

Creating Super Green Products and Devices

Sharp continually enhances the environmental performance of its products and devices by annually revising and upgrading its guidelines as it aims for increasingly stricter standards and higher goals. As a result, the ratio of Green Seal Products, Super Green Products and Green Devices to total net sales has increased, and Super Green Devices reached their targeted sales ratio for the first year in fiscal 2005.

Objectives for Fiscal 2005	Achievements	Objectives for Fiscal 2006	Objectives for Fiscal 2008
<ul style="list-style-type: none"> Green Seal Products accounting for 80% of net sales in Japan Super Green Products accounting for 20% of net sales in Japan 	<ul style="list-style-type: none"> Approx. 87% Approx. 35% 	<ul style="list-style-type: none"> 85% 30% 	<ul style="list-style-type: none"> 90% 40%
<ul style="list-style-type: none"> Green Devices accounting for 40% of net sales Super Green Devices accounting for 5% of net sales 	<ul style="list-style-type: none"> Approx. 51% Approx. 7% 	<ul style="list-style-type: none"> 65% 10% 	<ul style="list-style-type: none"> 85% 20%

Note: The sales ratios of Green Seal Products and Green Devices include both sales of Super Green Products and Super Green Devices.

Make All Products "Green Products"

Environmentally conscious products are what Sharp calls "Green Products." Sharp formulated the "Green Product Guidelines" in December 1998, defining specific design targets and design know-how in line with seven concepts. The guidelines are used at all design and production sites in Japan and overseas.

The first step in developing Green Products is product planning, where Sharp applies its guidelines to design a product that is environmentally superior in every aspect. Sharp then sets specific objectives according to the assessment items of the Green Product Standard Sheet. Finally, in the trial manufacture and mass production stages, Sharp determines how well the actual product has met the objectives set out for it.

In fiscal 2005, Green Products had to satisfy at least 90% or more of 48 assessment items, a standard that was met by all of Sharp's new products.

Certification of Green Seal Products and Super Green Products in Japan

Since April 1998, Sharp has been certifying products for Japan, which offer a particularly high level of environmental performance, as "Green Seal Products." Since October 2004, Sharp has begun certifying Green Seal Products with still higher environmental performance as "Super Green Products."

The certification standard of Green Seal Products demands a product that satisfies all four items required by the Environmental Performance Criteria and at least one item in the External Environmental Claim Standards, and that scores 70 points or higher out of a

total 100 points in the Environmental Performance Criteria. The certification standard for Super Green Products is higher still, when compliance with the EU RoHS directive* and acquisition of the Japanese Eco Mark are added, and products must score 90 points or higher in the Environmental Performance Criteria.

In fiscal 2005, both Green Seal Products and Super Green Products exceeded their initial targets for percentage of total sales. In the coming years, Sharp plans to raise these percentages still higher.

Assessment and certification standards for Green Seal Products and Super Green Products in Japan (fiscal 2005)

Category	Green Seal Products	Super Green Products	
I Level of environmental consciousness	<ul style="list-style-type: none"> Satisfies at least one item of the External Environmental Claim Standards 	<ul style="list-style-type: none"> Is significantly more environmentally conscious than the products of other companies 	
II Environmental Performance Criteria (total score: 100)	<ul style="list-style-type: none"> Satisfies four required items of the Environmental Performance Criteria 	<ul style="list-style-type: none"> Satisfies four required items of the Environmental Performance Criteria Meets the RoHS directive Has environmental label status 	
	<p>Prevents global warming Low power consumption, high energy efficiency, etc. 20 points</p>	<p>Makes effective use of resources Designed for recyclability, resource saving, etc. 20 points</p>	<p>Uses substitutes for toxic chemicals Meets the RoHS directive 35 points</p> <p>Other Has environmental label status, uses minimum packaging materials, etc. 25 points</p>
	At least 70 points		At least 90 points

