed of vegetable ingredients such as corn, wheat, and soybean meal. Most proteins in such vegetable ingredients do not necessarily have the optimal amino acid profile for muscle protein synthesis by animals. The insufficient supply of a certain amino acid may lead not only to inferior growth but also to increased excretion of nitrogen to the environment because of less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in catabolism of amino acids. Supplementation of L-threonine, which is in general the 2nd limiting amino acid in pigs and the 3rd limiting in chickens, can contribute 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-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.



L-Threonine Feed Grade

Eco-products

EP - 406

Others

Feed grade L-Tryptophan

AJINOMOTO CO., INC.

15-1, Kyobashi 1-Chome, Chuo-ku, Tokyo Japan

Tel 81-3-5250-8140 Fax 81-3-5250-8270

E-mail izuru_shinzato@ajinomoto.com

URL <http://www.ajinomoto.com/aan>

Elemental feeds

▲ A3 Hazardous substances

■ A4 Waste

■ B4 Higher quality

▼ B6 Environmental purification



Feeds for livestock animals are mainly composed of vegetable ingredients such as corn, wheat, and soybean meal. Most proteins in such vegetable ingredients do not necessarily have the optimal amino acid profile for muscle protein synthesis by animals. The insufficient supply of a certain amino acid may lead not only to inferior growth but also to increased excretion of nitrogen to the environment because of less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in catabolism of amino acids. Supplementation of L-tryptophan, which is one of the essential amino acids for pigs and chickens, can contribute 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-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.



L-Tryptophan Feed Grade

Eco-products

EP - 407

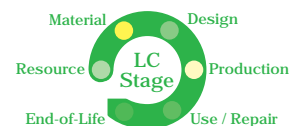
Others

Recycled Woodfree Paper

Marcalm Trade Pte Ltd
605B Macpherson Road, #06-09 Citimac Industrial
Complex, 368241 Singapore
Tel +65 2891393 Fax +65 2892012
E-mail marcalm@singnet.com.sg
URL

Special printing paper

- ▲ A4 Waste
- B1 Recyclability
- B3 Resource saving
- ▼ B7 Use of recycled materials



Almost everything on this planet has been recycled from something else - just think of the water you drink. Recycled office paper, whether copy paper or offset printing paper, is manufactured from post-consumer waste paper (such as the waste paper from most offices) and secondary fibres (like bagasse - a sugar cane residue, wheatstraw, etc) while using the same paper making processes. For environmental friendly and other eco reasons, users are encouraged to use recycled paper with 50% or more of recycled content. The quality is equally comparable to the conventional paper and the price is reasonable.



Copier Paper

Eco-products

EP - 408

Others

Ricoh RECO-View* Re-writable Sheet/Re-writable IC Tag Sheet

Ricoh Company, Ltd.
Ricoh Building, 8-13-1 Ginza, Chuo-ku, Tokyo 104-8222, Japan
Tel 81-3-6278-5209 Fax 81-3-3543-9347
E-mail envinfo@ricoh.co.jp
URL <http://www.ricoh.com/environment/>



The Ricoh RECO-View Re-writable Sheet and IC Tag Sheet can permit visual images displayed on its surface. Especially, the IC Tag Sheet, as a radio frequency identification (RFID) technology, is a new product, combining IC tags with re-writable capability. Images on the sheets can be easily erased and formed repeatedly up to about 1,000 times with 300 dpi resolution. With visualization of digital data on to re-writable sheets, workflow, cost and environmental impact can be dramatically improved. In factory and/or warehouse applications, a various management paper forms attached to incoming parts/products can be changed to the re-writable sheets, saving paper and IC chips. (Resources and energy are saved associated to the life cycle of paper and IC chip.) Additionally, IC tag re-writable sheet can change the workflow, as a part of IT system with RFID technologies. By checking visual image of the products printed on re-writable sheet with IC tag data, it is possible to reduce human errors, which also result in less environmental impacts.
* RECO-View is the trademark for Ricoh re-writable media. RE means RE-writable and Re-usable + ECO means economy and ecology.



Ricoh RECO-View* Re-writable Sheet/
IC Tag Sheet

Eco-products

EP - 409

Others

Relief (anastatic) printing

Haguresu: resource-saving label material without pasteboard

SASAKI PRINTING CO.,LTD.

91, Sekine-Kuchinaicho, Kitakami-shi, Iwate, Japan

Tel 81-1-9769-2111 Fax 81-1-9769-2126

E-mail ssk98@cocoa.ocn.ne.jp

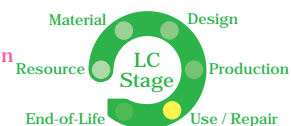
URL <http://www.vijp.net/ssk/>

▲ A4 Waste

▲ A5 Resource consumption

▲ B3 Resource saving

▲ B4 Higher quality



"Haguresu" label has been patented and two kinds of products, the lamination type and the roll type, are available. The label has no pasteboard, suggesting the savings of resource and disposal cost. Raw material of the label is 100% used paper and that of the ink is soybeans. Since the label is writable-type, it has been used by many municipal governments (warning label to the violating waste) and by distribution companies (dispatch label).



Eco-products

EP - 410

Others

Relief (anastatic) printing

Saika-label (a new proposal to the safety of food)

SASAKI PRINTING CO.,LTD.

91, Sekine-Kuchinaicho, Kitakami-shi, Iwate, Japan

Tel 81-1-9769-2111 Fax 81-1-9769-2126

E-mail ssk98@cocoa.ocn.ne.jp

URL <http://www.vijp.net/ssk/>

▲ A3 Hazardous substances

▲ A5 Resource consumption

▲ B4 Higher quality



In recent years, the consumer's interest to the safety of food is year by year increasing. A label material for vegetables and fruits is "Saika label", which can be directly attached to the surface of food. Since the common adhesives of label materials are made from petroleum, we have developed a new adhesive of rubber and applied to "Saika-label". The new adhesive is basing on the FDA specifications of USA, and satisfies the No.20 item of the food hygiene law. Since the "Saika-label" is possible to stick directly to vegetables and fruits, the packaging materials become useless and the amount of inflammable waste is reduced. Moreover, by attaching the label, the traceability of vegetables and fruits (personal history of the products) can be managed.



Eco-products

EP - 411

Others

Service related to printing trade

Teaching material of the environment. Kamishibai(B3 SIZE,A4 SIZE)

Mtec Co.,Ltd
1059,Tsuyoshi,Matsuyama,Ehime,791-1122 Japan
Tel 81-89-960-8880 Fax 81-89-960-8881
E-mail office@mtec.tv
URL <http://www.mtec.tv>

▲ A1 Global warming
■ B1 Recyclability



Special feature

Not only it shows to children, but also it can communicate with them by a narrator so children can feel contact.

What! You can choose a language from 9languages. (Japanese / English / French / German / Italian / Spanish / Slavic / Chinese / Korean)

Japanese culture / traditional "Kamishibai" In the whole world! While experience craftsmen remember a smile of children, put heart into and make a wooden frame.

Various grain of woods are expressed by a tree ring, and it is only the original wooden frame in the world.

It must become a wooden frame with atmosphere by time by connecting to the next generation.

Effect

Consideration and gentleness are fed in the infancy when the susceptibility which is the most important in human being formation is rich in by letting them understand that there is life to garbage because garbage is reborn by recycle.



Kamishibai
(B3 SIZE[Without door With door],A4 SIZE)

Eco-products

EP - 412

Others

Fertilizer

Salt-tolerance High-performance Fertilizer containing ALA

COSMO OIL CO., LTD. and COSMO SEIWA AGRICULTURE CO., LTD
Toshiba Bldg., 1-1, Shibaura 1-chome, Minato-ku, Tokyo, Japan
Tel 81-3-3798-349 Fax 81-3-3798-3430
E-mail ala_info@cosmo-oil.co.jp
URL <http://www.cosmo-oil.co.jp>

▲ A1 Global warming
■ B2 Longevity
■ B3 Resource saving
■ B4 Higher quality



"PENTAKEEP-V" is the only fertilizer in the world that contains ALA. ALA is known to have the following physiological characteristics, making it relevant to environmental fields as well as agriculture.

1) ALA promotes plant absorption of fertilizer, so it is expected to lead to the best use of resource and protect against environmental contamination from run-off.

2) ALA promotes plant photosynthesis. Its carbon dioxide fixation is expected to contribute to protection of global warming.

3) ALA improves salt tolerance. It is expected to contribute to the greening of deserts and alkali soil.



PENTAKEEP-V; High-performance Fertilizer

Eco-products

EP - 413

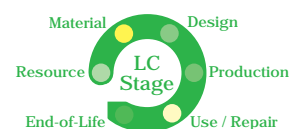
Others

Catalyst

Ecozone. Engineered using Nanotechnology to create Nano Titanium Dioxide

Titania Environmental Technologies Pte Ltd
30 Springleaf Garden, 788190 Singapore
Tel +65 6456 1910 Fax +65 6458 3704
E-mail enquiries@titania-envirotech.com
URL www.titania-envirotech.com

- ▲ A2 Air pollution
- B4 Higher quality
- B5 Energy saving
- ▼ B6 Environmental purification



Ecozone is a special surface coating system.

When applied, it reacts with visible light as a photocatalyst to combat against indoor air pollution and Sick Building Syndrome (SBS), which bring three important benefits:

1. Anti Bacterial/Viral Effect
 - a. Destroys the cell membrane of bacteria and coagulates the protein molecule in viruses.
 - b. Establishes a 99.97% kill rate of bacteria and viruses, which come into contact with the coated surface.
 - c. Reduces the infectious paths of bacteria and viruses
2. Air Purification/Deodorization
 - a. Destroys the energy bonds of gaseous molecules, enhancing the air quality of our immediate environment by getting rid of toxic gases such as formaldehyde, VOCs, NO_x, SO_x and benzene.
3. Anti Mould/Fungal
 - a. Inhibits the growth of mould and fungus in the air and damp areas



Ecozone.

Eco-products

EP - 414

Others

Paints

Energy Saving Insulation Coating for Interior and Exterior Wall and Roof

Chemson Asia Pte Ltd
24 Mandai Estate, 729915 Singapore
Tel +65 6763 8681 Fax +65 6762 2997
E-mail
URL www.chemsonasia.com

- ▲ A5 Resource consumption
- B3 Resource saving
- B5 Energy saving
- ▼ B6 Environmental purification



Chemson HeatShield is an environmentally-friendly decorative paint coating that contains advanced material of "Hollow Microspheres of Borosilicate Glass Bubbles" having remarkable "Heat Insulation" property.

The unique spherical shape glass bubble produces stable void which results in low thermal conductivity and a low dielectric constant. This means that CHEMSON HeatShield has the ability to slow down heat transfer remarkably.

CHEMSON HeatShield is called "Energy-Saving Decorative Paint Coating" which can cut utility bills (gas and electricity for air-conditioner or heater) substantially when applied on the internal wall by reflecting heat back in during the winter season. In the summer time, CHEMSON HeatShield will keep the inside room of the externally painted surface of a building cooler by re-radiating most solar heat back into the atmosphere.



Heatshield

Eco-products

EP - 415

Others

Paints

BioShield-Latest technology of Hygienic paint for the Interior Wall

Chemson Asia Pte Ltd
24 Mandai Estate, 729915 Singapore
Tel +65 6763 8681 Fax +65 6762 2997
E-mail
URL www.chemsonasia.com



Chemson BioShield is environmental-friendly water based decorative paint that has Zero-Voc, Anti-Bacteria and Aromatherapy Freshness properties.

