

## We offer products that are kind to the environment and people by reducing and strictly managing environmentally-sensitive substances.

### ■ Concept

Aiming to reduce the impact on the global environment and enhance end-user comfort and safety levels, the Ricoh Group is tackling important issues by establishing a strict management system for environmentally-sensitive substances contained in its products, reducing ozone, dust, and volatile organic compounds (VOCs)<sup>1</sup> emitted when products are used, and ensuring that its supplies are safe. Environmentally-sensitive substances contained in products will affect the environment when the products come to the end of their lifecycle and are improperly disposed of. An ecobalance<sup>2</sup> assessment shows that reducing the use of these substances will ultimately lessen the environmental impact a product has during its lifecycle and reduce recycling costs to a great extent. The Ricoh Group is making efforts to reduce environmentally-sensitive substances and create a reliable management system that covers the entire manufacturing flow, including suppliers.

1. VOC stands for volatile organic compound.  
TVOC stands for total VOC.

2. See page 57.

### ■ Targets for Fiscal 2007

- Create and enforce a system of managing chemical substances contained in Ricoh Group products (in fiscal 2005).
- Observe Ricoh standards that cover environmentally-sensitive substances emitted by products. (Observe Ricoh standards that cover such substances as ozone, dust, and VOC.)

### <Global>

#### ① Achievement of Standards for Environmentally-sensitive Chemical Substances

	Models that Achieved the Standards <sup>1</sup>	Ricoh Standards (mg/h) <sup>2</sup>	
		Color	Monochrome
Ozone	20	3.0	1.5
Dust		4.0	4.0
TVOC		18	10

1. Figures indicate the number of product series, including copiers, multifunctional copiers, and printers, launched in fiscal 2007 that achieve these standards.

2. Ricoch standards also meet the Blue Angel requirements, and were revised in 2007 in response to revisions to the Blue Angel requirements.

### ■ Review of Fiscal 2007

We made continuous progress in strengthening the management system for chemical substances contained in our products by using a PDCA cycle. During this year, we also reviewed and revised the list of chemical substances controlled by the Ricoh Group to implement even more stringent control and restrictions on the use of substances that carry substantial risk for the human body and the environment. To comply with the REACH Regulation, we also commenced developing a communication system to ensure that chemical substance information is communicated to every corner of the supply chain. Concerning emissions of environmentally-sensitive substances generated by products, Ricoh was quick to satisfy the Blue Angel requirements that came into force in January 2007, and a range of products, including 20 products—including a series of copier, multifunctional copier, and printer models—launched in fiscal 2007 have attained Ricoh standards for ozone, dust, and VOC.

### ■ Future Activities

To ensure that our chemical substance control across the entire supply chain of the Ricoh Group is fully compliant with the REACH Regulation, we will upgrade and strengthen the Group's management system. We will also continue our efforts to further reduce environmentally-sensitive substances in products.

### Controlling the Use of Environmentally-sensitive Substances

#### <Ricoch Group (Global)>

Ricoh set original standards for environmentally-sensitive substances that could be used in its products in 1993 as part of efforts to reduce these substances. Since then, it has regularly reviewed the standards to incorporate the latest regulations and scientific knowledge and has controlled chemical substances accordingly. In fiscal 2007, we reviewed and revised the list of chemical substances controlled by the Ricoh Group to implement even more stringent control and restrictions of the use of the substances that carry substantial risk to the human body and the environment. In addition, all the divisions engaged in production (the design, procurement, and manufacturing divisions) have jointly worked to improve the chemical substance control system. At the end of March 2006, a chemical substance management system (CMS) to prevent chemical contamination at suppliers was created on a global basis. At the same time, the chemical substance control system within the Ricoh Group was strengthened, completing the management system for chemical substances contained in products within Japan. We completed building a system for outside of Japan in July 2006. In fiscal 2007, in order to comply with the REACH Regulation, we began developing a communication system to ensure that chemical substance information is communicated to every corner of the supply chain, and thus took our management system for chemical substances contained in products to another level. To manufacture products that do not contain environmentally-sensitive substances and promptly disclose information to customers, we will continue our efforts to enhance the chemical substance control system that covers the entire production flow, including suppliers.

