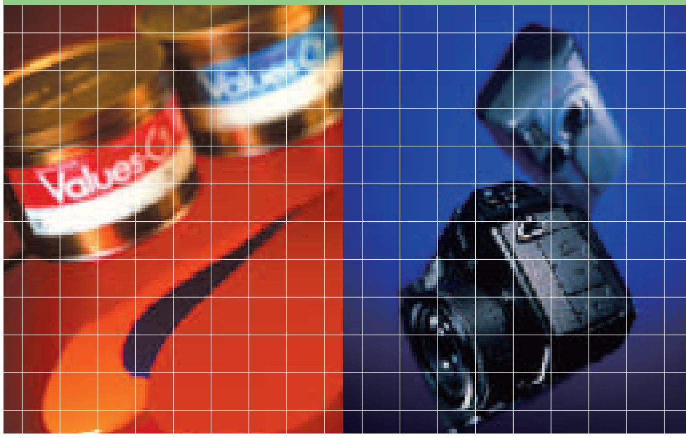
Responsible Care Report 2004

Responsible Care®

DAINIPPON INK & CHEMICALS



CORPORATE DATA

(As of March 31, 2004)

- Registered name: Dainippon Ink and Chemicals, Incorporated
- Corporate headquarters: DIC Building, 7-20, Nihonbashi 3-chome, Chuo-ku, Tokyo 103-8233, Japan
- Date of foundation: February 15, 1908
- Date of incorporation: March 15, 1937
- Paid-in capital: ¥82,423 million (non-consolidated)
- Number of employees: 4,636 (non-consolidated)
- Domestic operations: One branch, nine branch offices, 17 sales offices and 14 plants (non-consolidated)
- Number of affiliates and subsidiaries: 268 (domestic: 58, overseas: 210)

OPERATIONS

Dainippon Ink and Chemicals, Incorporated (DIC), is the core of the DIC Group, a global market leader with printing inks, organic pigments and synthetic resins as its core businesses. The Group currently classifies its businesses into four core operations.

Graphic Arts Materials Business Operation

Printing inks, printing plates, organic pigments

Industrial Materials Business Operation

Synthetic resins (including coating resins, adhesive, compounds molding resins, epoxy resins), polymer additives (including alkyl phenols and metal carboxylates)

High-Performance & Applied Products Business Operation

Plastic compounds, colorants, chemical coatings, plastic molded products, building materials, petrochemical-related products (including polystyrene and biaxially oriented polystyrene (OPS) sheets)

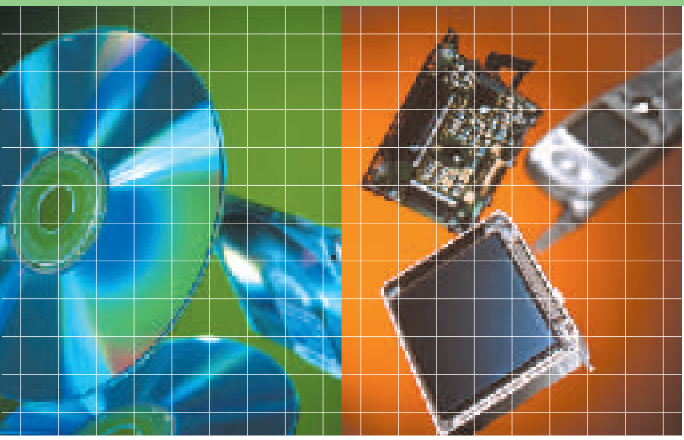
Electronics & Information Materials Business Operation

Imaging and reprographic products, liquid crystal (LC) materials, engineering plastics

Other Businesses

Health foods, fitness club management

"Responsible Care" refers to activities pledged and carried out by companies that manufacture and/or handle chemical substances with the aim of protecting the environment, safety and health, and to the implementation and continual revision of measures to accomplish this aim throughout the full life cycle of chemical products, from development and production through distribution and use to final consumption and disposal.



CONTENTS

About this Report:
1. Period under review: Fiscal 2003 (the year ended March 31, 2004)
2. Scope: DIC's *Responsible Care Report 2004* summarizes the activities and achievements of the following production and research facilities:

■ DIC:
The Ishikari, Gunma, Tatebayashi, Saitama, Kashima, Tokyo, Chiba, Mikawa, Komaki, Yokkaichi, Shiga, Suita, Sakai and Fukuoka plants and the DIC Central Research Laboratories

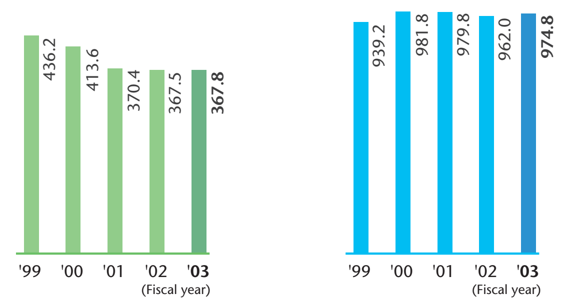
■ Affiliated companies and production facilities of affiliated companies located within DIC plants in Japan:
DIC Technology Corp.; DIC Global Logistics Co., Ltd.; DIC Bayer Polymer Ltd. (Sakai Plant); Shin DIC Kako, Inc. (Shiga Plant, Sakai Plant); Japan Formalin Company, Inc.; DIC EP, Inc. (Kashima Plant); Kodak Polychrome Graphics LLC (Gunma Plant); DIC Plastics, Inc. (Shiga Plant); DIC Sheet, Inc.; DIC Color Coating, Inc.

Financial Highlights

Non-consolidated / Consolidated

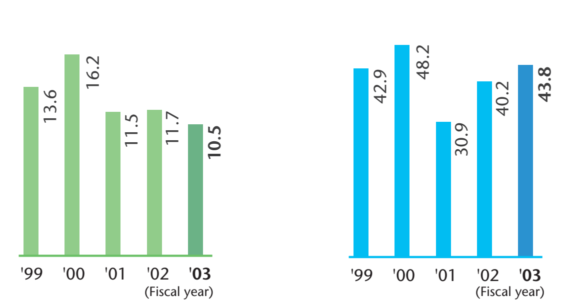
Net Sales

Billions of yen



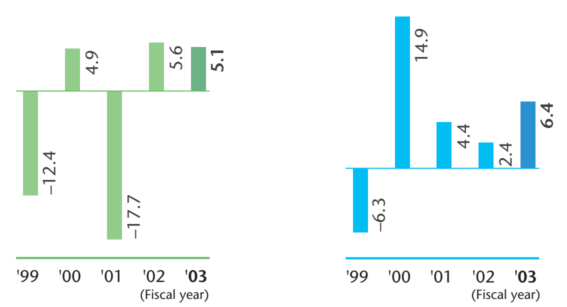
Operating Income

Billions of yen



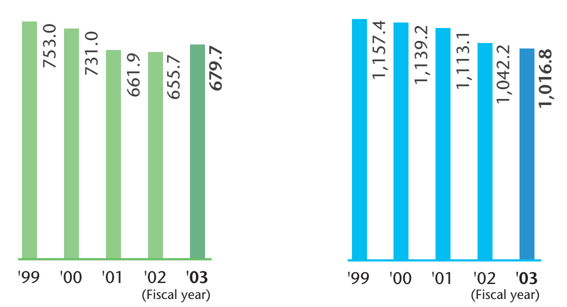
Net Income (Loss)

Billions of yen



Total Assets

Billions of yen



Note: These graphs have been prepared from the accounts maintained in accordance with the provisions set forth in Japan's Commercial Code and Securities and Exchange Law. The scope of consolidation differs from that used for the purposes of this report. In fiscal 2003, DIC had 222 consolidated subsidiaries.

A MESSAGE FROM THE PRESIDENT

Koji Oe
President

I am pleased and proud to present DIC's *Responsible Care Report 2004*. This report summarizes the results of our Environment, Safety and Health (ESH) protection activities during fiscal 2003, ended March 31, 2004.

DIC established an Environmental and Safety Committee in 1973 and in the two decades that followed developed an effective structure to implement ESH at all DIC plants, sales offices, research and development (R&D) facilities and affiliated companies. With the establishment in 1995 of the Japan Responsible Care Council (JRCC), of which DIC is a founding member, we unveiled and began implementing a Responsible Care program.

In line with our official Principle and Policy for the Environment, Safety and Health, we have made substantial progress on several fronts, including reducing environmental load, promoting the safe management of chemical substances and eliminating occupational accidents. In the period under review, we achieved a reduction in the index of energy consumption per unit of production, calculated in volume of crude oil used, substantially exceeding our stated goal of at least 1.0% annually. This reflected a number of factors, including the modification of production processes and the installation of cogeneration systems.

Our efforts have also enabled us to bring our zero emissions target for industrial waste disposed of as landfill—5% of the fiscal 1999 level by fiscal 2010—forward three years. We now expect to achieve this goal by the end of fiscal 2007, our 100th anniversary.

We have also worked tirelessly to develop and offer environment-friendly products. To this end, we have formulated new internal guidelines for assessing and designating such products and are focusing R&D efforts on products that satisfy these guidelines. Already more than 70% of our mainstay printing inks qualify under these guidelines as "environment-friendly." We are also applying our expertise in resin molding technologies to develop environment-friendly components for fuel cells. Going forward, we will continue to respond to society's expectations by focusing on the development of environment-friendly alternatives to existing products in our lineup.

To ensure DIC remains a company worthy of society's trust, we will strive as a leading multinational company to reinforce Responsible Care efforts at Group companies in Japan and overseas. In these and other efforts, we look forward to your ongoing support. As always, we welcome and appreciate comments or advice from our readers.

Principle and Policy for the Environment, Safety and Health

Principle

As a responsible corporate citizen, Dainippon Ink and Chemicals, Incorporated (DIC), recognizes that care for the environment, safety and health (ESH) is fundamental to the management of the Company. DIC is committed to the concept of sustainable development and contributes to society by creating environmentally sound products and technology.