It is one of the most important technological breakthroughs in Hygienic coating that provide the first line of defence against bacteria and germs on painted wall surfaces.

Chemson BioShield is also an "Eco-Friendly" product that releases no harmful VOC into the atmosphere and it complies with Singapore Environmental Council's Criteria for "Green Label" product. It is suitable for use in Hospitals, Hotels, Schools, Child Care Centre, Pharmaceutical & Cosmetics production facilities, Food preparation & Processing areas and many other places that require harmless paint.



Chemson Bioshield - Environment Friendly paint that use the latest technology for Hygienic paint

Eco-products

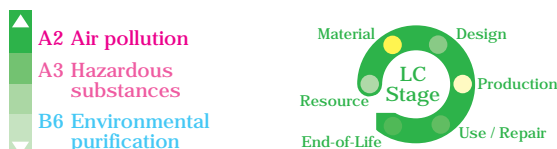
EP - 416

Others

Paints and related products

Crown Durolux

PPG Industries (Singapore) Pte Ltd
16 Sungei Kadut Way, 728793 Singapore
Tel +65 6752 2383 Fax +65 6752 7379
E-mail
URL



Crown Durolux is a Waterborne Polyurethane Finish to be used as Sealer and Top Coat.

It offers superior performance with greater wear, scratch, scuff, impact, stain, yellowing, flame, chemical and abrasion resistance.

Environmental Benefits:

Waterbased Coating is solvent free and therefore does not pollute the environment or harm your health. It is certified by Singapore Environment Council and granted the right to use the Green Label under the Singapore Green Labeling Scheme. Our product has Low Volatile Organic Compound (VOC) contents of less than 0.1%. It is non-flammable, non-toxic, free from Heavy Metal, formaldehyde free and has no unpleasant odor.



Waterborne Polyurethane Finish (091-X-2500)

Eco-products

EP - 417

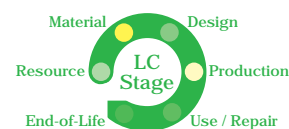
Others

Crown Duoprime

PPG Industries (Singapore) Pte Ltd
16 Sungei Kadut Way, 728793 Singapore
Tel +65 6752 2383 Fax +65 6752 7379
E-mail
URL

Paints and related products

▲ A2 Air pollution
▲ A3 Hazardous substances
▲ B6 Environmental purification



Crown Duoprime is a Waterborne Polyurethane Finish to be used as Sealer on wood substrates.

It offers superior performance with greater wear, scratch, scuff, impact, stain, yellowing, flame, chemical and abrasion resistance. Environmental Benefits:

Waterbased Coating is solvent free and therefore does not pollute the environment or harm your health. It is certified by Singapore Environment Council and granted the right to use the Green Label under the Singapore Green Labeling Scheme. Our product has Low Volatile Organic Compound (VOC) contents of less than 0.1%. It is non-flammable, non-toxic, free from Heavy Metal, formaldehyde free and has no unpleasant odor.



Waterborne Polyurethane Primer (091-0-2400)

Eco-products

EP - 418

Others

Near Zero VOC Anti-bacterial Paint

Haruna (S) Pte Ltd
No.6 Gul Drive, 629458 Singapore
Tel +65 6270 1602 Fax +65 6270 1250
E-mail siewlian@harunapaint.com
URL www.harunapaint.com

Paints and related products

▲ A2 Air pollution
▲ B4 Higher quality
▲ B6 Environmental purification



Haruna's near zero VOC emission HP Decofresh 202 attained the Green Label mark for water-based acrylic emulsion paint, having no formaldehyde, epichlorohydrin, and heavy metals such as mercury, lead, cadmium and hexavalent chromium. Apart from being eco-friendly, it is beneficial for the well-being of people as HP Decofresh 202 has been infused with anti-bacterial properties. This will ensure a painted surface that has a low level of harmful microbial activity, while not having an adverse impact on the environment as a whole. In addition to the eco aspects of the paint, the practical components have not been neglected. HP Deco Fresh 202 is characterized by its excellent paint properties of long-lasting colours, good washability, sealing hairline cracks, mould, blistering and peeling resistance.



HP Deco Fresh 202- Great for use where indoor air quality is important

Eco-products

EP - 419

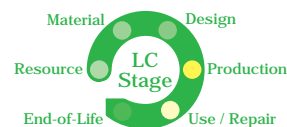
Others

Paints and related products

Solvent-less and water-based epoxy floor series

Haruna (S) Pte Ltd
No. 6 Gul Drive, 629458 Singapore
Tel +65 6270 1602 Fax +65 62701250
E-mail siewlian@harunapaint.com
URL www.harunapaint.com

▲ A2 Air pollution
■ B4 Higher quality
▼ B6 Environmental purification



Haruna's HP Hercules is a series of solvent-less and water-based epoxy floor coatings that do not emit hazardous air pollutants when compared with solvent-type epoxies. The application of HP Hercules results in reduced emission of harmful solvents and VOCs to the workplace and to the atmosphere. Despite the obvious environmental advantages, HP Hercules combines high mechanical strength and resistance to chemicals to produce a durable protective coating. The result is a series of pollution preventing hygiene coatings for car park, clean room, production plant, pharmaceutical plant, loading bay and warehouse.



HP Hercules - Great for industrial, commercial & residential uses

Eco-products

EP - 420

Others

Paints and related products

Water-based roadline paint

Haruna (S) Pte Ltd
No. 6 Gul Drive, 629458 Singapore
Tel +65 6270 1602 Fax +65 6270 1250
E-mail siewlian@harunapaint.com
URL www.harunapaint.com

▲ A2 Air pollution
■ B4 Higher quality
▼ B6 Environmental purification



Tarmac surfaces already take away precious urban real-estate for greenery. Haruna does not believe that the environment should suffer further with environmentally-unfriendly coatings being used to mark them. Therefore we formulate our product specifically as an environmentally responsible coating for marking roads. HP HorizoCoat is a water-based replacement for conventional chlorinated-rubber or thermoplastic road marking products. Being water means it is easy to apply, but does not sacrifice in terms of performance, as HP HorizoCoat couples high mechanical strength with a high-friction dried surface. This ensures that the painted surface is long-lasting, while making sure it is not slippery to traffic on it.



HP HorizoCoat - Suitable for roads, driveway, car parks etc.

Eco-products

EP - 421

Others

Miscellaneous chemicals

Biodegradable Chelating Agent - GLDA

Showa Denko Singapore Pte. Ltd.
4 Shenton Way #16-01 SGX Centre 2 Japan
Tel 65-6223-1889 Fax 65-6223-6007
E-mail gkyeo@sds.com.sg
URL <http://www.sds.com.sg>

▲ B6 Environmental purification
A3 Hazardous substances
▼ A4 Waste



GLDA is a biodegradable chelator for metals. It effectively prevents undesirable effects of metal ions in manufacturing processes. GLDA is an aqueous solution of the tetrasodium salt and its key properties are:

- * Biodegradable as defined by OECD tests, therefore an environmentally friendly chelating agent
 - * Efficient in cleaning hard surface
 - * Low corrosive effect against glass and certain metals
 - * High solubility in alkaline condition
 - * High performance as a builder for laundry detergents
- GLDA can be applied in industrial cleaners (for textile, paper, wood, glass, rubber, plastic, leather, metal finishing, ceramic industries) and household cleaners as well as in water treatment.



Eco-products

EP - 422

Others

Biodegradable hydraulic oil

Eco-friendly Bio Green Grass biodegradable hydraulic oil for off-road machines

KUBOTA Corporation
1-2-47, Shikisu-higashi, Naniwa-ku, Osaka-shi, Osaka, Japan
Tel 81-6-6648-2111 Fax
E-mail
URL www.kubota.co.jp/index.html

▲ A3 Hazardous substances
A4 Waste
B4 Higher quality
▼ B6 Environmental purification



This environmentally-friendly oil is degraded by microorganism and will not cause environmental damage if spilled onto grass, soil or into a river following a construction accident. We developed the technology for the world's first hydraulic oil that does not kill the grass. Eco-label certification criteria as biodegradable. It is certified as an Eco-label Product by Japan Environment Association.



Bio Green Grass

Eco-products

EP - 423

Others

Flexible plastic sheets

Ricoh RECO-View PR Film and CR Film used as re-writable cards

Ricoh Company, Ltd.

Ricoh Building, 8-13-1 Ginza, Chuo-ku, Tokyo 104-8222, Japan

Tel 81-3-6278-5209 Fax 81-3-3543-9347

E-mail envinfo@ricoh.co.jp

URL <http://www.ricoh.com/environment/>



Clear & fine 400dpi images on the information display of Ricoh RECO-View re-writable film can be easily erased and formed repeatedly up to several hundred times. Additionally, image data is memorized in the magnetic layer or the IC chip, which is retrieval when needed. Applications are "Loyalty Cards" to show shopping points with other information, "ID Cards/Passes" with or without a photo and an IC chip, and "Hospital Cards" with the next appointment information, etc. These films can be used ten times more than conventional direct thermal film. A loyalty card generates 0.0241Kg of CO₂ in its life cycle, which is one tenth of direct thermal cards.

The credit card type is reusable, but no information can be displayed on the card, and normal thermal card is just for one time use. Thus, these films can improve communication with cardholders, while reducing environmental impact.

* RECO-View is the trademark for Ricoh re-writable media. RE means RE-writable and Re-usable + ECO means economy and ecology.

** PR: Physical Re-writable Film with white opaque image

*** CR: Chemical Re-Writable Film with black image



RECO-View Re-writable PR Film for the loyalty card (Left) & CR Film for the hospital card (Right)

Eco-products

EP - 424

Others

Reinforced plastic products

Teaching material of the environment. Separation trash box "MIGO"

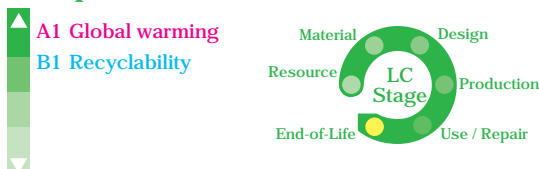
Mtec Co.,Ltd

1059,Tsuyoshi,Matsuyama,Ehime,791-1122 Japan

Tel 81-89-960-8880 Fax 81-89-960-8881

E-mail office@mtec.tv

URL <http://www.mtec.tv>



Special feature

It can be superior to a three-dimensional space model design, the long term durability that it isn't possible to be made by superior quality, only the stainless steel which experience artisan make by hand.

You can choose a classification kind of trash freely anytime. No pet lavatory (four trash cage) / a lavatory (one lavatory box) (included in normal specification.) It's to attract a heart of children. It's cute! Parent and child design of an animal. Because mass production is impossible, be precious.

Effect

If there is a recycling-oriented society realigned by environment improvements where people gather and there is MIGO in a familiar place, the children who are necessary for next generation will be able to pick up trash outdoor and to have some sense of values and mission. Because parents and children can separate garbage while taking communication, they can make a bright human and build a bright society.

If adults watch children separate garbage voluntarily, they think them proudly and will be able to think deeply once again about separating garbage and recycle.



Separation trash box "MIGO"

Eco-products

EP - 425

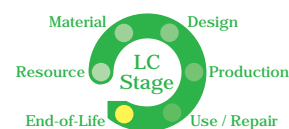
Others

Plastic products

Teaching material of the environment. Separation trash box "mini-MIGO"

Mtec Co.,Ltd
1059,Tsuyoshi,Matsuyama,Ehime,791-1122 Japan
Tel 81-89-960-8880 Fax 81-89-960-8881
E-mail office@mtec.tv
URL <http://www.mtec.tv>

▲ A1 Global warming
B1 Recyclability



Special feature

You can practice and learn what you study in Kamishibai, DVD / VHS animated image.