### Marketing Products Pursuant to the RoHS Directive

Ricoh has been engaged in reducing environmentally-sensitive substances and enhancing its management system for a long time, and has been sequentially launching products complying with the RoHS Directive since fiscal 2004. All applicable products that we launched in and after fiscal 2006 comply with the RoHS Directive.

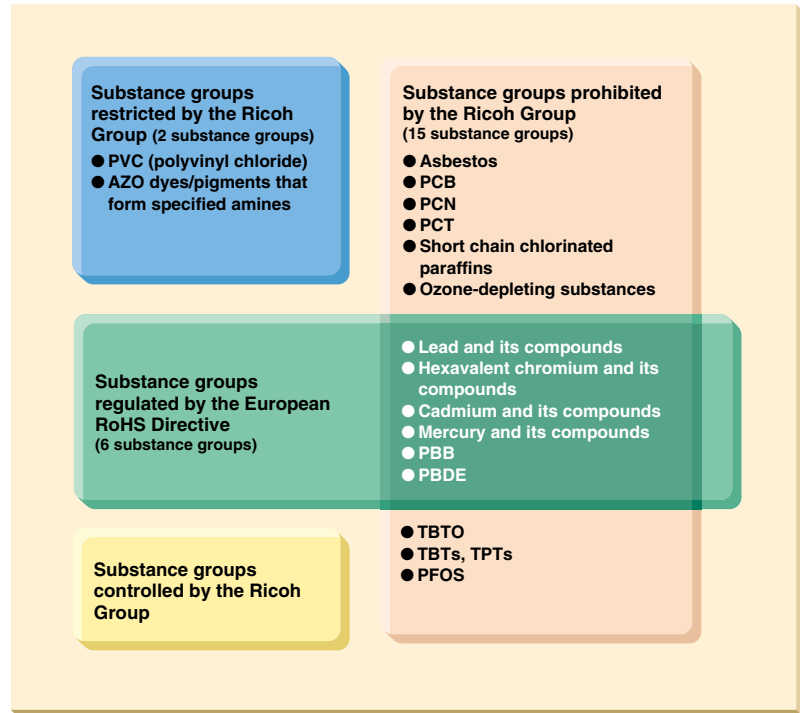
### REACH Regulation

This is a new EU regulatory framework for Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). It requires the registration and management of all chemical substances used in business in accordance with their conditions of use to ensure safe assessment of chemical substances. It came into force on June 1, 2007, and regulations have been gradually enforced from June 1, 2008.