Policy

1. We establish ESH-related objectives and targets and pursue continual progress.
2. We comply with laws, regulations and agreements relevant to ESH.
3. We consider the ESH implications of each of our products throughout their life cycles in accordance with the ideals of Responsible Care.
4. We instill in our employees a thorough understanding of this fundamental Principle and Policy.
5. We organize our operations so as to promote the safeguarding of the environment, safety and health and conduct audits to monitor progress throughout the Company.
6. We ensure that operations are conducted safely and materials are handled properly. We try to prevent environmental pollution and avoid affecting the environment negatively by recycling waste, conserving energy and other resources and using materials that are environmentally friendly.
7. We place the utmost importance on ESH-related considerations at all stages of the new product planning and production process.
8. We promote safety by providing customers with detailed instructions on the proper use and handling of all products.
9. In our overseas activities, we conduct environmental impact assessments and strictly observe local ESH regulations. In the absence of such regulations, we work with local officials and our business partners to develop environmental safeguards. We also follow this procedure when dealing with toxic materials, applying the same stringent standards for their handling as required in Japan. In addition, we promote the transfer of technology and know-how related to environmental protection.
10. We provide the public and appropriate authorities with ample information about our products and business activities so that they may have an accurate understanding of our efforts to promote health, safety and environmental protection.

The above Principle and Policy shall be available to all employees and to the general public. It is our goal that this Principle and Policy be followed at all DIC Group companies.

Established April 1, 1992
Revised February 1, 1996

October 2004

Koji Oe
President

Resources used in production ("input") and emissions released during production that impact the environment ("output")

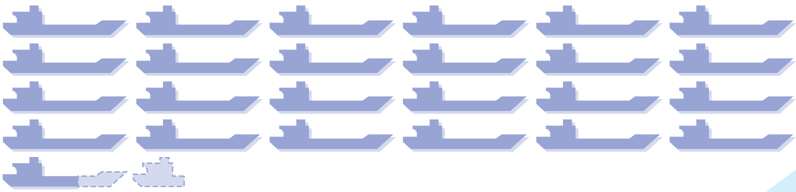
P9

123,000 kl
(Calculated in volume of crude oil used)

Energy Consumption

3.1% decrease
from fiscal 2002

Energy consumed by DIC in fiscal 2003 would fill 24.6 5,000 kl tankers.



(The decrease from fiscal 2002 would fill one tanker to approximately 80% capacity.)

= amount held by one 5,000 kl tanker

P11

92.8%

Green Procurement Rate

0.3 percentage point increase
from fiscal 2002

INPUT ▶ DIC

P19

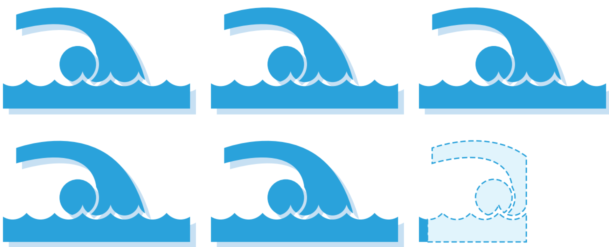
City water 340,000 m³
Industrial water 12,269,000 m³

12,609,000 m³

Total Water Consumption

9.5% decrease
from fiscal 2002

Water consumed by DIC in fiscal 2003 would fill 5,041.6 Olympic-sized (2,501 m³) swimming pools*



(The decrease from fiscal 2002 would fill approximately 527 Olympic-sized swimming pools.)

= amount held by 1,000 Olympic-sized swimming pools

*Based on the La Fédération Internationale de Natation (FINA) Standard

※ Indicates relevant page of this report

PRODUCTION INPUT–OUTPUT FLOW FOR FISCAL 2003

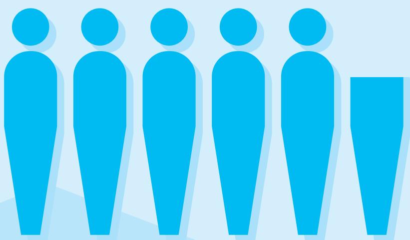
P18

76,000 tons
(including emissions from purchased electric power)

CO_2 Emissions
(calculated in volume of carbon released)

Level with fiscal 2002

In fiscal 2002, CO_2 emissions in Japan amounted to 2.67 tons per person. CO_2 emissions by DIC in fiscal 2003 represented the emissions of 28,464 people.



= amount used by 5,000 people

Note: Calculated in volume of carbon released by DIC based on figures published by Japan's Ministry of the Environment.

P7

601 tons
Emissions of PRTR Chemicals Released into the Atmosphere
(includes emissions of certain chemicals for which monitoring is voluntary)

P18

33 tons
SOx Emissions

P18

182 tons
NOx Emissions

OUTPUT ▶

P9

3,426 tons

Industrial Waste Disposed of as Landfill

18% decrease from fiscal 2002

Waste disposed of as landfill by DIC in fiscal 2003 would fill 856.5 four-ton trucks.

(The decrease from fiscal 2002 would fill approximately 191 trucks.)

= amount held by 100 four-ton trucks

P19

441 tons
COD Emissions into Water

P19

10,901,000 m^3
Total Emissions of Waste Water

In fiscal 2003, DIC's emissions of PRTR chemicals amounted to 601 tons, a decrease of approximately 9%, or 59 tons, from fiscal 2002.

REDUCTION OF CHEMICAL SUBSTANCE EMISSIONS

Pollutant Release and Transfer Register (PRTR) Chemicals

In fiscal 2003, DIC's emissions into the environment of chemicals targeted by the Japan Chemical Industry Association's (JCIA's) PRTR scheme amounted to 601 tons, a decrease of approximately 9%, or 59 tons, from fiscal 2002.

Until fiscal 1999, the JCIA's voluntary PRTR scheme targeted 284 chemicals. With the enactment of the PRTR Law, effective fiscal 2000, this number increased, to 480. This total comprises 354 chemicals specified under the PRTR Law and 126 chemicals from the JCIA list not specified under the PRTR Law.

In fiscal 2003, DIC used 127 of the 480 PRTR chemicals, an increase of nine from the previous period. This increase reflected a tightening of the standard used to qualify a chemical for inclusion, namely, volume used per factory, to one ton per year, from five tons per year.

The top graph to the right shows DIC's emissions of all PRTR chemical substances since it began monitoring these emissions in 1996. The table below the graph indicates PRTR chemicals for which emissions by DIC in fiscal 2003 exceeded 10 tons.

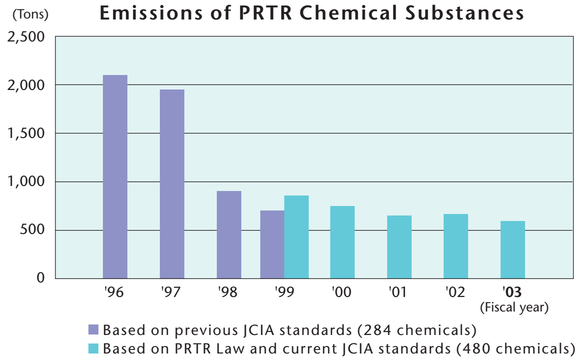
Notes:

1. **PRTR**
   The PRTR is a scheme for assessing, aggregating and disseminating data on the sources of hazardous chemicals, amounts released to the environment and amounts transferred off-site from industrial establishments via waste products.
2. **PRTR Law**
   Popular name for the Law Concerning the Reporting, etc. of Release to the Environment of Specific Chemical Substances and Promoting Improvements in their Management. The law, which went into effect in 1999, required companies meeting certain standards to assess the release and transfer of PRTR chemicals from 2001 and report results to the government from 2002. DIC has assessed the release of PRTR chemicals and aggregated and disseminated data in accordance with the law retroactive to 1999.

Compliance with Dioxin Emission Control Regulations

As of fiscal 2003, DIC has two incinerators that qualify as "specified facilities" under Japan's Law Concerning Special Measures Against Dioxins. Both facilities comply with legal standards governing dioxin levels in exhaust gas and waste water. Cinders and particulates generated during incineration are disposed of in accordance with the Waste Disposal and Public Cleansing Law.

Emissions of PRTR Chemical Substances

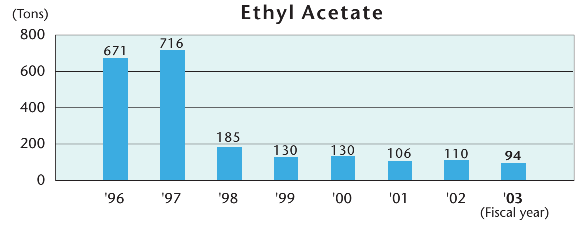


PRTR Chemicals with Emissions in Excess of 10 Tons in Fiscal 2003

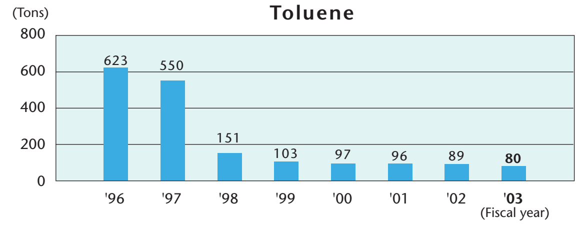
Emissions (Tons)

Chemical	Volume Manufactured/Used	Volume Emitted
Ethyl acetate	13,624	94
Toluene	11,880	80
Methyl ethyl ketone	11,179	79
Xylene	7,026	63
N,N–dimethylformamide	7,840	46
Methyl alcohol	30,116	38
Propyl alcohol	3,633	30
N–methylpyrrolidone	193	25
Butyl alcohol	6,753	21
HCFC–141b	333	20
Methyl cellosolve	150	14
Butyl cellosolve	1,927	10

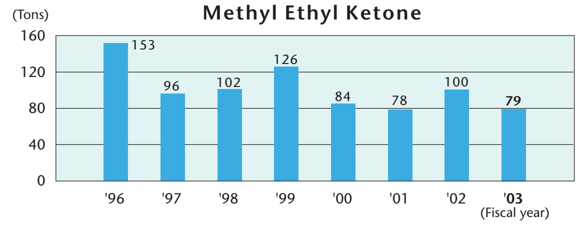
Ethyl Acetate



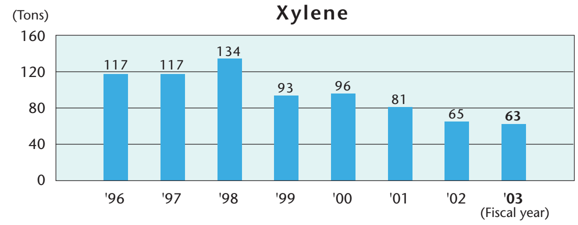
Toluene



Methyl Ethyl Ketone



Xylene



4,190t

3,426t

–18%

DIC achieved an 18% reduction in industrial waste disposed of as landfill in fiscal 2003, to 3,426 tons, from 4,190 tons in fiscal 2002.