It is usable as a Trash Box anywhere after having used as a teaching material. In Child rooms!

We use rigid vinyl chloride, and produce to mold a dear product usable indoors.

It is quite strong.

Because 12 kinds of classification magnets stick, You can pleasantly learn various classification approaches.

Effect

Heart is healed by being always cute mini- MIGO at home, and consideration and gentleness are fed.

Since children with full of the spirit of inquiry act themselves and can learn, they grow interested in garbage.

Because they can separate garbage and throw away in daily performance, they can learn about separating garbage before they notice, the children say "Leave the garbage of house to me" and help voluntarily.



Separation trash box "mini-MIGO"

Eco-products

EP - 426

Others

Plastic products

Multiple Edge Noise Barrier "TONAKAI"

Bridgestone Corporation
10-1,Kyobashi 1-chome Chuo-ku,Tokyo,104-8340 Japan
Tel 81-45-825-7538 Fax
E-mail
URL <http://www.bridgestone.co.jp/english/index.html>

▲ B4 Higher quality
B5 Energy saving
B6 Environmental purification



Multiple Edge Noise Barrier "TONAKAI" is a new type noise barrier which is more economical and effective on reducing the road-traffic noise.

- 1) Variation of 3 types; Large type (Height/Width:1m/2m), Small type (H/W:0.5m/1.15m), Mini type (H/W:0.5m/0.5m)
- 2) "TONAKAI" can reduce the noise by 3-5dB compared with a conventional noise barrier of the same height.
- 3) Better noise reduction without heightening the barrier enable to avoid the problem of sunlight and EMI interference.
- 4) "TONAKAI" can reduce the total cost of noise-control measures.
- 5) The noise reduction mechanisms are "Multi-diffraction" and "Mutual interference of sound wave in the barrier".
- 6) "TONAKAI" meets strength and safety standard.
- 7) "TONAKAI" can also be used for the railway noise.



TONAKAI (Multiple Edge Noise Barrier)

Eco-products

EP - 427

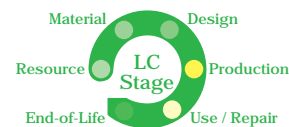
Others

Jute Shopping Bags

Eco-Friendly Reusable Promotional Jute Shopping Bags

K K International
3 D, Asha Towers; 34/1 Bondel Road;
Kolkata - 700019 India
Tel +91-33-22802716 Fax +91-33-22806661
E-mail kkinl@vsnl.net
URL

- ▲ A1 Global warming
- B2 Longevity
- B4 Higher quality
- ▼ B6 Environmental purification



We are manufacturers of Biodegradable Promotional Jute Shopping Bags In Other Words Eco Friendly Jute Bags. These bags are Reusable and best replacement for throwaway Plastics Bags which are not Eco Friendly. Jute the main material of these bags is obtained from Plants and hence Totally Biodegradable. These bags last many times more than plastics bags and when discarded Decompose Naturally. From the commercial point of view the bags are not very expensive on the pocket and since it can be printed hence becoming attractive and is also used for promotional purpose and as gifts too. Reusability gives value for money and its Eco Friendly Natural Properties make it safe for the Environment.



Eco-products

EP - 428

Others

Containers

BIOPAK Sharps Container

MEA Environment (Asia Pacific) Pte Ltd
12 Tuas Ave 1, 639497 Singapore
Tel +65 6861 8141 Fax +65 6863 3310
E-mail robin@mea-environment.com
URL

- ▲ A3 Hazardous substances
- A4 Waste
- B6 Environmental purification
- ▼



Protect yourself, Protect Others

Cut & skin injuries can happen anywhere, anytime when workers are not careful in handling sharp objects & biohazard waste. At MEA Environment we believe in every safety aspect of Waste Management, particularly in handling sharps, needles, blades & blood content.

Our sharps container, Biopak bins meets the stringent standard of BS7320:1990 and they are design to meet OSHA, W.H.O, APIC, CDC requirements.

The company has also other ranges of waste bins, Foot Pedal bins and Street furnishing for different set up and environment

Our Biopak Bin sizes include: 1.63L / 6L /10L /20L
Foot Pedal Biopak Bin : 30L , 42L
Biopak Mobile Garbage Bin: 60L,120L, 240L, 660L



Eco-products

EP - 429

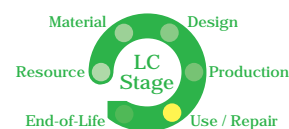
Others

Plastic containers

Recycled Containers with Attractive Appearance and Strength

Sekisui Chemical Co., Ltd.
2-3-17, Toranomom, Minato-ku, Tokyo, Japan
Tel Fax
E-mail kankyo@sekisui.jp
URL <http://www.sekisui.co.jp/>

▲ A5 Resource consumption
B1 Recyclability
B3 Resource saving
B7 Use of recycled materials
▼



Plastic containers are often used for in-plant handling of parts and products, as well as for their storage and transportation. However, end-of-life containers are usually disposed of in landfills or by incineration. There are two conventional methods of recycling: 1) pelletizing collected containers for use as molding materials; and 2) mixing the recovered pellets with new materials. However, pelletizing is costly and has product quality and color drawbacks. Relying on a proprietary injection molding method that uses recycled container material for the core layer which is sandwiched by new material layers, Sekisui Recycled Containers provide effective solutions for problems associated with recycling of plastic containers. Features of Sekisui Recycled Containers

- Three-layer molding structure in which the recycled container material forms the core layer and is sandwiched by new material layers.
- Color requirements can be met for recycled containers.
- The same quality and strength as 100% new material containers can be maintained.
- Crushed chips of collected containers can be used without pelletizing.
- Recycling can be repeated any number of times.



Eco-products

EP - 430

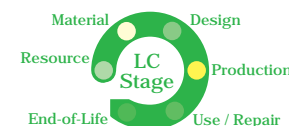
Others

Plastic waste container

Plastic waste container systems

Otto Waste Systems (S) Pte Ltd
12 Tuas Avenue 1, 639497 Singapore
Tel +65 6898 1267 Fax +65 6268 5193
E-mail sales@ottoasiapac.com
URL www.ottoasiapac.com

▲ A4 Waste
B4 Higher quality
B6 Environmental purification
B1 Recyclability
▼



Established in 1934, the family owned group OTTO, has grown into an international provider of Waste Containerization Systems. With almost 9 millions waste containers sold worldwide, commonly known as MGB, the Otto Group remains the dominant player in this industry. The Otto group offers waste handling & collection systems and this remains an integral component to the waste management industry. Customers can choose from a wide range of tried and tested state-of-art products and systems, which comply with the highest international standards. Based on a strong core business of 2-wheeled and 4-wheeled containers, the Otto Group is well placed to offer complete solutions for handling domestic and industrial waste.



MGB60-1100L Mobile Garbage bins & street furnishing

Eco-products

EP - 431

Others

Galvanizing and other hot-dip coating

Re-galvanized hot dip zinc-coated ironware

Cycle Inc.

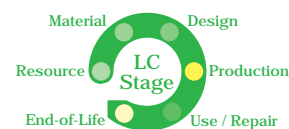
Shinbashi TS Bldg. 2F, 1-22-5, Nishi-shinbashi,
Minato-ku, Tokyo, 105-0003, Japan

Tel 81-3-3507-3196 Fax 81-3-3507-3197

E-mail s-egashira@z-cycle.co.jp

URL <http://www.z-cycle.co.jp>

- ▲ A4 Waste
- B1 Recyclability
- B7 Use of recycled materials



Generally, rusty hot dip zinc-coated metal fittings are disposed of as iron scrap. However, we offer recycled products by collecting those rusty metal fittings and re-galvanizing them after exfoliating the surface coat and rust. This recycling reduces the energy used in the production process to about 1/10 of that of new products. In addition, by electrolyzing wastewater from the sulfuric acid used for exfoliation(sulfuric acid with zinc and iron) with an electrolyzer, it is possible to retrieve and reuse the sulfuric acid and zinc.



Regalvanized steels

Eco-products

EP - 432

Others

Vending machines

The world's first vending machine adopting the heat pump heating system.

Matsushita Refrigeration Company

3-4-74 Noji-higasi, Kusatsu City, Shiga,
525-0058 Japan

Tel 81-77-566-4810 Fax 81-77-565-9633

E-mail

URL

- ▲ A1 Global warming
- A3 Hazardous substances
- B6 Environmental purification



This vending machine realizes the high efficiency more than double as high as the efficiency of electric heater by adopting the heat pump heating system, and increases the efficiency of cooling system.

As a result, it realizes the energy consumption as 950kWh per year.
(Achievement ratio: 205% of the standard of Energy Saving Law)



Can & bottles vending machines NS-6R30HP

Eco-products

EP - 433

Others

Digital cameras

EOS 350D DIGITAL: Environmentally conscious design product.

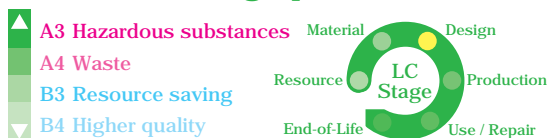
Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo Japan

Tel 81-3-3758-2111 Fax 81-3-3758-1160

E-mail

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



Approx. 13% of weight is reduced compared to previous model EOS 300D DIGITAL. EOS 350D DIGITAL weights 485g whereas previous model EOS 300D DIGITAL weights 560g. And also approx. 25% of volume is reduced compared to previous model EOS 300D DIGITAL. EOS 350D DIGITAL is 762.6cm³ (W:126.5mm, H:94.2mm, D:64mm) whereas previous model EOS 300D DIGITAL is 1017.8cm³ (W:142mm, H:99mm, D:72.4mm)



EOS 350D DIGITAL

Eco-products

EP - 434

Others

Digital cameras

EOS-1Ds Mark II : A RoHS-compliant digital SLR for professionals

Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan

Tel 81-3-3758-2111 Fax 81-3-3758-1160

E-mail

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



The RoHS Directive concerning the "Limitation of Specific Hazardous Substances contained in Electric and Electro Equipment" will be enforced from July 2006 in the EU. It is intended to restrict and prohibit the use of specific hazardous substances in electric and electro equipment.

The EOS-1Ds Mark II is an eco-friendly product that complies with the RoHS Directive, a European environmental regulation concerning lead/hexavalent chromium/mercury/cadmium/specific bromine flame-retardant materials PBB/PBDE.



EOS-1Ds Mark II

Eco-products

EP - 435

Others

Digital cameras

Nikon Digital SLR Camera D50

NIKON CORPORATION

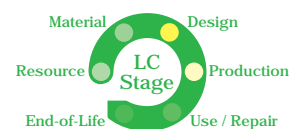
Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku,
Tokyo, Japan

Tel 81-3-3214-5311 Fax

E-mail

URL <https://www.nikon.co.jp>

- ▲ A3 Hazardous substances
- B3 Resource saving
- A4 Waste
- ▼ B4 Higher quality



A digital SLR camera that enables everyone, even beginners, to take the images he or she wants, quickly and easily. Digital Vari-Program, ideal for family use, allows you to select your desired mode for consistently beautiful photos - the SLR D50 handles every essential setting. The new "Child" mode takes more vibrant pictures of children.