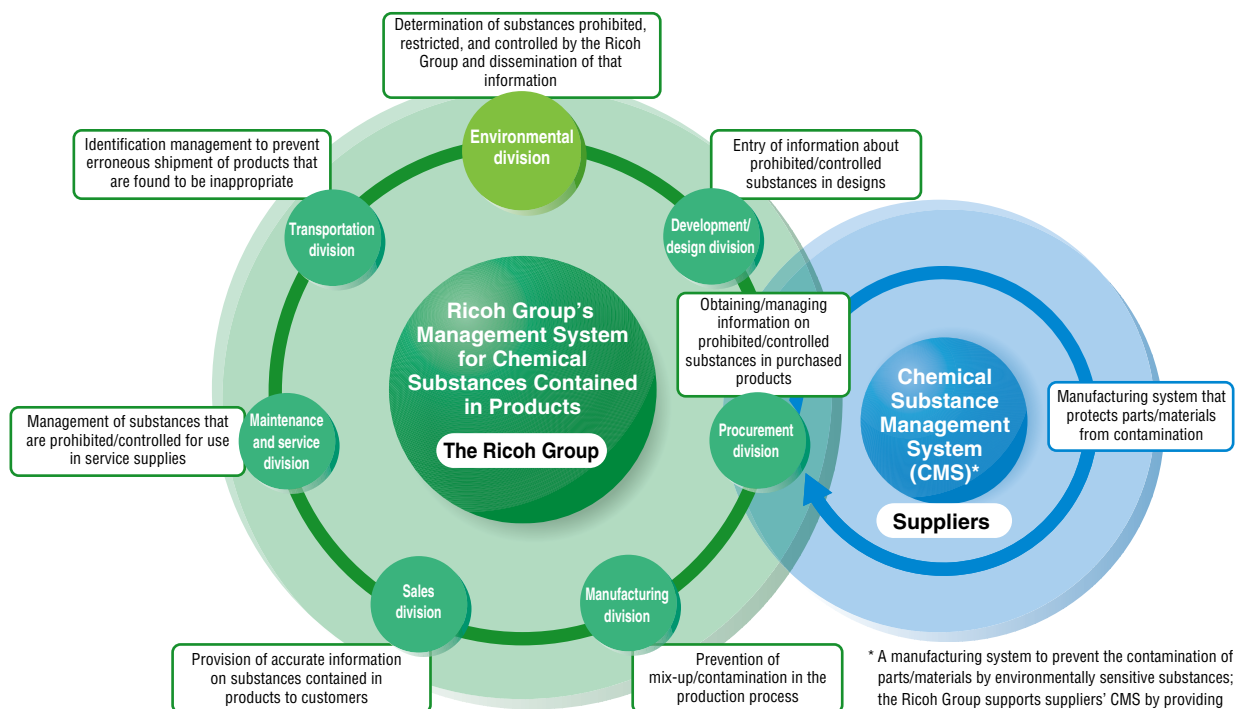
### RoHS Directive

The RoHS Directive, which stands for the Restriction of Hazardous Substances Directive, is an EU Directive that restricts the use of certain hazardous substances in electrical and electronic equipment. The directive has been in effect since July 1, 2006.

The relationship among substance groups prohibited, restricted, and controlled by the Ricoh Group and substances restricted by the European RoHS Directive



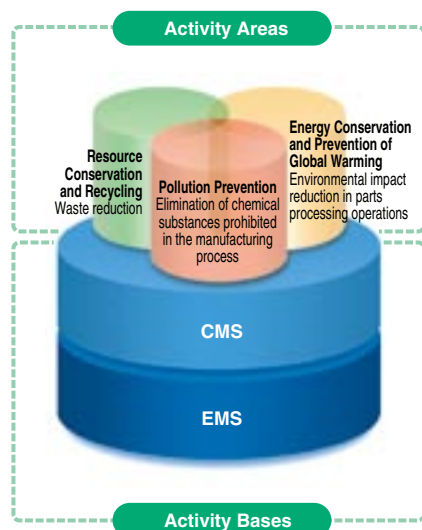
### Management System for Chemical Substances Contained in Products and CMS



### Green Procurement Activities in Partnership with Suppliers

The Ricoh Group promotes green procurement activities that place emphasis on partnership with suppliers. Green procurement refers to the procurement of raw materials, parts, and products with less environmental impact. Parts and products so designated are manufactured in plants that are advanced in environmental conservation. The purpose of green procurement is to reduce the environmental impact over the whole lifecycle of Ricoh products and to reduce the costs to the Ricoh Group and its suppliers by using resources and energy effectively. Moreover, by establishing these activities, we aim to contribute to global environmental protection and reinforce management practices of the Ricoh Group and its suppliers. Ricoh's support for suppliers' environmental conservation activities is provided in three areas: resource conservation and recycling, pollution prevention, and energy conservation and prevention of global warming. As part of this support, we have assisted suppliers in building the foundations of their environmental conservation activities, namely environmental management systems (EMS) and chemical substance management systems (CMS) since 1998. At present, we are focusing on supporting and promoting suppliers' CO<sub>2</sub> reduction activities.\* [\\* See page 13.](#)