Liquid waste treatment facility at the Mikawa Plant

REDUCTION OF ENERGY CONSUMPTION AND INDUSTRIAL WASTE

Energy Consumption

In fiscal 2003, DIC achieved a 3.1% decrease in its absolute energy consumption, calculated in volume of crude oil used, to 123,000 kl. The index of energy consumption per unit of production (fiscal 1990=100) was 87, a decline of 6.4%, substantially exceeding the Company's stated goal of reducing absolute energy consumption, calculated in volume or crude oil used, by at least 1.0% annually. These results reflect a number of factors, including the installation of cogeneration systems. The top graph to the right shows DIC's absolute consumption and the consumption index from fiscal 1990 through fiscal 2003.

DIC will continue to take steps to lower energy consumption Companywide, in line with its annual 1.0% target, by introducing high-efficiency production equipment, installing cogeneration systems at facilities with minimal to moderate energy requirements and employing fuel cells and other new technologies.

Notes:

1. Cogeneration systems enable the simultaneous production of several types of energy using one primary fuel. DIC's cogeneration systems use such fuels as natural gas and kerosene to produce electricity and the waste heat from fuel combustion to produce steam.
2. Energy consumption calculated in volume of crude oil used is the total volume of all types of energy used, including electric power and crude petroleum.
3. Energy consumption per unit of production is the volume of energy consumed per ton of production.
4. The energy consumption index compares the change in the rate of consumption per unit of production with fiscal 1990 as the base year. Japan's chemical industry has set a goal for this index of 90 by fiscal 2010.

Industrial Waste

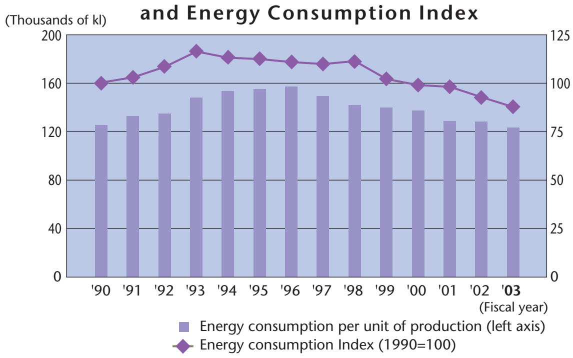
DIC achieved an 18% reduction in industrial waste disposed of as landfill in fiscal 2003, to 3,426 tons.

The second graph on the right illustrates the annual volume of industrial waste generated by DIC that has been disposed of in this manner since fiscal 1990.

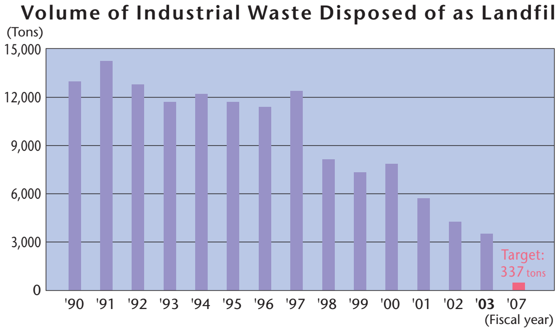
DIC has set a goal for industrial waste disposal of 5% of the fiscal 1999 level, or 337 tons, by fiscal 2010 and, since fiscal 2001, implemented a variety of programs aimed at achieving this goal. In fiscal 2003, the Company implemented a review of this initiative, as a consequence of which it brought its target forward three years, to fiscal 2007, and reinforced related efforts.

Note: Industrial waste disposed of as landfill refers to the volume of industrial waste buried in landfill sites.

Energy Consumption per Unit of Production (Calculated in Volume of Crude Oil Used) and Energy Consumption Index



Volume of Industrial Waste Disposed of as Landfill



Converting Cinders into Raw Materials

In December 2003, DIC's Chiba Plant installed automated facilities for removing metal and nails from cans and other containers from incinerator cinders, facilitating the use of these cinders to manufacture lightweight aggregate for structural applications and seal coats for pavement. As a consequence, in fiscal 2004 the plant expects to see a significant improvement in the proportion of the waste it generates that is converted into usable raw materials.

New automated facilities at the Chiba Plant

Recycling of Containers and Packaging

The Law for Promotion of Sorted Collection and Recycling of Containers and Packaging, which went into effect in April 1997, obliges companies to which the law applies to recycle containers and packaging into commercial products. To facilitate a smooth process, the Japan Containers and Packaging Recycling Association was established as a government-designated organization providing services on a contract basis. DIC has contracted the association as part of its strategy to ensure the efficient recycling of containers and packaging. In fiscal 2003, the Company paid a total of approximately ¥1.3 million to the association for the recycling of containers and packaging used in its health foods and petrochemicals-related products businesses.

92.5%

92.8%

+0.3 point

In fiscal 2003, 92.8% of the raw materials procured by DIC were from suppliers that meet its Green Procurement standards.

GREEN PROCUREMENT

Ozone-Depleting Substances

DIC previously used a designated ozone-depleting substance in some of its expandable urethane resins. By the end of fiscal 2003, however, DIC switched to an alternative manufacturing system, thereby enabling the Company to completely eliminate the use of ozone-depleting substances in its products.

Green Procurement

DIC established its own Green Procurement standards in fiscal 2001 and continues to encourage suppliers who do not meet these standards to implement changes.

In fiscal 2003, DIC achieved a Green Procurement rate of 92.8%, meaning that 92.8% of raw materials procured were from suppliers that meet its Green Procurement standards, up from 89.0% in fiscal 2001 and 92.5% in fiscal 2002. DIC intends to achieve a 100% Green Procurement rate by the end of fiscal 2005.

DIC's Green Procurement Standards

Activities A supplier must either	Materials Procured A supplier must
• have earned ISO 14001 certification or have a management system in place and a definite schedule for applying for ISO 14001 certification, or • conduct its operations in accordance with the principal requirements for ISO 14001.	• supply materials that contain no prohibited substances, e.g., substances prohibited under the Industrial Health and Safety Law or Class 1 specified chemical substances prohibited under the Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances, and • recycle containers or otherwise contribute to environmental preservation.

Note: Suppliers must meet standards in both columns to qualify.

Definition of Green Procurement Rate

$$\text{Green Procurement Rate} = \frac{\text{Total volume of raw materials procured from suppliers that meet DIC's Green Procurement standards}}{\text{Total volume of raw materials procured by DIC's Purchasing Department}} \times 100$$

Fiscal year	2001	2002	2003
Green Procurement (%)	89.0	92.5	92.8

Compliance with Customers' Green Procurement Standards

With the adoption of such directives as RoHS and WEEE, manufacturers are under increased pressure to establish stringent Green Procurement standards and ensure the compliance of raw materials and components suppliers.

In addition to implementing strict criteria for regulating heavy metal compounds and other hazardous substances, DIC proactively discloses information on hazardous substances contained in its products to its customers. In fiscal 2003, the Tokyo, Suita, Tatebayashi and Komaki plants were chosen as "Green Partners" by a leading Japanese electronics manufacturer which awards the designation to suppliers that cooperate in the production of environment-friendly products.

Notes:

1. **RoHS (Restriction of Hazardous Substances) Directive**
   A European Union (EU) directive banning the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) in electrical and electronic equipment brought to market after July 1, 2006.
2. **WEEE (Directive on Waste Electrical and Electronic Equipment) Directive**
   An EU directive on the responsibilities of individual manufacturers to collect and recycle waste electrical and electronic equipment.

Green Procurement of Office Supplies

Concurrent with its switch to an online purchasing system for office supplies, in fiscal 2003 DIC introduced a Green Procurement designation for office supplies and began promoting the use of products worthy of this designation*. In fiscal 2003, such products accounted for 22% of all office supplies purchased by the Company.

* Products that (a) have qualified as "green" under Japan's Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities, (b) bear Japan's Eco Mark (a designation assigned by the Japan Environment Association to products that contribute to environmental preservation) and/or (c) are included in the data book published by the Green Purchasing Network (GPN), an organization established in February 1996 to promote green purchasing among consumers, companies and governmental organizations in Japan.

Environment-friendly products accounted for 29% of DIC's non-consolidated net sales in fiscal 2003.

Environment-Friendly Product Development

DIC is actively committed to the development and launch of environment-friendly products, that is, products that respond to market expectations regarding reduced impact on the environment. Accordingly, the Company recently formulated new internal guidelines for assessing and designating environment-friendly products. The full-scale implementation of these guidelines commenced January 1, 2004.

In fiscal 2003, products qualifying as "environment-friendly" under DIC's new guidelines accounted for 29% of non-consolidated net sales. DIC aims to significantly increase this percentage and is focusing on R&D on the development of environment-friendly alternatives to existing products in its lineup. Through such efforts, the Company will continue to work to contribute to a sound and sustainable society.

Assessment and Designation of Environment-Friendly Products

DIC's guidelines for assessing and designating environment-friendly products encompass 16 criteria in four categories: energy consumption, raw materials used, risk and industrial waste generation. In principle, all DIC products, including those under development, are evaluated based on these 16 criteria in comparison with corresponding domestic market leaders. (Products for which there are no corresponding domestic market leaders will be evaluated in comparison with existing DIC products.)

DIC環境調和型製品

DIC products designated "environment-friendly" are eligible to use this proprietary mark on packaging labels and in catalogs, technical materials and product advertising.

ENVIRONMENT-FRIENDLY DIC PRODUCTS

This section introduces several environment-friendly DIC products and product development efforts.