- (1) Reduced product mass : 23% (160g) less than the prior type D100
- (2) Lead-free solder: Used on all circuit boards
- (3) Eco-glass (lead & arsenic free optical glass) usage: 100%
- (4) Hazardous substances (Pb,Cd,Hg,Cr⁺₆,PBB,PBDE) free: Meets RoHS directive of EU



Nikon Digital SLR camera D50

Eco-products

EP - 436

Others

Digital cameras

Nikon Digital SLR Camera D200

NIKON CORPORATION

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

Tel 81-3-3214-5311 Fax

E-mail

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

- ▲ A3 Hazardous substances
- B3 Resource saving
- A4 Waste
- ▼ B4 Higher quality



The D200 has demonstrated outstanding performance, ranking alongside the finest Nikon models at the fore of the digital SLR camera industry, and providing benefits such as exceptional images of 10.2 effective megapixels; the world's fastest power-up time; the fast continuous shooting capability of five frames per second; and a high-grade body finish and appearance.

- (1) Reduced product mass : 22% less than the Nikon D2X
- (2) Reduced product volume : 39% less than the Nikon D2X (from 157.5*149.5*85.5 mm to 147*113*74 mm)
- (3) Effortless assembly and repair : Packs the functions of five separate electronic boards into one for easier mounting, assembly and repair
- (4) Lead-free solder : All electronic circuit boards use lead-free solder
- (5) Hazardous substances : Meets RoHS Directive of EU
- (6) Eco-glass(lead & arsenic free optical glass) usage : 100%



Nikon Digital SLR Camera D200

Eco-products

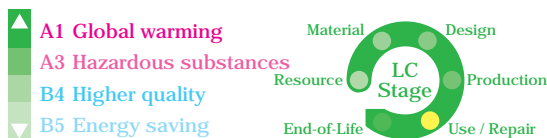
EP - 437

Others

Video recording and duplicating equipment

Super-Dynamic III Color Surveillance Camera, Quick installation, Power saving

Panasonic System Solutions Company,
Matsushita Electric Industrial Co., Ltd.
4-3-1, Tsunashima-higashi, Kohoku-ku,
Yokohama-shi, Kanagawa, Japan
Tel 81-45-544-3613 Fax
E-mail
URL <http://panasonic.co.jp/pss/>



Super-Dynamic III Color Surveillance Camera:

Reduced installation time and energy

Backing focus adjustment can be carried out by moving the image pickup element in the camera to the most desired position through the original Auto Back Focus function. This allows focus to be adjusted roughly at the installation time and reduces the time and energy for focus adjustment to a third, because focus can be fine-tuned with a switch on the camera or a remote controller on final inspection.

Reduced power consumption

While functions such as wide dynamic range, high-image resolution, high sensitivity, Auto Back Focus, Scene change detection and Auto image stabilizer functions have been either enhanced or newly added to the previous model, power consumption is kept at no more than that of the previous model.



WV-CP480/CP484 Series

Eco-products

EP - 438

Others

Video cameras

DVCPROHD P2 Camera recorder, HVX200 (for professional)

Panasonic AVC Networks Company,
Matsushita Electric Industrial Co., Ltd.
1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504 Japan
Tel 81-6-6905-8356 Fax 81-6-6905-4755
E-mail
URL <http://panasonic.co.jp/pavc/>



True high definition image quality with low-compression DVCPRO HD intraframe recording.

Multiple formats: DVCPRO HD, DVCPRO 50, DVCPRO, DV selectable.

New generation system 'DVCPROHD P2 Series' employing world's first semiconductor device in recording medium.

The system is capable of rewriting for 30,000 times, degradation or dropout caused by number of use does not occur, and connector of medium is highly durable, so that lifetime of medium is extended significantly compared with recording tape (minimum 100 passes) and it greatly contributes to resource saving and reuse.

Heavy use of FPGA/Ultra LSI in promoting digital signal processing has led to reduction of parts quantity and power consumption despite realization of high function.

Non-Use of Specific Chemical Substances*

(* Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)



Memory card Camera recorder P2 System,
AG-HVX200

Eco-products

EP - 439

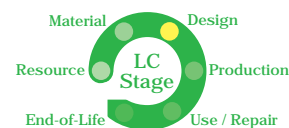
Others

Electric audio equipment

Digital Audio Mixer for Professional

Panasonic System Solutions Company,
Matsushita Electric Industrial Co., Ltd.
4-3-1, Tsunashima-higashi, Kohoku-ku, Yokohama-shi,
Kanagawa, Japan
Tel 81-45-544-3613 Fax
E-mail
URL <http://panasonic.co.jp/pss/>

▲ A3 Hazardous substances
B3 Resource saving
B5 Energy saving



This is a "System-in-One" digital audio mixer which is integrated sound system components into one unit, such as mixer, equalizer, acoustic feedback suppressor, compressor/limiter, delay, reverb, etc. Resources and Energy Saving

Reduction in the number of devices and voltages has been carried out through the switching power supply of all circuits and development of next generation digital signal processing architecture.

- Reduction in the number of printed circuits boards. (14 pcs <> 7 pcs)
 - Compact size (capacity reduction 28%)
 - Light weight (weight reduction 29%)
 - Power consumption (reduction 48%)
- (Compared to our models of FY2000)

Green Materials

- Use of fastening screws and aluminum die-cast made by hexavalent chromium-free chemical treatment
- Chromium-free processed steel for inner chassis
- Use of lead-free solder



Digital Audio Mixer WR-D40

Eco-products

EP - 440

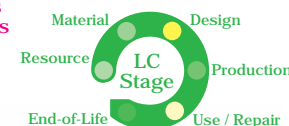
Others

Industrial Personal Computer

Long-life designed Industrial-use Personal Computer, FA3100S, model 9000

TOSHIBA CORPORATION Industrial Systems Company
1-1, Shibaura 1-Chome, Minato-Ku, Tokyo 105-8001, Japan
Tel Fax
E-mail
URL

▲ A3 Hazardous substances
A4 Waste
B2 Longevity



FA3100S model-9000 is the latest model of industrial-use personal computer, which is for the industrial systems or the social-infrastructure that is working for 24 hours. The selected CPU is the product that is available for a long term, and the memory supports ECC (Error Check and Correct) for reliability improvement. Long-life high-reliability products were selected for other load parts of PC. The computer is equipped with the RAS function that diagnoses the operating state and helps the restoration of the system from unusual state. So, it has high reliability and versatility that are important for an industrial product. Aiming to lighten the load to users and the environment, we are actively working on the effective use of resources by reducing the harmful substances related to the environment and by providing long-life products. As an approach to the reduction of hazardous substances, we took the initiative in promoting the reduction of six substances in RoHS directive, in cooperation with parts-makers. In addition, the maintenance of 15 years at the longest is possible, and thereby the reduction of waste is realized.



Industrial Computer (FA3100S model 9000 type)

Eco-products

EP - 441

Others

Parts of motor vehicles, including parts of motorcycles

Tire Pressure Monitoring System (TPMS)

BRIDGESTONE CORPORATION

10-1, Kyobashi 1-chome Chuo-ku, Tokyo, 104-8340 Japan

Tel 81-3-3563-6972 Fax 81-3-3563-1165

E-mail

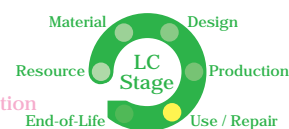
URL <http://www.bridgestone.co.jp/english/index.html>

▲ B5 Energy saving

B2 Longevity

B4 Higher quality

▼ A5 Resource consumption



The Tire Pressure Monitoring System was developed to improve the accuracy and accessibility of reading tire air pressure which is a major factor in safety, economy and other benchmarks of tire performance.

The system comprises a sensor fixed onto the wheel with a special band when the tire and wheel are assembled. The system also includes a hand-held device that receives radio signals emitted from the sensor. The device reads tire air pressure and internal temperature data when held close to, but not necessarily touching, the tire. Owners of fleets can use one hand-held device to read sensors equipped in wheel assemblies of many vehicles.



TPMS (Handreader & Sensor)

Eco-products

EP - 442

Others

Microscopes and magnifying glasses

Nikon Fieldmicroscope Series -EZ-Micro-

NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku,

Tokyo, 100-8331, Japan

Tel 81-3-3214-5311 Fax

E-mail

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

▲ A1 Global warming

A3 Hazardous substances

A5 Resource consumption

▼ B4 Higher quality



This top-end fieldmicroscope from Nikon's Naturescope series was designed for microscopic observation of insects, vegetables and minerals, and enables simplified digital photography during observation. The prism in the photographic optical path is treated with phase-correction coating for superb photography with a Nikon compact digital camera.

(1) Use of bioplastic : Four microscope body parts, as well as the packing bag, are made from vegetable-origin plastic to reduce petroleum dependence.

(2) Reduced hazardous substances : PVC (polyvinyl chloride) has been totally eliminated from the main body, case and strap. Other parts in conformance with Nikon's green procurement standards.

(3) Eco-glass usage : 100%



Nikon Fieldmicroscope-Naturescope Series-Fabre Photo

Eco-products

EP - 443

Others

Exchange lenses for cameras

Eco-friendly EF Lenses with High Image Quality

Canon Inc.

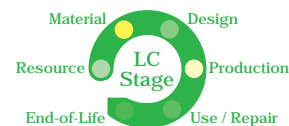
30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan

Tel 81-3-3758-2111 Fax 81-3-3758-1160

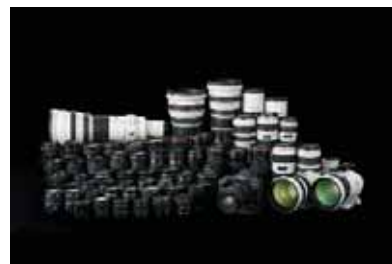
E-mail

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

▲ A3 Hazardous substances
A4 Waste
▼ B6 Environmental purification



Preventing sludge from polluting the environment requires a complex and large-scale treatment process. Lead-free lenses will sweep away the root use of lead. Canon launched the development of lead-free lenses in partnership with glass material manufactures and was successful in developing lenses with the same optical features, durability and workability as conventional lenses, using substances that do not cause harm to people or the environment. At least 100 types of Canon lenses, including EF lenses, are made of Lead-free glass materials.



Canon EF lenses

Eco-products

EP - 444

Others

Watches

Enviromental Friendly Solar Powered Watches

Citizen Watches (H.K.) LTD. Singapore Branch

101 Thomson Road, #32-05 United Square, Singapore

307591 Singapore

Tel (65) 62569188 Fax (65) 62569488

E-mail

URL

▲ B3 Resource saving
▼



In 1976, Citizen revolutionized watchmaking with the introduction of light-powered watches.

Three decades later, Citizen Eco-Drive introduces the most advanced light powered timepiece ever - the Minute Repeater Perpetual Calendar with Alarm.

At the push of a button, the Minute Repeater chimes the hour, quarter hour and minute. Eco-Drive technology joins hands with an old masterpiece and light comes to the Minute Repeater.

Citizen Eco-Drive watches use the simplest, yet most technically advanced power generating and storage system in the Watch Manufacturing Industry. A Solar conversion panel and energy cell are the power provider for these Quartz Watches. Eco-Drive's ability to use light from any source to generate electrical power means that the supply is limitless and free. The absence of any added complex power generating machinery that would require additional upkeep is another big advantage.



BL9000-59L

Eco-products

EP - 445

Others

wn-1, the globe-shaped wrist watch

Think the Earth Project / SPACEPORT INC.
EastWest Bldg 5F, 5-17-10, Hiro-o, Shibuya-ku, Tokyo, Japan
Tel 81-3-5798-2895 Fax 81-3-5798-2896
E-mail tte-sales@spaceport.co.jp
URL <http://www.thinktheearth.net>

Watches



View the world from outer space. Try applying planetary speed to your body.