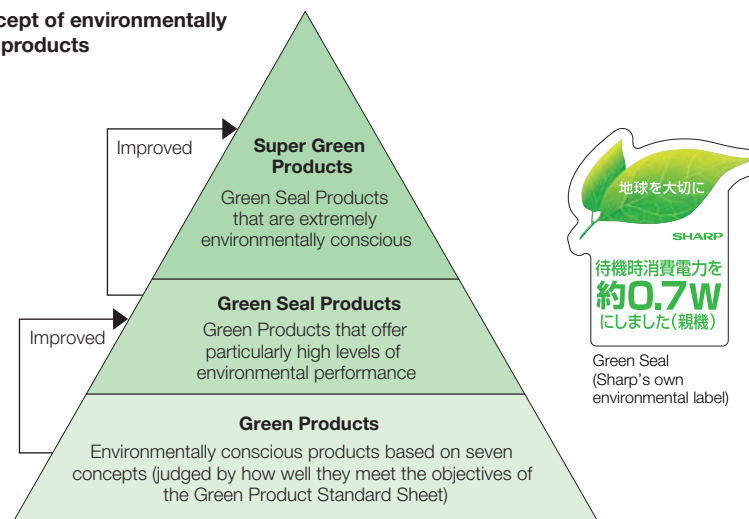
All conditions under sections I and II must be satisfied.

* RoHS: An EU directive on the "Restriction on the use of certain Hazardous Substances." RoHS prohibits the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) in electrical and electronic equipment entering the EU market after July 1, 2006.

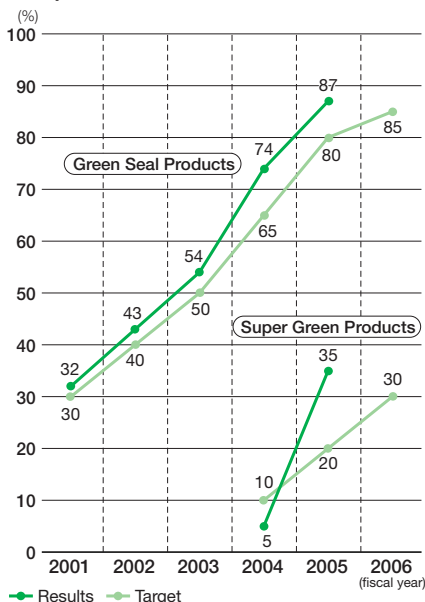
Sharp Green Product concept

Low energy consumption	<p>Products that are energy-efficient and use little energy Design products that consume less power both in running and standby mode, and air conditioners/heaters that give more efficient cooling and heating.</p>
Safety	<p>Products that are safe to use Carry out tests on products for chemicals and work to abolish or reduce use of chemicals that have negative effects on people's health or the environment.</p>
Resource reduction	<p>Products that use minimum resources Make products that use less water and detergent, and reduce the amount of materials used in products and packaging.</p>
Recycle	<p>Recyclable products Choose materials that can be easily recycled or reused in products, and label the type of material used.</p>
Use recycled materials	<p>Products made from recycled materials Use recycled plastic and reuse parts in making products.</p>
Long life usability	<p>Products with a long life cycle Design products that are upgradeable and easy to repair.</p>
Easy to disassemble	<p>Products that are easy to disassemble Design products so that they will be easy to take apart for recycling.</p>

Sharp concept of environmentally conscious products



Ratio of Green Seal Products and Super Green Products to total net sales



The percentage for Super Green Products in fiscal 2004 represents only the second half of that year.

Four required items in the Environmental Performance Criteria in Japan (fiscal 2005)

Items	Detail
Energy saving	• Lower power consumption and standby power consumption than previous models
3R	• Easy separation and disassembly, or is upgradeable
Safety	• Uses lead-free solder in more than one circuit board
Packaging	• Abolishes the use of polystyrene foam (for products weighing less than 10 kg) • Increases the ratio of recycled materials, or uses less packaging material than previous models (for products weighing 10 kg or more)

Green Seal Products External Environmental Claim Standards (fiscal 2005)