#### Suppliers' Activity Areas and Bases



#### History of Green Procurement

	Activities
1998	Started supporting the establishment of environmental management systems (EMS) at suppliers
2001	Started a survey on environmental impact information (survey on chemical substances contained in products)
2002	Commenced Ricoh Group's efforts toward the total elimination of environmentally-sensitive substances/Established Ricoh Group's green procurement policy
2003	Completed environmental management systems (EMS) at 1,089 suppliers throughout the world
2004	Issued Chemical management system guidelines for suppliers
2005	Commenced educational activities for CO <sub>2</sub> reduction at suppliers
2006	Completed chemical management systems (CMS) at 734 suppliers (1,700 sites) throughout the world
2007	Started supporting the establishment of chemical management systems (CMS) at second-tier suppliers and subsequent tier suppliers Started supporting CO <sub>2</sub> reduction activities by suppliers (preliminary). Plan to commence the support on a fuller scale in 2008.

\* For the text of our Green Procurement Standards/Guidelines and Chemical Substance Management System (CMS) Guidelines, please visit <http://www.ricoh.com/environment/guideline/01.html>

#### Establishing CMS at Suppliers

##### <Ricoh Group (Global)>

To ensure that products do not contain environmentally-sensitive substances, it is necessary to monitor the upstream manufacturing process at every step. To help establish a chemical substance management system (CMS) across its entire supply chain, the Ricoh Group commenced a program to train and certify supplier employees as CMS examiners in 2005. In addition to internal audits of their own companies, certified examiners will conduct audits at upstream second- and third-tier suppliers that deal with important processes involving environmentally-sensitive substances

and will support them in establishing CMS. As of the end of March 2008, 1,081 CMS examiners at 597 suppliers were certified, and the establishment of CMS was completed at all first-tier suppliers (1,823 sites of 909 firms) and at 136 second- and third-tier suppliers that are engaged in important processes involving the use of environmentally-sensitive substances, such as solder and plating.



Audit of an upstream supplier (Thailand)

## Chemical Substance Control for Supplies

### <Ricoh Group (Global)>

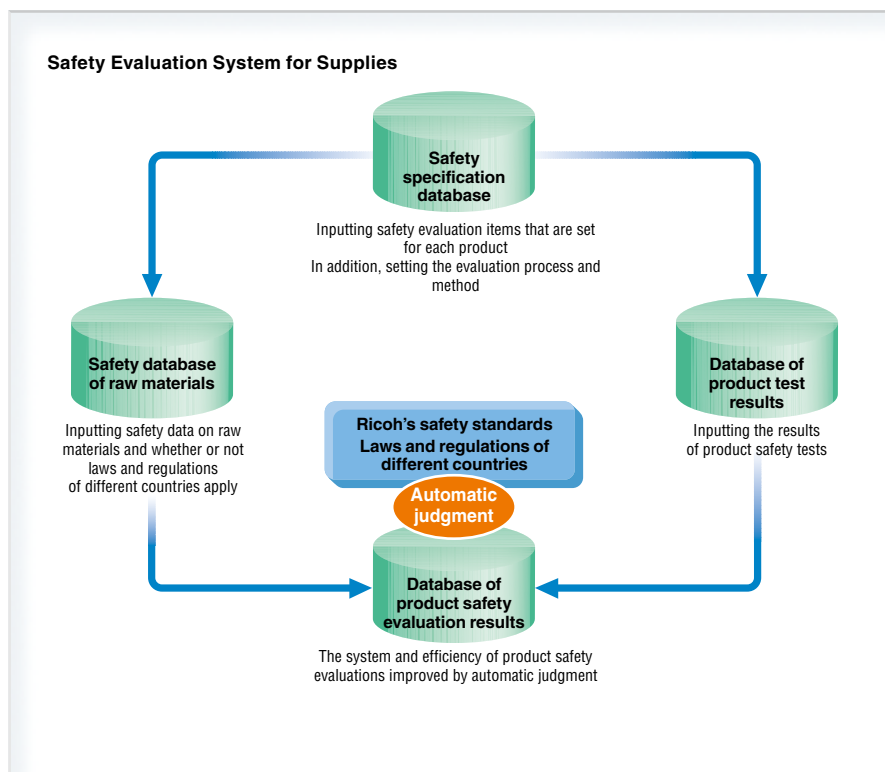
Various chemical substances are used in supplies, including toner and developer. Based on the belief that “product safety is a basic condition for customer satisfaction,” the Ricoh Group ensures the safety of its supplies through the appropriate chemical substance control. We use an information system called RECSIS<sup>1</sup> to evaluate safety. Depending on the type of product, we set items for which safety should be confirmed, create MSDS,<sup>2</sup> evaluate new chemical substances, check on the method of treatment and disposal, consult the relevant laws and regulations, and prepare safety specification data for products. In fiscal 2006, we upgraded the system. The new system can make automatic safety judgments by referring to the laws and regulations of different countries and Ricoh standards for the chemical substances contained in supplies. In fiscal 2007, by using this system’s database of raw materials, we began taking necessary steps to satisfy the REACH Regulation (Registration, Evaluation, Authorization and Restriction of Chemicals),<sup>3</sup> under which a pre-registration process commenced in June 2008.