"wn-1" is imaged after the view of the Earth as seen from the window of a spaceship. Its globe-shaped hour hand rotates counterclockwise with the North Pole at its center just like the real Earth does. You can read the time of any place on the northern hemisphere at a single glance. "wn-1" consists of three parts: Base holder w/band, Core module and Bezel. They come in corrugated craft paper wrappings designed after geologic strata. The cardboard layers packed inside function as shock-absorbing material. You can use the package and 20 illustration cards inside it to make wn-1 a desk clock. wn-1 has as many appearances as the people who wear it, and the package won't be thrown away after purchase as it also functions as a part of the product. wn-1 is equipped with a 10-year battery for long-time use. wn-1 is the first product from Think the Earth Project whose worldwide sales started in March 2001. wn-1 was given form by SII (Seiko Instruments Inc.) who sympathized with Think the Earth Project's theme: ecology and economy in coexistence. Wearing "wn-1" makes you feel closer to the Earth always.



wn-1 (watch northern hemisphere)

Eco-products

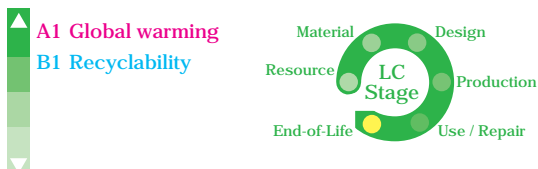
EP - 446

Others

Teaching material of the environment. DVD/VHS Animation

Mtec Co.,Ltd
1059,Tsuyoshi,Matsuyama,Ehime,791-1122 Japan
Tel 81-89-960-8880 Fax 81-89-960-8881
E-mail office@mtec.tv
URL <http://www.mtec.tv>

Audio disc records, Video disc records



Special feature

You can study 9 languages in one piece of DVD! How convenient! It's the first time in the world! It's with 9 languages of subtitles Japanese voice +9 language (Japanese / English / French / German / Italian / Spanish / Slavic / Chinese / Korean)

This is with the subtitles which children of deaf and dumb can enjoy! VHS animation is Japanese voice only.

Because characters of dear animal appear on the screen displays, children take an interest and they can pleasantly learn about recycle. Effect

Because it expresses what garbage is reborn and can be changed in a future model, creative power becomes rich, and, in the future, is he or she to be a researcher or an exploiter?

By learning how to separate garbage, children can have sense of values and mission and can tell right from wrong, then there won't be the juvenile delinquency.



DVD/VHS Animation

Eco-products

EP - 447

Home electric appliances / Lightings

Manufacturing products

100% recycled PET panels for groove-wiring double floors

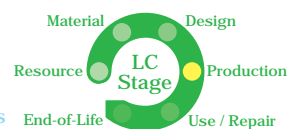
Panasonic AVC Networks Company,
Matsushita Electric Industrial Co., Ltd.
Electrical Conduits and Wiring Materials Division,
Matsushita Electric Works, Ltd.

14, Kashiwabara, Ishioka-shi, Ibaraki, Japan
Tel 81-299-23-2457 Fax 81-299-23-2417

E-mail

URL http://biz.national.jp/Ebox/oa_floor/

- ▲ A1 Global warming
- ▲ A5 Resource consumption
- ▲ B3 Resource saving
- ▼ B7 Use of recycled materials



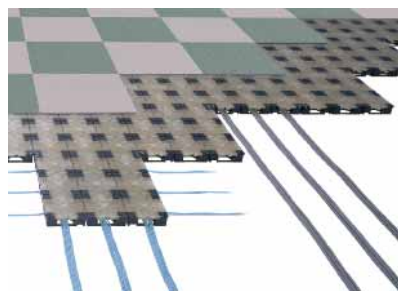
1. This wiring floor is made of recycled PET bottle flakes to effectively use resources to preserve the global environment. CO₂ emissions can be reduced by 32kg by recycling PET bottles to make 1m² panels.

2. The transparent cover allows wiring in grooves to be checked at a glance by just turning over the tile carpets.

3. 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.

4. The finished floor panel thickness is only 50mm. The thin panels can also be used in offices with a low ceiling.

5. The panel joint rings securely fix the panel corners. They prevent panel displacement and provide high resistance to earthquakes.



Wiring Floor FPZ3000 NE11840

Eco-products

EP - 448

Home electric appliances / Lightings

Television receivers

Wastewater Treatment Technology

TEIJIN ENGINEERING LIMITED

6-7 Minami-honmachi 1-chome, Chuo-ku, Osaka ,
541-8587 Japan

Tel 81-6-6268-2227 Fax 81-6-6268-2238

E-mail

URL www.teijin-eng.co.jp

- ▲ B6 Environmental purification



No sludge is produced and running costs are low. We are conducting businesses of Electro-Catalytic Method and Multi-Stage Activated Biological Process jointly with ELIF of Israel based on their technologies. EL-CAT: Electro-Catalytic Method

Features/Raw water of high concentration can be treated. Continuous process for high efficiency. Low running cost. No sludge is produced. MSABP: Multi-Stage Activated Biological Process
Features/High purification efficiency. Primary and secondary sedimentation tanks are not required. Low operation cost. No activated sludge is produced. Fully automatic and space-saving.



Eco-products

EP - 449

Others

Waste management, Water management

Ultra-Flo® membrane and systems for water and wastewater treatment

Ultra-Flo Pte Ltd

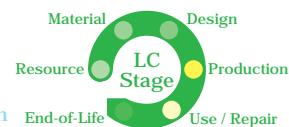
452 Tagore Industrial Avenue, 787823 Singapore

Tel +65 6457 7533 Fax +65 6457 7517

E-mail info@ultra-flo.com.sg

URL www.ultra-flo.com.sg

- ▲ A4 Waste
- B1 Recyclability
- B3 Resource saving
- ▼ B6 Environmental purification



Ultra-Flo® ultrafiltration membrane modules and systems are used in the following areas to protect and enhance the environment using minimal chemicals:-

- Water Clarification-for municipal water and surface water, including sea, river, well water for industrial use
 - Water Upgrading-from industrial process water to ultra-pure water
 - Water Recycling-to reduce cost and dependency on treated water
 - Disposal Compliance-to satisfy discharge standards and prevent pollution
- The membrane can be in a hollow-fiber, tubular or flat sheet form and modified to suit each particular application.

System configuration can be "in-side out" or "out-side in". As in the case of membrane bioreactor systems (MBR), it can be a "side-stream" or "submerged" configuration.

We are also one of the largest wastewater treatment DBOO (design, build, own and operate) service provider in Singapore using our proprietary membranes and know-how. Our specifically designed products and services are exported throughout Asia and Europe.

We are a test-bed partner for MBR by the Public Utilities Board (Singapore's Water Authority) and already completed several projects internationally.



2 x M-20 Ultra-Flo® System (Installed at oil refinery in Baku, Azerbaijan for sewage treatment)

Eco-products

EP - 450

Others

Microbial Inoculant

EM applications - making microorganisms work for you!!

EM Research Organization Inc.

468 Kawasaki, Uruma-city, Okinawa 904-2203 Japan

Tel Fax 81-98-972-6068

E-mail overseas@emro.co.jp

URL www.emro.co.jp/english

- ▲ B6 Environmental purification
- A4 Waste
- B1 Recyclability



EM stands for Effective Microorganisms™. EM is a combination of various beneficial, naturally-occurring microorganisms mostly used for or found in foods. It contains beneficial organisms from 3 main genera: phototrophic bacteria, lactic acid bacteria and yeast. These Effective Microorganisms™ secrete beneficial substances such as vitamins, organic acid, chelated minerals and antioxidants when in contact with organic matter. They change soil microflora and fauna so that disease-inducing soil becomes disease-suppressing soil which in turn has the capability to develop into azygogene soil. The anti-oxidation effects of these microorganisms pass directly to the soil or indirectly to plants maintaining their NPK and CN ratio. This process increases the humus content of the soil and is capable of sustaining high-quality food production.



EM1 Microbial Inoculant produced in Japan

Eco-products

EP - 451

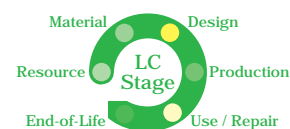
Others

Sensor tap

Sensor Tap using Hydro Power Technology

Rigel Technology (S) Pte Ltd
No.12 Kaki Bukit Techpark 2, 415948 Singapore
Tel +65 6844 0660 Fax +65 6844 0112
E-mail sales@rigel.com.sg
URL www.rigel.com.sg

- ▲ A1 Global warming
- B1 Recyclability
- B3 Resource saving
- ▼ B5 Energy saving



A technology that is making the full use of water movement energy and transform into electrical energy for other useful application such as powering the sensor system and solenoid flushing activation. The complete system consists of a power generator coupled with a turbine rotor, a rechargeable battery pack and a sensor activation solenoid.

When each time the solenoid valve is opened, the water will have to flow through the turbine rotor and start spinning it just like the windmill. The spinning effect will thus make the generator to generate electricity to charge the rechargeable battery that was designed for storing the electricity energy. This stored energy will be used for powering the sensor system and activating the solenoid. The turbine rotor is also act as a water restrictor in this application and thus reduces the water flow rate that indirectly reduces the water discharge volume. A lab test has shown that there is a further saving of water up to 30%.



RIGEL ST 102DX

Eco-products

EP - 452

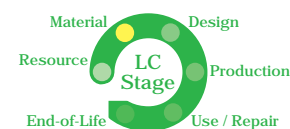
Others

Organic fertilizers

Amimate

FD Green (Thailand) Co.,Ltd.
6 Mu 2, Suk Sawat Road, Tambon Bang Kru, Amphoe
Phra Pradaeng, Samut Prakarn 10130 Thailand
Tel +66(2)463-4669 Fax +66(2)819-2650
E-mail ppd_fdgadm@bkk.ajinomoto.com
URL

- ▲ B1 Recyclability
- B3 Resource saving
- B4 Higher quality
- ▼ B6 Environmental purification



Amimate made from by-products of Ajinomoto Group of Companies in Thailand. As the useful residual nutrients used in production of food products is guarantee of no toxic. We found that, these residue was still able to be nutrient for enhancing the plant growth. Moreover, they are the source of organic nutrients (amino acid) to support bacterial activity for biological improvement of soil. Therefore, it had been developed to be product with proven scientific evidence of no residual impact to soil and environment in long-term application. Amimate selling as organic fertilizer for agriculturalist in Thailand.



Eco-products

EP - 453

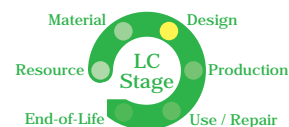
Others

Books

We Will Make The World Green (Book)

FD Green (Thailand) Co.,Ltd.
6 Mu 2, Suk Sawat Road, Tambon Bang
Khru, Amphoe Phra Pradaeng, Samut Prakarn
10130 Thailand
Tel +66(2)463-4669 Fax +66(2)819-2650
E-mail ppd_fdgadm@bkk.ajinomoto.com
URL

- ▲ B1 Recyclability
- B3 Resource saving
- B5 Energy saving
- ▼ B6 Environmental purification



The book explains a strategic approach to the environmentally sustainable business, which FD Green (Thailand) Co.,Ltd. (FDG) applied to make its exponential success in the environmentally sustainable business. Leading edge research and innovative thinking led FDG to develop an environmentally sustainable business model that has enabled it to turn previously unprofitable waste and by-products into a thriving business and a competitive advantage in the fertilizer sector. As an ethical and socially responsible company, FDG would like to share its environmental concerns, its research and its business model with other decision-makers for the benefit of the future generations.