100% Vegetable Oil-Based Offset Ink Containing No Volatile Organic Chemicals (VOCs)

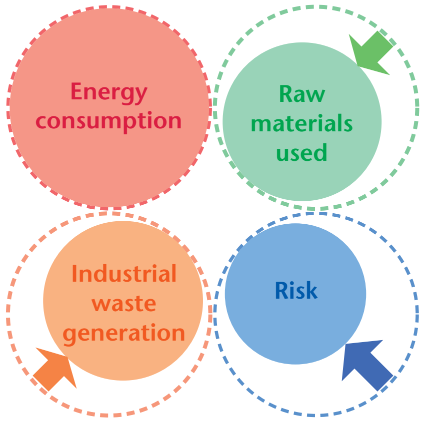
New Champion Naturalith 100

Offset inks are used for a broad range of printing applications. Conventional offset inks are made with petroleum-based solvents and have a VOC content of 20% to 40%. While soybean oil-based offset inks contain less solvent, they still have a VOC content of 15% to 20%. By employing an innovative cross-linking structure (CLS), DIC succeeded in developing an offset ink that uses 100% vegetable oil—thereby eliminating VOCs—and delivers high-density adherence and the rapid formation of a surface skin.

New Champion Naturalith 100's outstanding environmental and printing performance has earned it a number of prestigious awards, including an Award of Excellence and a Nikkei Business Daily award in the 1999 Nikkei Superior Products and Services Awards.

Comparison of Conventional Offset Inks and *New Champion Naturalith 100*

(Dotted lines represent conventional offset inks)



- Energy consumption: Comparable to conventional offset inks
- Raw materials used: Organic solvents eliminated, significantly reducing environmental load
- Risk: VOCs in production environment reduced
- Industrial waste generation: Generation of industrial waste reduced

Overcoming Technical Challenges

Offset Ink Technology Headquarters

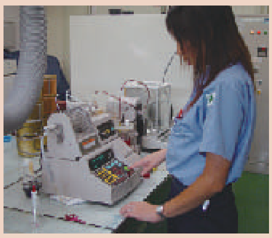
Our efforts focus on developing non-polluting offset inks with the aim of helping to conserve non-renewable resources and preserve the environment. Our ultimate objective has always been to develop VOC-free offset inks. While the use of vegetable oil instead of petroleum-based solvents has long been recognized as the solution to this problem, developing a commercially viable 100% vegetable oil-based ink presented numerous technical challenges, notably a slow drying time. Years of research by our team culminated in the development of an innovative CLS that finally facilitated the commercialization of a groundbreaking 100% vegetable oil-based offset ink. This ink—*New Champion Naturalith 100*—continues to earn praise from customers not only for the minimal burden it exerts on the environment but also for its friction resistance and other outstanding performance features.

Maintaining Vigilance in Production

Ink Production Department

New Champion Naturalith 100 is a VOC-free 100% vegetable (primarily soybean) oil-based offset ink. To ensure *New Champion Naturalith 100* merits the description "VOC-free", we must pay particular attention to quality control for raw materials and production processes. This requires a high level of vigilance on the part of production teams. It is our hope that printers will continue to depend on *New Champion Naturalith 100* to ensure high-quality, environmentally sound printing services for their customers.

Hideo Ishii, General Manager of the Offset Ink Technology Headquarters and developer of *New Champion Naturalith 100*



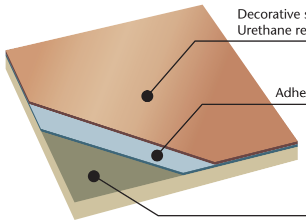
New Champion Naturalith 100 product inspection

Low-VOC Decorative Boards that Improve Room Air Quality

DIC Board VS (*DIC* Ambiente *Series*)

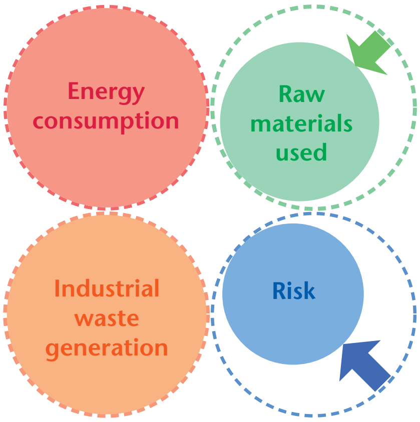
Health problems caused by hazardous air quality in homes resulting from, among others, inadequate ventilation—a result of excessive insulation—and the emission of chemical substances from building and decorative materials have become a major concern in recent years. These problems are referred to collectively as multi-chemical sensitivity ("Sick House Syndrome"). Japan's Ministry of Health, Labour and Welfare (MHLW) has taken several steps to improve residential air quality in the country, including establishing standards for VOC levels in homes. Responding to increasing concern over this issue, DIC has developed *DIC Board VS*, a low-VOC decorative board for interior use that improves room air quality.

Note: Sick House Syndrome encompasses a variety of health problems, including eye and throat irritation, caused by hazardous air quality in homes. These problems result from VOCs in the air caused by inadequate ventilation and the emission of chemical substances from building and decorative materials, as well as from molds and dust mites from furniture, carpets and other household goods and, for some individuals, ultrasensitivity to chemical substances.



Note: Under Japan's revised Building Standards Law, enacted in July 2003, all building materials with the potential to emit formaldehyde must be certified. Materials qualifying for F☆☆☆☆, the most stringent classification, are subject to no restrictions on use when used for interior decorative purposes.

Comparison of *DIC Board VS* and Conventional Decorative Boards
(Dotted lines represent conventional decorative boards)



- Energy consumption: Comparable to conventional decorative boards
- Raw materials used: VOC level less than 1/10 that of conventional decorative boards
- Risk: VOCs in production environment reduced
- Industrial waste generation: Comparable to conventional decorative boards

Developing Materials for Healthy Living Environments

Building Materials Technology Headquarters

Sick House Syndrome has become a key concern in recent years and efforts to improve air quality in homes by enhancing building and decorative materials are attracting considerable attention. Our efforts to address this challenge led to the development of *DIC Board VS*. Japan's MHLW has issued new standards for VOC levels in homes. These standards impose limits on toluene and xylene, which are present only in minute quantities in *DIC Board VS*, as well as for paradichlorobenzene, ethylbenzene, styrene, chloropyrifos and Di-n-butyl phthalate, none of which are present in *DIC Board VS*. Accordingly, use of *DIC Board VS* on cabinets, doors and other applications can contribute to ensuring high residential air quality.

In developing *DIC Board VS*, our engineers sought to minimize VOC content by choosing materials developed in-house and applying a wide range of proprietary technologies. This is another reason we feel confident in recommending this product to customers.

All applicable DIC products have been certified under the JAS standard for formaldehyde emissions, as dictated by Japan's revised Building Standards Law. Most of these products have qualified for F☆☆☆☆, the most stringent qualification for decorative boards. We look forward to continuing to work with other DIC Group companies to develop and manufacture innovative, environment-friendly new products.


Technical staff


Production staff

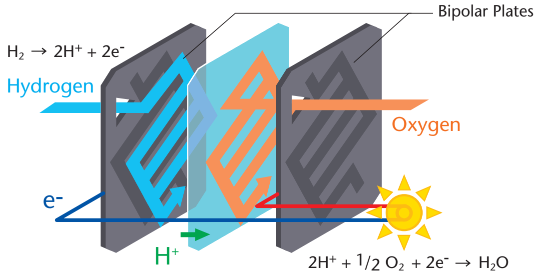
Bipolar Plates for Fuel Cells

Revolutionary Low-Cost Molded Resin Bipolar Plates

A fuel cell converts hydrogen and oxygen into water and in the process generates electricity. Efficient energy conversion and suitability for cogeneration —that is, combined heat and electricity generation— applications are attracting increasing attention as a next-generation alternative to conventional energy generators.

Essential components of fuel cells, bipolar plates are used to separate the hydrogen and oxygen. DIC is developing revolutionary bipolar plates made of molded thermosetting resin that are equal in performance to conventional sintered carbon bipolar plates but can be manufactured for 1/100 the cost.

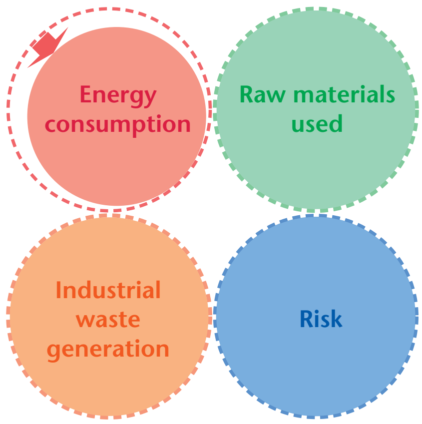
How a Fuel Cell Works



Hydrogen + oxygen = water + electricity

Comparison of DIC's Molded Resin Bipolar Plates and Conventional Bipolar Plates

(Dotted lines represent conventional bipolar plates)



- Energy consumption: Requires less than 1/10 the time to heat as conventional machined bipolar plates
- Raw materials used: Comparable to conventional bipolar plates
- Risk: Comparable to conventional bipolar plates
- Industrial waste generation: Comparable to conventional bipolar plates

Developing Fuel Cell Materials to Facilitate Green Energy

R&D Headquarters

Fuel cells offer outstanding conversion efficiency and are seen by many as our last chance to reduce CO_2 emissions in the atmosphere. With the aim of contributing to the expansion of fuel cell use, our group focuses on developing highly durable materials for bipolar plates and other key fuel cell components.

Efforts to develop fuel cells continue worldwide, reflecting their importance to our environment. Our efforts to date reflect our belief in the importance of fuel cells as next-generation technologies that will transform us from a society dependent on supplies of petroleum-based fuels to one that is capable of satisfying its energy needs with hydrogen. Today, our team of researchers continues to develop materials that will facilitate the creation of cleaner and more efficient fuel cells.

R&D staff

Fuel cell operating test

DIC Group companies overseas are also actively engaged in ESH.

ESH IN OVERSEAS OPERATIONS

ESH at Overseas DIC Group Companies

As of March 2004, the DIC Group included 210 subsidiaries in 61 countries. Core subsidiaries Sun Chemical Corp. and Reichhold, Inc., both of which head their own extensive groups companies, are actively engaged in ESH through Coatings Care and Responsible Care activities, while other subsidiaries are pursuing a variety of independent programs.

In Southeast Asia and the People's Republic of China (PRC), DIC assists Group companies to conduct ESH assessments.