## Reduction in Environmentally-Sensitive Substances Generated While in Use

### <Ricoh (Japan)>

Ricoh has established its own standards on chemical emissions\* generated by products while in use and endeavors to reduce these emissions. Chemical substances emitted by products like copiers and printers are measured at the emission-measuring testing laboratory located within the company. Ricoh is certificated as an official testing laboratory by Germany’s BAM (Bundesanstalt für Materialforschung und -prüfung; Federal Institute for Materials Research and Testing), and measurement data from Ricoh’s testing laboratory will be recognized in registering for the Blue Angel, a German environmental label.

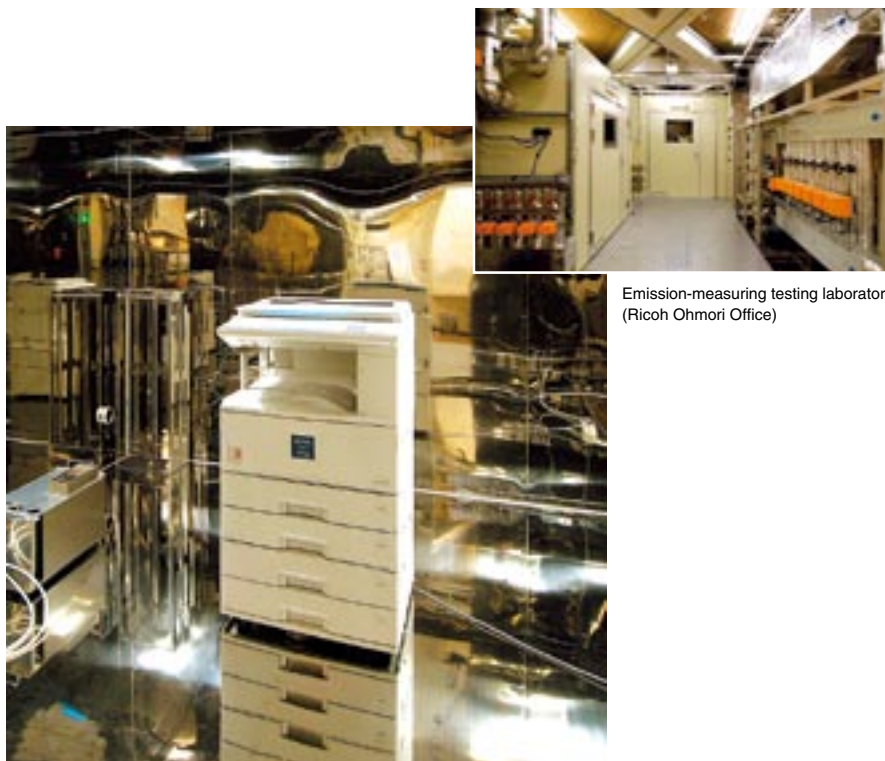
\* Chemical emissions are chemical substances emitted by products and include ozone, dust, and volatile organic compounds (VOCs).



1. Ricoh Environmental & Chemical Safety Information System

2. Material Safety Data Sheet

3. See page 34.



Emission-measuring testing laboratory  
(Ricoh Ohmori Office)