4

Eco-services

- I Product related services
- II Reuse and recycling services
- III Outsourcing services
- IV Management related services
- V Others

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Eco-services

ES - 001

Product related services

Fluorescent lamps

Fluorescent lamp management service, 'A Light Relief Service'

Matsushita Electric Works, Ltd.

1048, Kadoma, Kadoma-shi, Osaka, Japan

Tel 81-6-6908-1131 Fax

E-mail

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

A4 Waste

B1 Recyclability

B3 Resource saving

B5 Energy saving



This service is to sell only a function of 'lighting' without a transfer of ownership of products to a customer.

Service companies designated by Matsushita Electric Works investigate the status of customers' lamp use, and set the monthly service prices based on the results.

Customers are not responsible for the draining wastes, and the used lamps are recycled as resources by intermediate processing companies recommended by Matsushita Electric Works. A consulting service is continuously provided for customers. (ex. how to lengthen the life of lamps.)

Information on the status of services and disposal of used lamps is disclosed on the Web Site.



A Light Relief Service

Eco-services

ES - 002

Product related services

Cleaning tools

HydroBall Automatic Tube Cleaning System for Shell & Tube Condensers

HydroBall Technics (SEA) Pte Ltd

Technopreneurship Incubation Centre,
ITE College East, 10 Simei Ave, 486047 Singapore

Tel +65 6338 8033 Fax

E-mail petersoh@hbt.com.sg

URL www.hbt.com.sg

A1 Global warming

A5 Resource consumption

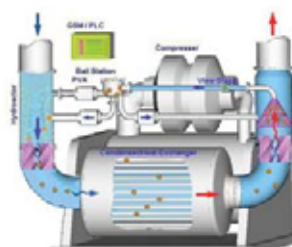
B3 Resource saving

B5 Energy saving



The HydroBall System automates the cleaning of condenser tubes in central air-con chillers by passing customized sponge balls at preset intervals through the condenser tubes to prevent the formation and accumulation of scaling and fouling deposits on the inner surface of the tubes. Fouling in condenser tubes causes the chiller to be less energy efficient and results in higher energy consumption. Besides saving energy, the system also help to reduce the use of water treatment chemicals and water consumption, thereby reducing the discharge of chemically treated water from the cooling system into water courses.

HydroBall Automatic Tube Cleaning System by HydroBall Technics



Eco-services

ES - 003

Product related services

Green Gifts

Present Tree

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://env-r.com/tree>



Present Tree is present that delivers an owner certificate for the planted tree with a message card. Trees will be planted for the reproduction of tropical forests in the 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. Ten years later, the Teak will be cut down, and saled. The income of the Teak will be paid to the owner. The income will also able to be used for reforestation, or the environment conservation activity. As another privilege, CO₂ offset certificate is attached to Present Tree. The planted tree will become forest and that will absorb carbon dioxide. It contributes prevention of global warming. The owner certificate is described with the owner's name, and the latitude and the longitude of the position where the Teak sapling is afforested, that is measured by the GPS(Global Positioning System).



[Present Tree] contents

Eco-services

ES - 004

Product related services

Environmental Improvement

Environmental Services

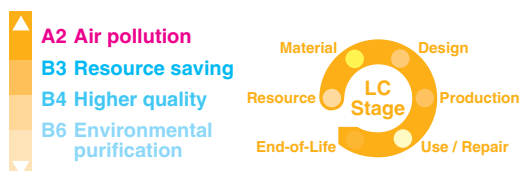
Dayen Environmental Limited

No.6 Woodlands Industrial Park E1, 757729 Singapore

Tel +65 6365 0652 Fax +65 6365 1025

E-mail

URL



Dayen is an environmental engineering company that provides comprehensive solutions for clean water. We are a single-source provider of engineering, field construction, project management and operations and maintenance services to municipal, industrial and commercial customers. We undertake EPC turnkey projects and manufacture our own and trade alliances' environmental engineering equipment. We also invest in water and wastewater treatment facilities through DBOO (Design, Build, Own & Operate) and BOOT (Build, Own, Operate and Transfer) schemes. We embrace advanced technologies in our application such as membrane in MBR, UF and RO systems. At the same time, we also use conventional treatment methodologies, where appropriate. In doing so, we provide cost effective, efficient and value-added solutions to our clients.

Dayen's capabilities in area included :

- Liquids Treatment Systems
- Solids Treatment and Minimization Systems
- Pumping Stations
- Dewatered Sludge Storage and Conveyance Systems
- Foul Air Containment, Extraction and Treatment Systems
- Industrial Wastewater Treatment and Reclamation Systems
- Membrane Bioreactors
- Brackish and Seawater RO Systems
- Ultra-pure Water System



Membrane BioReactor plant using advanced Air-Lift membrane technology

Eco-services

ES - 005

Reuse and recycling services

Personal computers

HITACHI Recycle Service for PC

HITACHI Recycle hotline (Service only in Japan)

2-2-1 Ohte-machi, Chiyoda-ku, Tokyo Japan

Tel 0120-12-5006 Fax

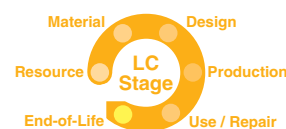
E-mail anky@ebina.hitachi.co.jp

URL <http://www.hitachi.co.jp/pc-recycle/> (Japanese Only)



A4 Waste

A1 Global warming

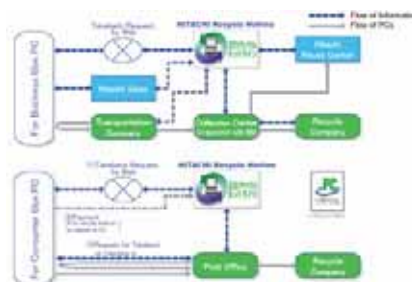


Let's recycle the personal computer which became unnecessary! Consultation is to "HITACHI Recycle Hotline" !

Revised recycling law (April, 2001 enforcement, ministerial ordinance enforcement in October, 2003) correspondence.

The recovery recycling system of the national scale based on approval of the broader based specification system and the broader-based authorization system of the Act of Disposal of Waste Matter. Reuse and recycle what was discarded until now and promote effective use of resources.

Cut down the amount of the last disposal (reclamation).



HITACHI Recycle Service for PC

Eco-services

ES - 006

Reuse and recycling services

Cleaning tools

Office Recycle Service by High Pressure Water Fulfillment of Zero-Emission

Matsushita Electric Works Building Management Co., Ltd.

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

Tel 81-6-6908-7945 Fax 81-6-6906-6969

E-mail

URL <http://group.mew.co.jp/mewbm>

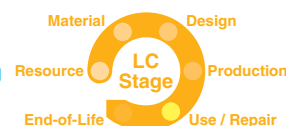


B1 Recyclability

B2 Longevity

B3 Resource saving

A5 Resource consumption



To maintain the office environment, we clean carpets and spray repellent on them.

Used carpets must be disposed in proper manners as industrial wastes not to deteriorate the global environment.

In order to reduce this effort, we wash carpets entirely with reducing the frequency of cleaning and the quantity of sprayed repellent.

This service contributes to reduction of industrial wastes towards Zero-Emission and prevention of repellent's effect to human bodies.

[Applications]

Cleaning of filters of air conditioners -Reduction of power consumption by purification of air surroundings and dirty filters-



We wash carpets by this machine

Eco-services

ES - 007

Reuse and recycling services

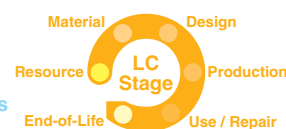
Recycling services

The SMART answer to E-Waste recycling technology

Cimelia Resource Recovery Pte Ltd

No.3 Tuas Ave 2, 639443 Singapore
Tel +65 6898 0808 Fax +65 6898 0888
E-mail info@cimeliaglobal.com
URL <http://www.cimeliaglobal.com>

- ▲ A4 Waste
- B1 Recyclability
- B3 Resource saving
- ▼ B7 Use of recycled materials



Cimelia offers total E-Waste management and recycling, Platinum Group Metals (PGM) recovery and refining services.

Our objectives:

To brand Cimelia as the leader in the E-Waste management, recycling PGM refining industry and to offer our services worldwide through our Cimelia global network

Our services include:

- E-Waste management and recycling
- PGM recovery and refining processes
- Base metals and alloys recovery / manufacturing
- PGM byproducts manufacturing
- CRT, LCD, plastics recycling
- Auto and spent catalyst recycling

Our strengths include:

- Fully integrated E-Waste management and recycling

- Customized solutions specific to clients' requirements
- Certified, safe and secured destruction services
- Protection of clients' intellectual property
- World-class security system
- Worldwide representation and network operation
- Logistics and warehousing facilities worldwide
- Web-based trading, services and accessibility
- ISO 9001, ISO 14001 and OHSAS 18001 certified
- Closed loop, environmentally friendly recycling process
- Continuous R & D, keeping up with changing technologies



Eco-services

ES - 008

Outsourcing services

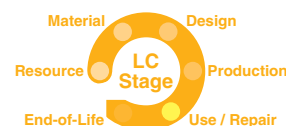
Building and Civil Engineering

SHIMIZU ECO SERVICE

SHIMIZU CORPORATION

Seavans South No.2-3, Shibaura 1-chome, Minato-ku, Tokyo, 105-8007, Japan
Tel 81-3-5441-1111 Fax 81-3-5441-0343
E-mail env@shimz.co.jp
URL <http://www.shimz.co.jp/>

- ▲ B5 Energy saving
- A5 Resource consumption
- B2 Longevity



Some researchers say that developed CO2 during maintenance period of a building is 80% of that developed during its lifecycle time. We provide comprehensive services for reducing environmental loads in whole processes of diagnosis, proposal, operation, and renewal.

- *Comprehensive diagnosis and proposal. : We perform detailed diagnosis for existing buildings, and plans to prolong the buildings' lifetime through proposals for optimization Life Cycle Cost and environmental loads.
- *Fine tuning. : Basing on detailed analysis/study on the past management data, we control/manage operation of equipment thoroughly and with high efficiency, and save charges for heat/electricity/water.
- *Proposal for renewal/construction. : We not only update equipment or renew degraded equipment but also carry out planning and designs considering even changes in using manner, with the aim of reducing environmental loads.
- *Monitoring and countermeasures. : For buildings that we maintain, we keep data on charges for heat/electricity/water after completion, so that environmental loads should be reduced continuously.



Shimizu Eco-Service

Eco-services

ES - 009

Outsourcing services

Waste management, Water management, Energy recover

Electrochemical waste water treatment

ecoWise Holdings Ltd

3 Phillip Street, #14-01 Commerce

Point, 048693 Singapore

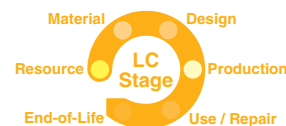
Tel +65 6536 2489

Fax +65 6536 7672

E-mail enquiries@ecowise.com.sg

URL www.ecowise.com.sg

- ▲ A4 Waste
- ▲ A5 Resource consumption
- ▲ B6 Environmental purification
- ▼ B7 Use of recycled materials



The Hydrox technology (electrochemical reaction) generates ions that targets wastewaters and effluents. The multi-compartment electrolytic cells allow large volumes of polluted water to be treated quickly and quietly at high efficiency.

Banks of electrochemical cells reacts with polluted water and separates waste and pollutants. Its needs much less energy/chemicals and post treatment than standard chemical treatment.

Pollution removal using proprietary electrolytic materials/processes and design covers a wide range of industrial waste streams. Hydraulic retention is typically with 1 to 2 minutes.