DIC has introduced the same workplace accident report forms to Group companies in the graphic arts field in Southeast Asia as it uses in Japan and established communications procedures to facilitate the effective sharing of environment- and safety-related information. As a consequence, the incidence of workplace accidents at DIC Group companies in the region has declined significantly. In fiscal 2003, DIC established a similar system to facilitate communications with DIC Group companies in the PRC, particularly its holding company, which overseas DIC operations in the country, and its R&D facility in Qingdao.

DIC has also translated safety principles and standards into local languages and English for use by Group companies in Southeast Asia and the PRC. In fiscal 2003, the Company produced English- and Chinese-language versions of *Principles of Safe Conduct: Procedures and Attitudes for a Safe Workplace*, which is used by Group companies in Japan. The Qingdao R&D facility prepared a similar document that takes into account local laws and regulations, which was distributed to Group companies in the PRC and translated into Japanese for the benefit of DIC employees on assignment in the country.

With the aim of supporting efforts to ensure ESH for DIC Group employees everywhere, the DIC Group's R&D facilities around the world ensure companies are provided with data on chemical substances that facilitate safe handling.

Note: Spearheaded by the National Paint & Coatings Association (NPCA), Coatings Care is the paint and coatings industry's equivalent of Responsible Care in the chemicals industry. Like Responsible Care, Coatings Care is a voluntary program designed to assist companies with their ESH initiatives.

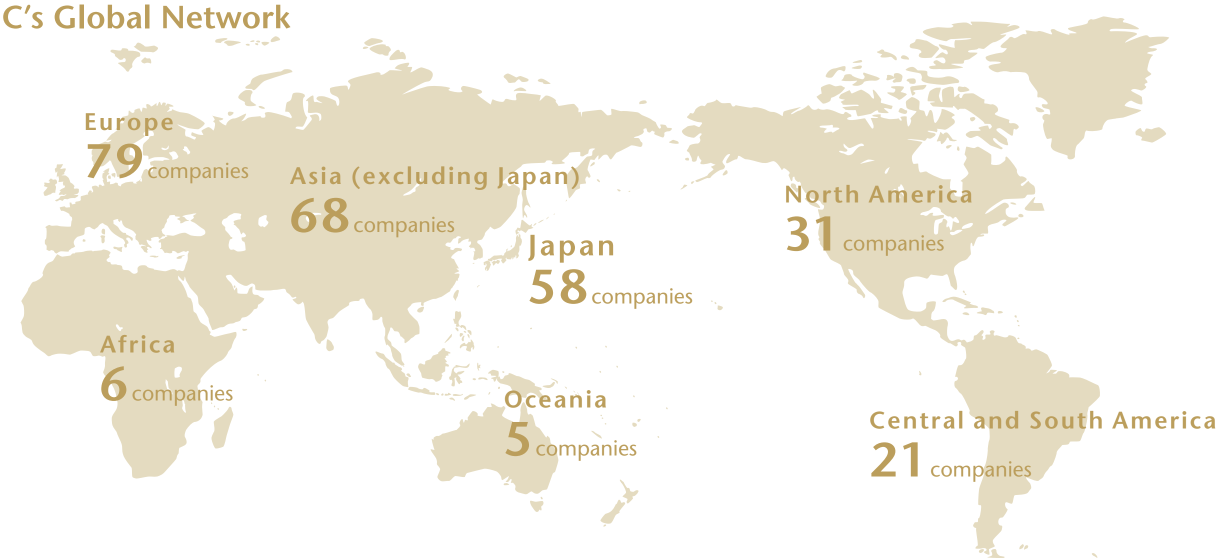
ESH in International Transactions

In addition to adhering to the rules outlined in its *Safety Management for International Trade Manual*, DIC has prepared a checklist for employees traveling overseas on business to prevent the illegal export of products, regulated substances and technologies. DIC also keeps abreast of information on trafficking in prohibited substances and has established an internal mechanism to ensure adherence with international regulations.

For products exported from Japan for sale in overseas markets, DIC prepares and distributes material safety data sheets (MSDSs) in local languages or English. DIC has also begun using product labels that comply with laws and regulations in receiving countries. In fiscal 2003, the Company replaced labels on products bound for the Republic of Korea and Malaysia with labels that comply with labeling laws in these countries.

Note: An MSDS contains information on the properties of and proper handling procedures for a particular chemical substance. Chemical manufacturers in Japan are required to provide MSDSs to customers in advance for products containing substances specified by the Labor Safety Hygiene Law, Poisonous and Deleterious Substances Control Law and Law Concerning the Reporting, etc. of Release to the Environment of Specific Chemical Substances and Promoting Improvements in their Management.

DIC's Global Network



ENVIRONMENTAL LOAD REDUCTION

Emissions of CO_2, SO_X, NO_X and COD

Graph 1 indicates DIC's emissions of CO_2 from fiscal 1990 through fiscal 2003 (fiscal 1990=100), calculated in volume of carbon released, and indexes energy consumption per unit of production (fiscal 1990=100). Although the absolute volume of emissions of CO_2 in fiscal 2003 was on a par with the previous period, the index declined to 84, from 86.

CO_2 emitted through the combustion of energy during production accounts for the bulk of DIC's CO_2 emissions. Accordingly, the Company's targets for reducing CO_2 emissions are tied to its targets for lowering energy used for production. In fiscal 2003, DIC exceeded its CO_2 emission index target of 85 thanks to intensive efforts to reduce energy consumption. The Company's target for fiscal 2004 is 83.

Graphs 2, 3 and 4 show sulfur oxide (SO_X) and nitrogen oxide (NO_X) emissions and chemical oxygen demand (COD) from fiscal 1990 through fiscal 2003, respectively. Although SO_X emissions have declined significantly during this period, owing primarily to a switch from liquefied petroleum gas (LPG) and city gas from fuel oil, NO_X emissions have increased as a consequence of the installation of cogeneration systems. Nonetheless, emissions of both substances remain stable and well below legislated levels and levels agreed upon with municipal authorities.

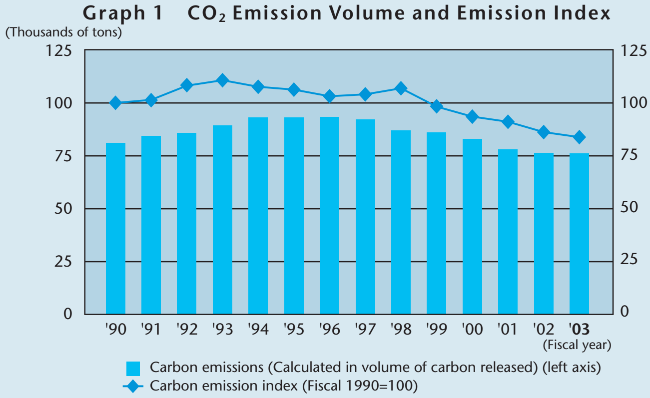
Soil and Groundwater Analysis at Plant Sites

During fiscal 2003, DIC conducted soil analysis at the site of a sports ground belonging to its Amagasaki Plant prior to its sale, although such analysis was not obligatory under the Soil Contamination Countermeasures Law as the land had not been used for production purposes. This analysis revealed the presence of certain contaminants in excess of legally permitted levels. Further examination of the data led inspectors to conclude that these contaminants were likely to be naturally present in the soil. Local authorities concurred with this conclusion. However, given the purposes under consideration for the land after its sale, soil was replaced and the site transformed into a vacant lot.

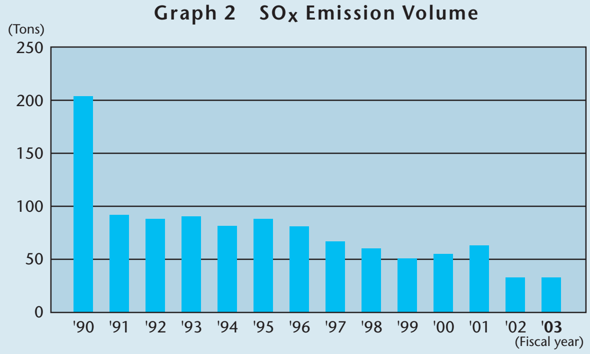
DIC conducts soil analysis at all former plant sites plants and, if requested by local authorities, measures groundwater contamination. If indicated, the Company promptly implements soil remediation or other necessary measures.

DIC plants that have earned ISO 14001 certification have incorporated the implementation of measures to prevent the leaching of hazardous chemical substances and standard operating procedures.

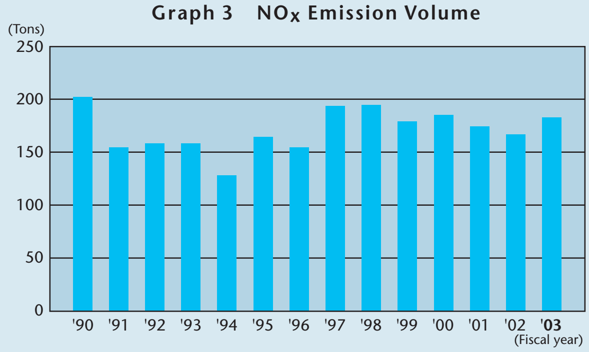
Graph 1 CO_2 Emission Volume and Emission Index



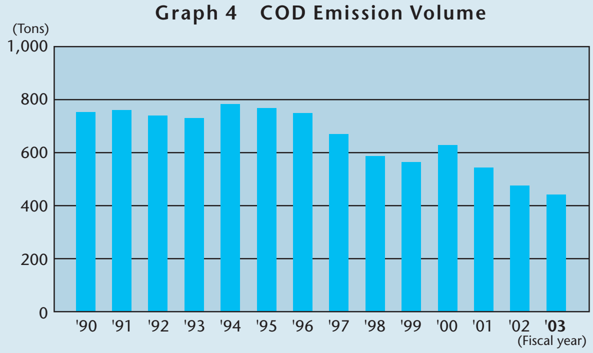
Graph 2 SO_X Emission Volume



Graph 3 NO_X Emission Volume



Graph 4 COD Emission Volume



(EMISSIONS INTO ATMOSPHERE, WATER AND SOIL)

Key Environmental Indicators

Table 1 Emissions of PRTR Chemicals (See page 7)

Fiscal year	1996	1997	1998	1999	2000	2001	2002	**2003**
Based on previous JCIA standards (284 chemicals) (tons)	2,095	1,948	895	696	—	—	—	**—**
Based on PRTR Law and current JCIA standards (480 chemicals) (tons)	—	—	—	856	749	652	660	**601**

Note: In fiscal 1996, the number of PRTR chemicals was 284. This was increased to 480 in fiscal 1999.