Items	Detail
Energy saving, energy creating	Power consumption • Industry-leading model of each product category Standby power consumption • Industry-leading model of each product category • 0.1W or less (remote controlled products) • 1.0W or less (phones, faxes, PCs) Energy creating • Industry-leading conversion efficiency
3R	Resource savings during use • Industry-leading model of each product category (saving water and detergent, etc.) Compact/lightweight • Industry-leading model of each product category • Reduced by 30% or more compared to previous models Recycled materials • Use of recycled materials (material recycling)
Safety	Green materials • Abolishing use of halogen-based flame retardants, substituting polyvinyl chloride • Use of refrigerant with low global warming potential • Use of no RoHS-designated substances
Eco Mark	Acquired Eco Mark • Acquired Eco Mark authorized by the Japan Environment Association
Others	Original technology • Sharp technology, the environmental consciousness of which can be evaluated objectively

Certification of Green Devices and Super Green Devices

Environmentally conscious devices are what Sharp calls "Green Devices." To define the standards and assessment method for their development, Sharp established guidelines, which it began applying in April 2004. In fiscal 2005, Sharp began developing devices with still higher standards of environmental performance, ones that even surpass those of Green Devices. These devices are what Sharp calls "Super Green Devices."*

The development of Green Devices begins at the planning stage, where the environmental consciousness of the product is discussed in every aspect. Sharp then sets specific objectives based on the assessment items of the Green Device Standard Sheet. Finally, in the trial manufacture and mass production stages, Sharp determines how well the actual product has met the objectives set out for it.

In fiscal 2005, both Green Devices and Super Green Devices exceeded their sales ratio targets. In the coming years, Sharp plans to raise these figures still higher.

* Certification standards for Green Devices and Super Green Devices in fiscal 2005: Green Devices must satisfy at least 90% or more of all 21 assessment items (9 of which are compulsory) listed in the Environmental Performance Criteria. Super Green Devices must satisfy at least 95% or more of the 21 assessment items (10 of which are compulsory) listed in the Environmental Performance Criteria. They must be either the industry's No. 1, or the industry's first devices in at least one item of the External Environmental Claim Standards. A number of Super Green Devices were developed in fiscal 2004 which complied with these fiscal 2005 standards.

Green Device concept

Energy saving	Reduce total power consumption and reduce power consumed in standby mode compared to previous models
Recyclability	Use standard plastic or materials that are easy to separate and disassemble (target: LCD devices)
Resource saving	Reduce device weight or volume compared to previous models
Green materials	Use no RoHS-designated substances or substances prohibited under Sharp standards
Long life	Extend the life of the product with exchangeable parts and consumables (target: LCD devices)
Packaging	Reduce packaging materials
Information disclosure	Provide information on chemical substances in devices

Start of Comprehensive Product Environmental Evaluation System

Sharp combined the know-how it accumulated while developing and assessing environmentally conscious products and devices with its know-how of LCA (life cycle assessment) to create its "Comprehensive Product Environmental Evaluation System." It was installed on Sharp's in-house intranet in March 2005.

Going online makes the development process more efficient, while the compilation of databases from design know-how and development data facilitates LCA and feedback to the next development. Thus, Sharp is able to promote environmentally conscious designs and improve accuracy in design and assessment.

In April 2006, Sharp began operation of this system in all domestic product and device groups, and plans to introduce it into overseas design and production bases within fiscal 2006.

Promoting Green Procurement

In fiscal 2000, Sharp established the "Green Procurement Guidelines" and began efforts to enhance the environmental consciousness of parts and materials at a supplier level.

In fiscal 2003, Sharp formulated its "Survey Manual for Chemical Substances in Parts and Materials" and investigated chemical substance content as determined by the Japan Green Procurement Survey Standardization Initiative (JGPSSI).* The company also took measures toward eliminating RoHS-designated substances. Sharp eliminated RoHS-related substances in all products for Europe by the end of 2005 and in new products, except for a few products for some areas, by March 31, 2006.

In fiscal 2005, Sharp revised the Green Procurement Guidelines and the Survey Manual for Chemical Substances in Parts and Materials, and it introduced an online survey response system. In fiscal 2006, Sharp plans to introduce these measures to overseas production sites.

* A council comprising 5 organizations and 86 companies, mainly electronics manufacturers including Sharp Corporation, which works to standardize research on chemical substances in parts and materials.

Information on Web site

<http://sharp-world.com/corporate/eco/report2006> ■ Green Products ■ Green Devices ■ Green Procurement assessment items