Eco-services

ES - 010

Outsourcing services

Waste management, Water management, Energy recover

Composting

ecoWise Holdings Ltd

3 Phillip Street, #14-01 Commerce

Point, 048693 Singapore

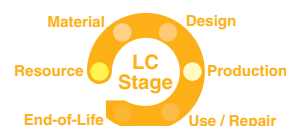
Tel +65 6536 2489

Fax +65 6536 7672

E-mail enquiries@ecowise.com.sg

URL www.ecowise.com.sg

- ▲ A4 Waste
- ▲ A5 Resource consumption
- ▲ B6 Environmental purification
- ▼ B7 Use of recycled materials



Compost manufacturing facility of 15,000m2 for the production of quality organic compost from tree and horticulture wastes with a daily intake of over 100tonnes/day.

The composting reactor chambers are able to convert natural raw organic feed materials to organic fertilizer in 14 days. Production activities are close monitored, from initial intake quality, shredding, crushing, sieving, ingredient mixing, process monitoring, curing and final product testing.

The organic compost is widely used in gardens, parks and landscaping activities.



Eco-services

ES - 011

Outsourcing services

Recycling Biomass Cogeneration

Biomass cogeneration plant - green energy

ecoWise Holdings Ltd

3 Philip Street, #14-01 Commerce Point,
048693 Singapore

Tel +65 6536 2489 Fax +65 6536 7672

E-mail enquiries@ecowise.com.sg

URL www.ecowise.com.sg

▲ A4 Waste

▲ A5 Resource consumption

▲ B6 Environmental purification

▼ B7 Use of recycled materials



ecoWise generates green energy using its own 1MW biomass cogeneration plant using wood/tree waste/woodchips. Electricity up to 1000kW and 15 tonnes/hour of steam are generated for internal use reducing power grid off-take.

ecoWise is also able to provide on-the-job training in boiler operations as well as participation in sustainability projects. It also manages its own wood and tree waste shredding operations producing wood chips as fuel.



Biomass Cogeneration Plant and Fuel

Eco-services

ES - 012

Management related services

Industrial organic chemicals

Green Procurement and Chemical Substance Management System

Hitachi,Ltd

6-27-18, Minami-Ohi, Shinagawa-ku, Tokyo Japan

Tel 81-3-5471-2382 Fax 81-3-5471-2877

E-mail ecoinfo@system.hitachi.co.jp

URL http://www.hitachi.co.jp/products/ts_env/ (Japanese Only)

▲ A3 Hazardous substances



Realizing Efficient Green Procurement and Design for Environment. Facilitates data collection by introducing the system in green procurement operation with suppliers.

Realizes efficient management to comply with chemical product policy, such as RoHS¹⁾ Directive.

Tabulates a part or a product chemical content, and evaluates each product's conformity with regulation.

Facilitates cilitates green procurement by automatically requesting registration of chemic information.

1)EU Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment.



Green Procurement

Eco-services

ES - 013

Management related services

Monitor and control equipment

Energy-Saving Service Solution [HDRIVE]

Hitachi, Ltd.

1-18-13, Soto-Kanda, Chiyoda-ku, Tokyo Japan

Tel Fax

E-mail project_hdrive@pis.hitachi.co.jp

URL <http://www.hitachi.co.jp/Div/hitachi/inv/hdrive/> (Japanese)



"HDRIVE," is a service that helps industrial customers conserve energy without paying any initial costs.

Hitachi offers to install inverters and high-voltage motors in fans, pumps and blowers at customer facilities free of charge, for equipment in which energy-saving can be expected.

Under a ten-year contract, a fixed percentage of the cost savings generated from monthly energy savings is applied as a service charge.

The amount of energy saved is calculated from the equipment's operating data, measured by monitoring device.

HDRIVE also offers a new financing approach that emphasizes the customer's cash-flow and helps reduce investment risks when customers change their operations.



Outline of energy-Saving Service Solution

Eco-services

ES - 014

Management related services

Air conditioning and household equipment

OH SAVER (Optimized HVAC Control System For Energy Saving)

Hitachi Plant Technologies, Ltd.

1-1-14, Uchikanda, Chiyoda-ku, Tokyo Japan

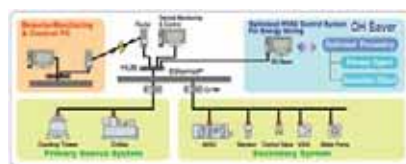
Tel 81-3-5281-0131 Fax 81-3-5281-0139

E-mail a-sales@hitachiplant.co.jp

URL <http://www.hitachiplant.hbi.ne.jp>



Total system parameters are simulated to obtain the highest energy saving. 20% Energy saving (cooling season) was achieved by shifting from individual component control to total HVAC System control. Hitachi Experiment Energy saving is realized without changing any existing HVAC equipments. Object oriented software design resulting in flexible adjustments of system components or parameters, i.e., heat source, AHU etc.,



OH SAVER

Eco-services

ES - 015

Management related services

Electrical machinery, equipment and supplies

ESCO (Energy Service Corporation)

Hitachi, Ltd. Company: Energy Solution Service Division

1-18-13 Soto-Kanda, Chiyoda-ku, Tokyo Japan

Tel 81-3-4564-4302 Fax 81-3-4564-4149

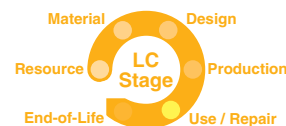
E-mail esco_hitachi@pis.hitachi.co.jp

URL <http://www.hitachi.co.jp/ESCO/index.html>

A1 Global warming

A5 Resource consumption

B5 Energy saving



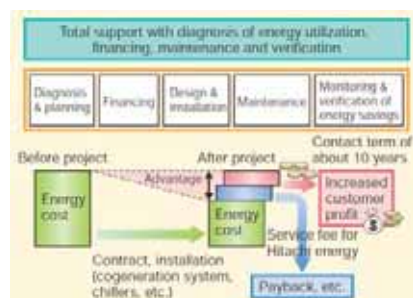
Comprehensive Energy Solution Service.

The service includes energy saving diagnosis, energy saving proposal, equipment installation, finance, and maintenance as comprehensive services for energy savings.

Effectively reduction of CO₂ emission, energy costs, and capital assets.

No investment for installation of energy saving system, repairing those equipments.

Hitachi promotes a totally supporting energy saving business, for instance, air conditioning, lighting, power generation, and optimization of systems.



ESCO (Energy Service Corporation)

Eco-services

ES - 016

Management related services

Information recording

ECOrates- The Integrated Environmental Information System

Mitsubishi Electric Corporation

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

Tel 81-3-3218-2238 Fax 81-3-3218-2465

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

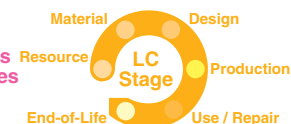
URL <http://www.MitsubishiElectric.co.jp/corporate/eco/index.html>

A1 Global warming

A3 Hazardous substances

A4 Waste

A2 Air pollution



The massive amount of data involved in administrative and managerial issues related to the environmental management business requires the utilization of various information systems. To improve the efficiency of its environmental management activities, Mitsubishi Electric has developed and introduced an integrated environmental information management system designed to promote the achievement of environmental action objectives throughout the group.



EC Orates

Eco-services

ES - 017

Management related services

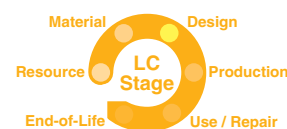
Manufacturing products

System Integration Life Cycle Assessment SI-LCA

Hitachi, Ltd. Information and Telecommunication Systems

6-27-18 Minami-Ohi, Shinagawa-ku, Tokyo Japan
Tel 81-3-5471-2745 Fax 81-3-5471-2746
E-mail m-tani@itg.hitachi.co.jp
URL

▲ A1 Global warming
A2 Air pollution
A4 Waste
▼ A5 Resource consumption



Quantities evaluation technique about the environmental load of a System & Service product.

The environmental load by introduction of a System & Service product is converted into the amount of CO₂ emission, and quantitative evaluation is possible.

The life cycle of a System & Service product is evaluated on ten steps of stages which equipment manufacture, usage, collection, recycle, waste, etc. defined from a design and development of software.

Calculation of the employment cost and environmental load cost accompanying systems development or introduction is possible.



SI-LCA

Eco-services

ES - 018

Management related services

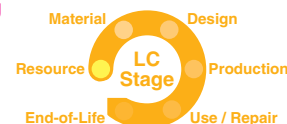
Consulting service

Consulting service for geothermal and hydraulic power generation

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
E-mail
URL <http://www.mmc.co.jp/english/business/energy.html>

▲ A1 Global warming
A5 Resource consumption
B1 Recyclability



Mitsubishi Materials have long been actively involved in the development and utilization of renewable energy sources, such as geothermal and hydraulic energy, taking advantage of the technology we have acquired in the underground resources business.

We have six hydroelectric power plants (approx. 17MW total) and two geothermal power plants: the Ohnuma Geothermal Power Plant (9.5MW: since 1974) and the Sumikawa Geothermal Power Plant (50MW: since 1994), operating at Akita Prefecture in Japan. These power plants generate clean electric power of around 565,000MWh per year. 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.



Ohnuma Geothermal Power Plant (9.5MW)

Eco-services

ES - 019

Management related services

Marketing Services

ECO LIFESTYLE AND DESIGN MARKETING SERVICES

ECO LIFESTYLE & DESIGN (SINGAPORE)

No. 38 Bencoolen Street, 189655 Singapore

Tel +65 9691 7861 Fax +65 6462 1624

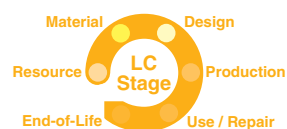
E-mail ecolds2006@yahoo.com.sg

URL

▲ B4 Higher quality

▲ B5 Energy saving

▲ B7 Use of recycled materials



Eco Lifestyle & Design (Singapore) or Ecolds in short, provides marketing and business development services to Eco Designers and Suppliers in Eco Lifestyle products including organic cotton designer wear, organic cotton babywear, energy saving Eco appliances and gadgets, Eco Design Furnishing products. Ecolds also works with specialists in Eco textiles research and technologies to provide clients with professional services.

Ecolds

Eco-services

ES - 020

Others

Conveyers and conveying equipment

Eco-friendly total logistics service

Hitachi Industries co., Ltd

9-7 Ikenohata 2-chome, Taito-ku, Tokyo Japan

Tel 81-3-5814-5611 Fax 81-3-5814-5627

E-mail

URL Website : //www.hitachi-hic.com

▲ A1 Global warming

▲ A5 Resource consumption

▲ B5 Energy saving



Ocean gateway will support your logistics for the less CO₂ emission. We Hitachi Futo Co. Ltd is pleased to offer the total logistic solution such as,

- To minimize the CO₂ emission by utilizing the nearest port for North Kanto Province.
- To offer the global logistics service from the small items to giant items with reasonable cost.
- To transport and store the customer's commodities in the safe Ibaraki area where has no active fault.



Eco-friendly total logistics service

Eco-services

ES - 021

Outsourcing services

General industrial machinery and equipment

UNOX Wastewater Treatment System

Showa Denko Singapore Pte. Ltd.