Table 2 Energy Consumption (See page 9)

Fiscal year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
Energy consumption (calculated in volume of crude oil used) (1,000 kl)	127	132	136	148	154	155	157	151	142	139	138	129	127	**123**
Energy consumption per unit of production (liters/ton)	138	142	150	160	157	156	153	151	154	141	136	133	128	**120**
Energy consumption index	100	103	109	116	114	113	111	110	112	103	99	97	93	**87**

Note: Energy consumption per unit of production is the volume of energy consumed per ton of production, calculated in volume of crude oil used. The energy consumption index compares the change in the rate of consumption per unit of production with fiscal 1990 as the base year. The JCIA has set a target for the reduction of energy consumption per unit of production for its member companies of 90% of the fiscal 1990 level by 2010. For DIC, this would be 124 liters/ton.

Table 3 CO_2 Emissions (See page 18)

Fiscal year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
CO_2 emissions (calculated in volume of carbon released) (1,000 tons)	81	84	86	89	93	93	93	92	87	86	83	78	76	**76**
CO_2 emissions per unit of production (kg/ton)	88	90	96	97	94	94	90	92	94	87	82	80	76	**74**
CO_2 emission index	100	102	108	110	107	106	103	104	107	98	93	91	86	**84**

Note: CO_2 emissions per unit of production is the volume of CO_2 emitted per ton of production, calculated in volume of carbon released. The CO_2 emission index compares the change in the rate of consumption per unit of production with fiscal 1990 as the base year.

Table 4 Volume of Industrial Waste Disposed of as Landfill (See page 9)

Fiscal year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
Volume disposed of as landfill (tons)	12,948	14,345	12,764	11,870	12,157	11,882	11,508	12,247	8,069	7,552	7,981	5,582	4,190	**3,426**
Zero emission index	—	—	—	—	—	—	—	—	—	100	106	74	55	**45**

Note: Industrial waste disposed of as landfill refers to the volume of industrial waste buried in landfill sites after reduction (through dessication or incineration) or directly. DIC has set a goal for industrial waste disposal of 5% of the fiscal 1999 level (337 tons) by fiscal 2007.

Table 5 SO_X Emissions (See page 18)

Fiscal year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
SO_X emissions (tons)	204	92	88	90	82	88	81	67	60	51	55	63	33	**33**
SO_X emissions per unit of production (g/ton)	221	99	97	98	84	89	79	67	65	52	54	65	33	**32**
SO_X emission index	100	45	44	44	38	40	36	30	30	23	24	30	15	**15**

Note: SO_X emissions per unit of production is the volume of SO_X emitted per ton of production. The SO_X emission index compares the change in the rate of consumption per unit of production with fiscal 1990 as the base year.

Table 6 NO_X Emissions (See page 18)

Fiscal year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
NO_X emissions (tons)	202	154	158	157	127	164	154	193	194	179	185	174	166	**182**
NO_X emissions per unit of production (g/ton)	219	166	175	171	130	165	150	193	210	181	182	180	166	**177**
NO_X emission index	100	76	80	78	59	75	68	88	96	83	83	82	76	**81**

Note: NO_X emissions per unit of production is the volume of NO_X emitted per ton of production. The NO_X emission index compares the change in the rate of consumption per unit of production with fiscal 1990 as the base year.

Table 7 Water Consumption and Wastewater Emissions

Fiscal year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
Water consumption (city water) (1,000 m^3)	546	542	558	581	568	546	520	562	536	500	482	386	339	**340**
Water consumption (industrial water, others) (1,000 m^3)	19,769	19,603	20,205	19,569	18,945	18,585	17,917	17,647	16,766	16,708	17,178	14,918	13,588	**12,269**
Wastewater emissions (1,000 m^3)	14,431	14,310	14,750	14,827	14,523	14,830	14,367	14,294	13,124	13,172	13,771	11,813	10,985	**10,901**

Table 8 COD Emissions (See page 18)

Fiscal year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
COD emissions (tons)	745	753	740	730	792	775	745	677	594	571	615	545	474	**441**
COD emissions per unit of production (g/ton)	809	810	818	793	807	780	723	676	642	579	606	563	475	**430**
COD emission index	100	100	101	98	100	96	89	84	79	72	75	70	59	**53**

Note: COD emissions per unit of production is the volume of COD emitted per ton of production. The COD emission index compares the change in the rate of consumption per unit of production with fiscal 1990 as the base year. Calculations for sites having no COD emissions data are based on biological oxygen demand (BOD) emissions.

Safety and Health Record

During fiscal 2003, three occupational accidents with lost work days were reported at DIC plants, two more than in the previous fiscal year. Two accidents involved employees being wedged or caught in machinery, while one involved an employee being hit by a flying object, resulting in corneal damage. The occupational accident frequency rate for the period was 0.40 and the occupational accident severity rate was 0.012, compared with 0.14 and 0.014, respectively, in fiscal 2002.

In addition, one accident occurred that required reporting to the authorities. This accident was due to a valve operation error, which resulted in a portion of the hot steam and reagent gushing out of the tank.

The graphs on the right show DIC's occupational accident frequency and severity rates from fiscal 1970 through fiscal 2003.

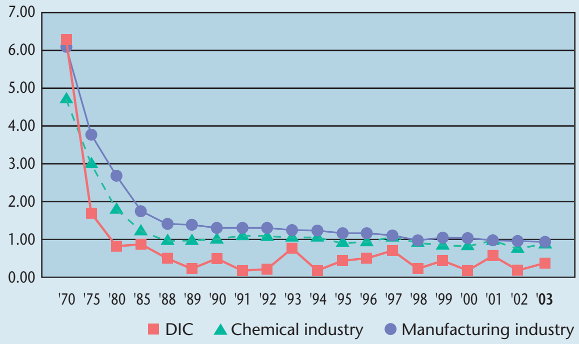
Notes:

1. **Occupational Accidents with Lost Work Days**
   Occupational accidents are accidents resulting in days away from work.
2. **Occupational Accident Frequency Rate**
   The occupational accident frequency rate is the number of injuries and deaths due to occupational accidents per one million hours of labor. (Calculation: Number of injuries and deaths ÷ Total work hours × 1,000,000). An occupational accident frequency rate of 1.0, for example, corresponds to one accident per year in a workplace with 500 employees.
3. **Occupational Accident Severity Rate**
   The occupational accident severity rate is the number of work hours lost per 1,000 hours of labor. (Calculation: Number of days lost ÷ Total work hours × 1,000). An occupational accident severity rate of 0.1, for example, corresponds to 100 work hours lost per year in a workplace with 500 employees.

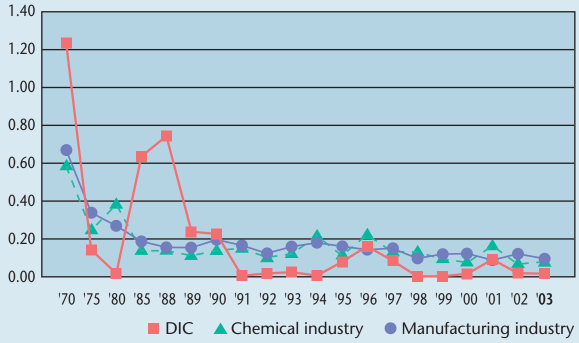
DIC was honored to receive two awards during fiscal 2003 in recognition of its superb safety record and accumulated experience in ensuring employee safety.

Kashima Plant: Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency) Incentive Prize (Occupational Health) (Minister of Health, Labour and Welfare)

Occupational Accident Frequency Rate



Occupational Accident Severity Rate



Notes:

1. "Chemical Industry" and "Manufacturing Industry" include all companies in the chemical industry and manufacturing industry, respectively, as defined by the MHLW for the purposes of its Occupational Safety and Health Statistics.
2. Figures for DIC are for the fiscal year (April 1–March 31). Figures for the chemical industry and the manufacturing industry are for the calendar year.

"Safety Tree" Rings

DIC has established the "Safety Tree" as a way to recognize the achievements of its plants and R&D facilities in eliminating occupational accidents.

Each year, DIC presents plants and R&D facilities that achieve consecutive occupational accident-free years, that is, years free from accidents resulting in days away from work, with a ring for their "safety tree." One tree comprises 20 rings. When a tree is completed, the process begins again from the top as each silver ring is replaced with a golden one for each consecutive occupational accident-free year.

As of the end of fiscal 2003, three DIC plants had achieved more than 20 consecutive occupational accident-free years: the Fukuoka Plant (35 years), the Mikawa Plant (30 years) and the Ishikari Plant (23 years). These achievements do not reflect any extraordinary efforts. Rather, they are the result of the consistent, honest application of near-miss incident sampling, hazard prediction and improvement proposal activities by plant employees. Other DIC plants are modeling their efforts to achieve consecutive occupational accident-free years after the examples set by these three plants.

Safety tree

History of DIC's Environment and Safety Program

(Fiscal year)	
1973	Environment and Safety Response Department established under direct supervision of DIC's President
	Internal safety audit conducted
1974	Environment and Safety Management Regulations and Working Regulations for Interim Countermeasures Department established
	Inspection of environment and safety precautions at major plants undertaken
1977	Large-scale waste incinerator installed at Chiba Plant
1979	Procedures for Using New Chemicals established
	Questionnaire on Characteristics of Chemicals established
1982	Guidelines for Training Inexperienced Workers (New Employees) established
1983	Professional sanitary guidance qualifications made mandatory for all management-level personnel
1984	Inspection of environment and safety precautions at branch offices, subbranches and sales offices launched
1985	5 S Procedures and Attitudes for a Safe Workplace and Examples of Emergency Situations published
	Campaign to reinforce 5 S Procedures and Attitudes for a Safe Workplace launched following several accidents
	Guidelines for Implementing Management Directives on Key Environment and Safety Issues published
1987	Campaign to identify potential accidents launched
1988	Environment and Safety Guidelines for the R&D Department published
1990	Environment and Safety Management Regulations revised to include section on global environmental preservation
1992	Environment and Safety Philosophy formulated
	Accident-free year achieved for entire Company
	Guidelines for Preparing MSDSs established
1993	Voluntary Long-Term Environment and Safety Plan formulated
	Guidelines for Preventing Accidents Caused by Static established
	Chemical substance safety information officer appointed in each division
	Various commemorative events held to mark 20th year of DIC's environment and safety program
1995	Public pledge to uphold principles of Responsible Care announced by DIC in its role as a founding member of Japan's Responsible Care movement
	Guidelines for Crisis Management in the Event of an Accident established
	Procedures and route for reporting and communicating instructions in the event of an accident established for domestic and overseas affiliates
	The Aftermath of the Great Hanshin–Awaji Earthquake published, chronicling conditions following the disaster
	Responsible Care audit system established
1996	Guidelines for Selling Chemical Products established
	Safety and Quality Control Supervisor appointed at sales office
	First Responsible Care annual report (1996) published
	ISO 14001 certification obtained by Kashima Plant from Japan Quality Assurance Association
1997	Sakai, Amagasaki, Mikawa, Chiba, Tokyo, Saitama, Yokkaichi, Gunma and Komaki plants obtain ISO 14001 certification
1998	PSM Guidelines are published
	Suita, Warabi and Nagoya plants obtain ISO 14001 certification
1999	PRTR chemical emission levels announced
2000	Registration and monitoring of chemical emissions modified in compliance with new PRTR system; environment-related costs and investments published in line with Environment Agency standards for environmental accounting
2001	Emission volumes for "priority" PRTR chemicals, i.e., those for which emissions exceed 10 tons, published
2002	2002 energy consumption and CO_2 emission volume published
	Tatebayashi Plant obtains ISO 14001 certification
	Shiga Plant expands ISO 14001 certification to encompass entire plant
2003	Internal guidelines for assessing and designating environment-friendly products established
	Data on emissions of CO_2 and other chemical substances exerting a burden on the environment published

Environment and Safety Awards Received by DIC

(Fiscal year)		
1973	Amagasaki Plant	Effort Prize (Minister of Labour)
1974	Warabi Plant	Effort Prize (Minister of Labour)
1976	Warabi Plant	First Prize (Hygiene) (Minister of Labour)
1978	Mikawa Plant	Progress Prize (Minister of Labour)
	Sakai Plant	Progress Prize (Minister of Labour)
1979	Hokkaido Plant	Effort Prize (Minister of Labour)
	Mikawa Plant	Effort Prize (Minister of Labour)
1981	Tokyo Plant	Effort Prize (Minister of Labour)
1982	Mikawa Plant	First Prize (Safety) (Minister of Labour)
	Sakai Plant	Effort Prize (Minister of Labour)
1984	Tokyo Plant	First Prize (Hygiene) (Minister of Labour)
	Hokkaido Plant	First Prize (Hygiene) (Minister of Labour)
1986	Mikawa Plant	First Prize (Hygiene) (Minister of Labour)
1987	Sakai Plant	First Prize (Hygiene) (Minister of Labour)
1989	Amagasaki Plant	First Prize (Hygiene) (Minister of Labour)
1991	Sakai Plant	Progress Prize (Minister of Labour)
1992	Chiba Plant	Effort Prize (Minister of Labour)
	Sakai Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
1993	Chiba Plant	Top Plant for High-Pressure Gas Safety Commendation (Minister of International Trade and Industry)
	Mikawa Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
		Safety Effort Award (JCIA)
1994	Suita Plant	Effort Prize (Minister of Labour)
	Chiba Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
1994	Sakai Plant	First Prize (Safety) (Minister of Labour)
	Warabi Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
1996	Saitama Plant	Progress Prize (Minister of Labor)
	Nagoya Plant	Effort Prize (Minister of Labor)
	Amagasaki Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Nagoya Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Fukuoka Plant	Special Commendation (JCIA)
1997	Mikawa Plant	Top Plant for High-Pressure Gas Safety Commendation (Minister of International Trade and Industry)
	Tokyo Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Tokyo Plant	Safety Award (JCIA)
1998	Fukuoka Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Ishikari Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
1999	Suita Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Kansai Polymer Sakai Plant	Safety Effort Award (JCIA)
	Nagoya Plant	Progress Prize (Minister of Labor)
2000	Mikawa Plant	Safety Award (JCIA)
	Mikawa Plant	First Prize (Safety) (Minister of Health, Labour and Welfare)
2001	DIC	Chairman's Award (Japan Industrial Safety and Health Association)
	Saitama Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Saitama Plant	First Prize (Minister of Health, Labour and Welfare)
2002	Tokyo Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Suita Plant	First Prize (Occupational Health) (Minister of Health, Labour and Welfare)
	Saitama Plant	Chairman's Award (Reduce, Reuse and Recycle Promotion Committee)
2003	Kashima Plant	Top Hazardous Substance Operation Commendation (Commissioner, Fire Defense Agency)
	Kashima Plant	Incentive Prize (Occupational Safety) (Minister of Health, Labour and Welfare)
	Yokkaichi Plant	Chairman's Award (Reduce, Reuse and Recycle Promotion Committee)

ENVIRONMENTAL ACCOUNTING

ESH Costs

Prior to 1998, DIC disclosed environmental and safety- and health-related costs (expenses and investments) based on internal standards. Since then, however, the Company has disclosed environmental costs prepared in line with the *Preparation for Establishment of an Environmental Accounting System* (2000 Report), published by Japan's Ministry of the Environment, while it continues to calculate safety- and health-related costs using internal standards.

1. Fiscal 2003 Environmental Costs

Environmental costs in fiscal 2003 comprised investments of ¥1,376 million and expenses of ¥10,973 million. These costs are broken down in the graph to the right and tables 1 through 4.

Breakdown of Fiscal 2003 Environmental Expenses (¥10,973 million)

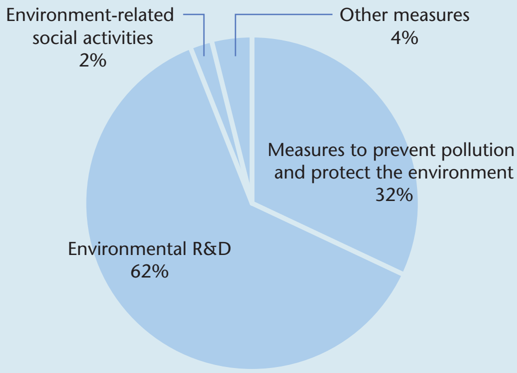


Table 1 Environmental Costs (Investments and Expenses)

Millions of yen

Category	Scope	Investments	Expenses	% of Total
1. Costs incurred through activities aimed at minimizing environmental load generated within the business area through production and sales activities (costs within the business area)	Costs related to the preservation of air and water quality, maintenance or improvement of waste disposal and recycling activities	643	3,498	32%
(a) Pollution prevention and environmental protection costs	Costs related to the preservation of air and water quality	522	1,847	
	• Operating/maintenance expenses related to activities aimed at curbing air pollution (476), global warming (166), water pollution (816), soil pollution prevention expenses (2) and other expenses Investments in air pollution prevention activities (505); water pollution prevention activities (17); other investments			
(b) Resource recycling costs	Costs related to the maintenance or improvement of energy consumption and internal and external waste disposal	121	1,651	
	• Operating/maintenance expenses for activities aimed at reducing energy and resource consumption (483), water consumption (4) and waste disposal (1,069); expenses related to the obligatory recycling of used merchandise (0.8) and other expenses • Investments in activities aimed at reducing energy consumption (107), waste disposal activities (14) and other investments			
2. Environmental costs related to management activities (management activity costs)	Costs related to environmental and safety promotion and education; environmental management and auditing related to acquisition of ISO 14001 certification • Personnel/administrative expenses (251), ISO 14001 maintenance expenses (14), environmental load measurement expenses (58) and other	(Note 1)	418	4%
3. Environmental costs related to technological activities (technological activity costs) (Note 2)	Expenses and investments related to the develop ment of products that reduce environmental load (including personnel expenses)	733	6,830	62%
4. Environmental costs related to social activities (social activity costs)	Costs of plant and office greening programs and shared costs • Internal maintenance expenses (13), fees to external organizations (128) and other expenses	0	152	2%
5. Costs related to damage inflicted on the environment (environmental damage costs)	Environmental clean-up and other expenses • Levies on lake development (65) and other expenses	0	75	
Total		1,376	10,973	100%

Notes:

1. The investment portion of management activity costs is included in costs within the business area.
2. Technological activity costs are costs related to the development of products that reduce environmental load and include R&D costs of new products as well as improving/customizing existing products.

Table 2 Environment-Related Facility Investments and Technology Costs

Millions of yen

Category	Composition	Expenses
Environment-related facility investments	Investments in facilities to reduce environmental load and lower energy and resource consumption; other investments	1,376
Percentage of total facility investments	11%	
Environment-related technology costs	Investments related to environmental conservation technologies and the development of products that reduce environmental load	7,563
Percentage of total technology costs	27%	

Table 3 Economic Effects of Environmental Conservation Measures

Millions of yen

Category	Expenses
Income earned by waste recycling	587
Treatment cost reduction through waste recycling	204
Cost reduction through energy conservation	163
Total	954

Table 4 Impact of Measures to Protect the Environment

	Environmental Load Index (Fiscal 1990=100)	
1. Impact of environmental protection measures within the business area	CO_2 emissions (calculated in tons of carbon) per unit of production	84
	SO_X emissions per unit of production	15
	NO_X emissions per unit of production	81
	COD emissions per unit of production	53
	Energy used (calculated in volume of crude oil used) per unit of production	87
	Emissions of solid wastes disposed of through burial by external companies	26% (of the fiscal 1990 level)
		45% (of the fiscal 1999 level) (base year for reduction plan)
	The volume of waste disposed of as landfill was 29 million tons less than in fiscal 1990. (Note 1)	
	Emissions of PRTR chemicals were 70% of the fiscal 1999 level. (Note 2)	
2. Impact of upstream and downstream environmental protection measures	The reduction in CO_2 emissions realized as a result of modal shifts declined 629 tons. (Note 3)	

Notes:
1. The comparison of fees paid for the disposal of waste as landfill (fiscal 2003 actual payment basis) was calculated by subtracting the fiscal 2003 total from the fiscal 1990 total.
2. Figures represent emissions of PRTR chemicals based on a revised list of target chemicals that went into effect in fiscal 2001 and is retroactive to fiscal 1999. (The new list encompasses 480 chemicals, of which DIC uses 127.)
3. Calculations are based on standards set forth by the Japan Federation of Freight Industries in its Report on Survey of Modal Shifts. A significantly greater reduction in CO_2 emissions was realized through the use of large-scale transport modes in fiscal 2003.