4 Shenton Way #16-01 SGX Centre 2, 068807 Singapore

Tel +65-6223-1889 Fax 65-6223-6007

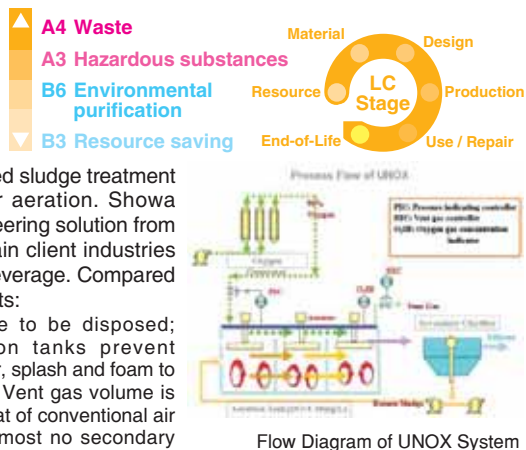
E-mail gkyeo@sds.com.sg

URL <http://www.sds.com.sg>

UNOX system is a high-stability, high-organic-loading activated sludge treatment process which uses high-purity oxygen instead of air for aeration. Showa Environment System Co. Ltd. provides the total UNOX engineering solution from design, construction to maintenance and operation. Our main client industries include petrochemical, chemical, pulp and paper, food and beverage. Compared to deep tank aeration process, UNOX has the following merits:

- | | |
|--|--|
| a) Size of aeration tank is reduced to 1/3 of the conventional type, resulting in smaller land requirements and hence lesser environmental impact; | d) Covered aeration tanks prevent spreading of odour, splash and foam to the surroundings. Vent gas volume is less than 1/250 that of conventional air system, hence almost no secondary pollution of the air; |
| b) Quality of treated effluent remains stable at very high BOD load or under fluctuating loading; | e) Lower overall construction and operation costs. |
| c) No sludge bulking and excellent sludge settling and dewatering. Also reduction in excess sludge to be disposed; | |

We also design and supply PSA (Pressure Swing Adsorption) oxygen generator for high-purity oxygen supply. With over 120 projects in Asia as our track record, we will continue to expand the presence of UNOX to promote cleaner environment and sustainable development. For inquiries outside Japan, please contact Showa Denko Singapore which represents Showa Environment System's business in Asia.



Flow Diagram of UNOX System

Eco-services

ES - 022

Others

Building and Civil Engineering

Securing and making use of emission reduction units

SHIMIZU CORPORATION

Seavans South No.2-3, Shibaura 1-chome, Minato-ku, Tokyo, 105-8007, Japan

Tel 81-3-5441-1111 Fax 81-3-5441-0343

E-mail env@shimz.co.jp

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

We create projects abroad such as CDM (Clean Development Mechanism) and JI (Joint Implementation) with the objective of emission reduction of greenhouse gasses, and contribute to preventing global warming and sustainable development of developing countries. We also secure/utilize emission reduction units obtained through managing the projects.

We started tackling with these issues in 1999, and in February 2006 we newly established "GHG Project Department" to make further intensive efforts. We began with the CDM project in Armenia, that was the first Japanese CDM case where we conducted through every step of project searching, investigation, preparing project design document, registration, construction, and management, and we are now focusing our sights on starting seventeen projects in five countries in the world.



Development of emission reduction projects/17 projects across the world (as of April 2006)

Eco-services

ES - 023

Others

Building and energy management system

Energy saving solution for the comfort air conditioning of buildings.

Toshiba Corporation Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku,
Tokyo 105-8001, Japan

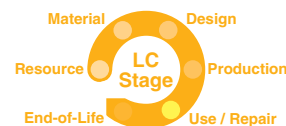
Tel 81-3-3457-4368 Fax 81-3-5444-9280

E-mail

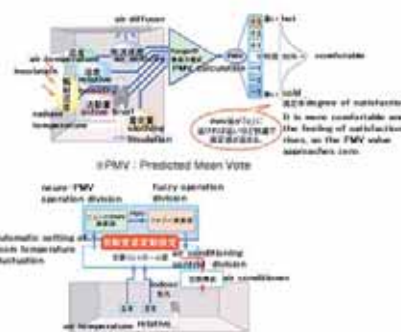
URL http://www3.toshiba.co.jp/snis/bldg/index_j.htm

▲ A1 Global warming

■ B5 Energy saving



Neuro-PMV® is a control system for the comfort air conditioning that realizes the energy saving without disturbing the user's amenity. It uses PMV (Predicted Mean Vote: ISO7730) as the index of air conditioning control, and can change the setting temperature in real time to keep the uniform PMV control. The value of radiation temperature used in the calculation of PMV is depending on IT, so it doesn't need a special sensor. The system can be applied to old buildings as well as new buildings. In addition, we promote an ESCO business to realize the energy saving on the whole of a building. As for the total energy saving of air conditioner, heat source facility, lighting facility and sanitation, we can offer the services that include the planning, the construction and the maintenance.



Predicted Mean Vote(up side) ,
Energy saving solution for the comfort air conditioning(down side)

Eco-services

ES - 024

Others

Transportaiton Service by Rail

Environmentally Friendly E231 Series

East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo Japan

Tel 81-3-5334-1122 Fax

E-mail eco@jreast.co.jp

URL <https://www.jreast.co.jp/e/index.html>

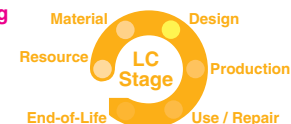
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A1 Global warming

B1 Recyclability

B4 Higher quality

B5 Energy saving



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 realized the most environmentally friendly design.



E231 series run on the Utsunomiya line

Eco-services

ES - 025

Others

Transportation Service by Rail

The series N700 with enhanced energy efficiency (Tokaido and Sanyo Shinkansen)

**Central Japan Railway Company,
West Japan Railway Company**

1-1-4, Meieki, Nakamura-ku, Nagoya,
Aichi 450-6101, Japan
4-24, Shibata 2-chome, Kita-ku, Osaka 530-8341
Japan
Tel Fax
E-mail
URL <http://jr-central.co.jp>,



The Tokaido and Sanyo Shinkansen, which cover the main intercity transportation in Japan, have been superior to other modes of transportation such as airplanes, in terms of lower CO₂ emissions in carrying one person one kilometer. The Series N700 has been developed based on the concepts of "The fastest cutting edge rolling stock", "Superior comfort" and "Superior environmental performance", improving energy efficiency by various measures such as reduction in car weight and air resistance. The commercial operation is planned to begin in the summer of 2007.



series N700

Eco-services

ES - 026

Others

Transportation Service by Rail

E2-Series of Railcars Conserved Energy

East Japan Railway Company

2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo,
151-8578 Japan
Tel 81-3-5334-1122 Fax
E-mail eco@jreast.co.jp
URL <http://www.jreast.co.jp/e/index.html>



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.



E2-series for Asama and Hayate Shinkansen trains

Eco-services

ES - 027

Others

Insurance

Weather Protection: Weather Derivatives/Insurance, Wind Speed

Tokio Marine & Nichido Fire Insurance Co., Ltd.

2-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo Japan

Tel Fax

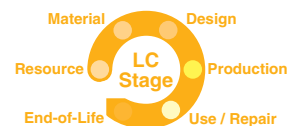
E-mail

URL <http://www.tokiomarine-nichido.co.jp/>

▲ A1 Global warming

▲ A5 Resource consumption

▼ B4 Higher quality



Ecology-related industries such as wind power generation utility have a huge amount of risk of setting up and managing their business due to the fact that their operations and performances highly depend on weather phenomenon and climatic aberration. We support a variety of business ventures and operations by providing them with our risk-transfer products such as weather derivatives and weather insurance.

Example: "Wind Condition Protection" for wind power generation utilities.



Pamphlet(Weather Derivatives)

Eco-services

ES - 028

Others

Toiletry products

OEM of Toiletry Products

Health Icon International Holdings Pte Ltd

Block 207 Woodlands Ave 9, #04-55 Woodlands

Spectrum II, 738958 Singapore

Tel +65 6754 9138 Fax +65 6754 9483

E-mail hicon@singnet.com.sg

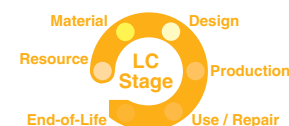
URL www.hicongroup.com

▲ A1 Global warming

▲ A5 Resource consumption

▼ B4 Higher quality

▼ B6 Environmental purification



We do our best in providing you with environment friendly cleaning detergents and laundry products.

Let us help you to play your part in saving the earth and have a greenish environment.

Our products includes:

Cleaning detergents, laundry, shampoo, shower bath and hand soap products.



Company List

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Ultra-Flo Pte Ltd	EP449
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Winzone International Pte Lt	EP328
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Cooperation for Commercial space

HITACHI, LTD.

SARAYA CO., LTD.

SIEMENS PTE LTD.

IKANO PTE LTD.

Next Eco together with HITACHI



Pen shape cordless driver drill

HITACHI
Inspire the Next



Gentle on Humans, Gentle on the Earth.



Yashinomi detergent is a natural detergent made from high quality palm oil, which is not only gentle on your skin, but also environmentally friendly. SARAYA launched this eco-friendly product more than 30 years ago, when most people yet not fully aware of the importance of ecology.

Palm oil has become an indispensable natural resource for our daily lives, widely utilized as a safe and cheap ingredient for food, cosmetics, tires, detergents, and other necessities. At the same time, Rainforest destruction caused by the extensive development of palm plantation has exerted a grave influence on the living conditions of wild animals, including Borneo Elephant, rare species indigenous to Borneo Island. In pursuit of harmonious coexistence of nature and humans, Saraya launched "the Project to Protect Borneo Elephant and Forest" to engage in the rescue of hurt elephants and the rainforest protection.



**Yashinomi Dish
Washing Detergent**
300mL/250mL(refill)



**Yashinomi Laundry
Powder Detergent**
1.2kg



**Yashinomi Laundry
Liquid Detergent**
800mL/720mL(refill)

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Water – the world's No. 1 resource. Fascinating. Vital. Yet not as abundant as we would imagine. And even more precious tomorrow. So when you're looking for a partner to shape the future of water in municipalities and industry, it pays to talk to the leader: Siemens Water Technologies. Let's take care of the world's water. Together.

Low price – but not at any price

Low prices are the cornerstone of the IKEA vision, business idea and concept. At IKEA, we talk about low price – but not at any price. This means that all IKEA products must be manufactured under acceptable working conditions by suppliers who take responsibility for the environment.

To achieve this goal IKEA supports a variety of activities that protect the environment and improve the lives of people who work at our suppliers.

Honesty is the core of our work on long-lasting, close relationships with all customers, co-workers and suppliers. IKEA suppliers must follow our code of conduct stating our minimum requirements on social and working conditions, as well as a range of environmental issues.

The vision and business idea

The IKEA vision and business idea encourage the social and environmental responsibility. The vision "To create a better everyday life for the many people" refers not only to IKEA customers but also to the environment, co-workers and the employees working for IKEA suppliers.

"To offer a wide range of well-designed, functional, home furnishing products at prices so low that as many people as possible will be able to afford to buy them" is the IKEA business idea.

Ever since IKEA was founded in 1943, we have tried hard to avoid wasting resources – everything from natural resources to

other resources such as time and money. This approach is essential in order to produce environmental impact.

Close co-operation with suppliers, together with our own distribution chain, has resulted in cost-and-resource-effective production and distribution. The design and manufacture of products should be undertaken in a way that ensures the products are safe from a health perspective and environmentally adapted.

Co-workers make the vision and business idea real

"To give down-to-earth, straightforward people the possibility to grow, both as individuals and in their professional roles, so that together we are strongly committed to creating a better everyday life for ourselves and our customers" is our human resource idea. It is the co-workers at IKEA who turn the IKEA vision and business idea into a reality.

The IKEA culture is based on shared values and founded on respect for resources, an innovative mindset and the courage to assume responsibility.

IKEA PS ELLAN
Rocking chair

\$89



IKEA PS ELLAN chair is made of recyclable polypropylene and wood fibres from sawmill waste.

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