2. Safety- and Health-Related Costs

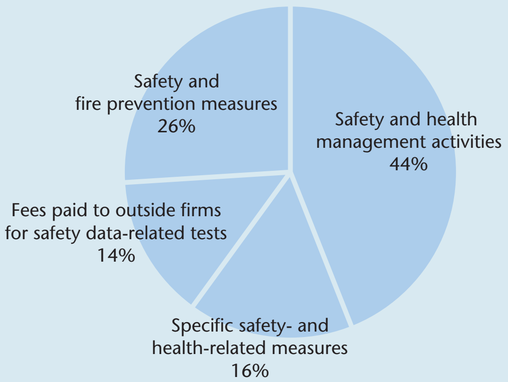
Safety- and health-related costs in fiscal 2003 comprised investments of ¥238 million, while safety- and health-related expenses were ¥767 million. A breakdown of these costs is shown in the graph to the right and table 5.

Table 5 Safety- and Health-Related Costs

Millions of yen

Category	Investments	Expenses	% of Total
Safety and health management costs (a) Safety management costs (b) Health management costs	231	345 327 18	44%
Specific safety- and health-related costs		120	16%
Fees paid to outside firms for safety data-related tests	0	104	14%
Safety and fire prevention costs	7	198	26%
Total	238	767	100%

Breakdown of Fiscal 2003 Safety- and Health-Related Expenses (¥767 million)



DIC'S RESPONSIBLE CARE ORGANIZATION

DIC has established Responsible Care and internal audit organizations to facilitate the implementation of its Responsible Care program.

1. Responsible Care Organization (Head Office)

As the principal decision-making body for Responsible Care activities, DIC has established the Environment and Safety Conference at its head office. This conference includes the director in charge of Responsible Care, other relevant directors and general managers of relevant business divisions at the head office.

2. Responsible Care Implementation Organization (Plants, R&D Facilities and Sales Offices)

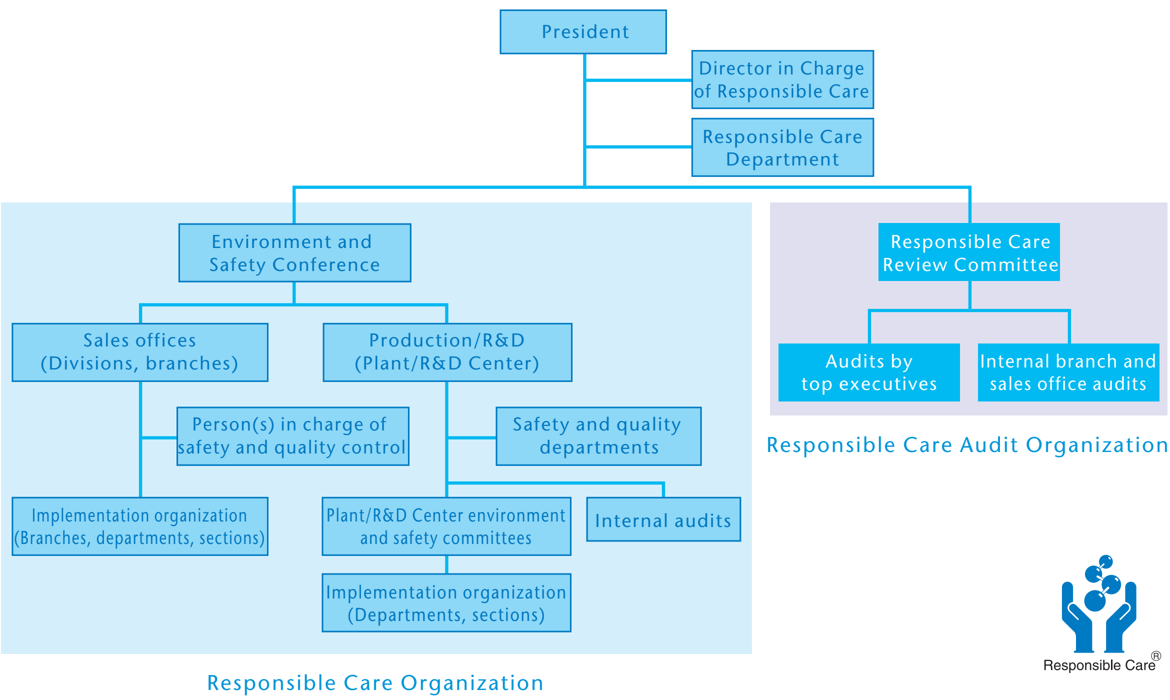
At each of DIC's plants and at its R&D facilities, an Environment and Safety Committee has been established and environment, safety and quality control personnel assigned. DIC has also assigned a Safety and Quality Management Supervisor to each sales office.

All of DIC's principal plants have obtained ISO 14001 certification, the International Organization for Standardization's global benchmark for environmental management systems, allowing them to measure Responsible Care efforts against internationally accepted criteria. Certified plants are listed on page 29.

3. Internal Audit Organization

DIC's Responsible Care Review Committee comprises directors and general managers of relevant business divisions of the parent company and monitors the Responsible Care activities of each plant on an annual basis. Inspection teams led by top executives also monitor the Responsible Care activities of each plant through on-site audits. Individual plants, R&D facilities and offices also conduct periodic internal audits.

DIC's Responsible Care and Internal Audit Organizations



Responsible Care®

SAFE MANAGEMENT OF CHEMICAL SUBSTANCES

1. Preparation and Presentation of Safety Information on Chemical Substances

DIC prepares and distributes MSDSs (see page 17) for all chemical substances it sells in the Japanese market, not only those for which it is obligated to by law. DIC has completed a revision of its MSDSs to ensure compatibility with Japan Industrial Standards (JIS).

To ensure its products are not a cause of environmental pollution, DIC also includes information on appropriate measures for disposal in its MSDSs.

DIC has created its own automated MSDS creation and distribution systems. MSDSs that have been prepared manually are reproduced using this system to ensure all legal requirements have been satisfied and reduce the margin for human error, thereby ensuring a uniform level of quality and reliability for all DIC MSDSs. Domestic customers have the option of distribution by mail or the Internet. Customers requesting online distribution can view and download DIC's MSDSs at any time from the DIC web site. DIC also provides cumulative, itemized data on shipments to customers of PRTR chemicals.

For products sold in overseas markets, DIC issues MSDSs in local languages or in English that comply with local legal requirements. The Company has incorporated Japanese, EU and U.S. MSDS requirements into its own MSDS standards, thereby ensuring exhaustive disclosure. For customers overseas, DIC prepares MSDSs that comply with EU guidelines in multiple European languages.

DIC also provides hazard data and safety control information in response to requests for assistance from customers.

2. Internal Assessment of Chemical Substances and Production Processes and Management of Chemical Substance-Related Risks

DIC conducts internal assessments of chemical substances and production processes prior to the introduction of new substances or new equipment at any of its plants. The Company also promotes education regarding the appropriate use of chemical substances and equipment.

When formulating capital investment plans or upgrading equipment, DIC conducts advance internal assessments aimed at ensuring the safety and reliability of equipment and reducing the margin for human error.

With the aim of ensuring the integrity of existing equipment, DIC has adopted a process safety management program that enables it to identify and assess risk. To reinforce chemical substance-related risk management, DIC conducts hazard assessments and formulates procedures for handling substances judged to be highly hazardous.

3. ESH in R&D Activities

Employees engaged in R&D adhere to the guidelines pertaining to general safety and workplace safety education set forth in *Environment and Safety Guidelines for the R&D Department*.

In determining product development themes, DIC promotes efforts to reduce the volume of hazardous chemicals substances used and to develop less-hazardous alternatives and safer production processes that generate less waste, as well as conducts environmental assessments. DIC also keeps abreast of legal developments in other countries to facilitate the modification of products bound for overseas markets in accordance with local requirements.

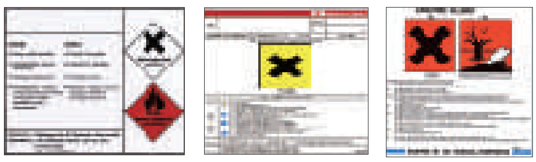
4. ESH in Product Distribution

DIC provides yellow cards to drivers of container trucks, tanker trucks and other dedicated hazardous chemical transport vehicles, as well as to drivers of ordinary delivery vehicles carrying mixed loads, to ensure prompt responses in the event of an emergency. The Company exclusively uses containers and tanks that comply with Japan's Fire Defense Law standards, United Nations' standards and other legal requirements.

DIC is currently expanding use of Japan Rail containers, trailers, ocean shipping and other large-lot distribution modes with the aim of reducing related energy consumption and CO_2 emissions. Modal shifts in fiscal 2003 contributed to a 629-ton reduction in CO_2 emissions.

Notes:

1. **Yellow Cards**
   Promoted by the JCIA, the yellow card system is a voluntary system of cards containing safety and emergency response information on chemical substances, which are provided by manufacturers to transport firms handling chemical substances.
2. **Modal Shift**
   A shift to large-lot transport modes, including ocean shipping and rail, which offer higher energy efficiency per load.



If requested by its customers, DIC prepares and affixes labels for products exported from Japan that comply with labeling laws in receiving countries. The labels shown here are for products bound for Malaysia, the ROK and the EU (left to right).

Working Together

DIC's plants and R&D facilities throughout Japan endeavor to work with the community and contribute to local environmental efforts through a variety of initiatives, including participation in local clean-up programs, plant tours and community meetings. Many DIC employees also volunteer their time in the community in a variety of capacities. To support these efforts, DIC has established a system whereby employees are allowed time off from work for volunteer activities, as well as a system whereby employees who are members of the Japan International Cooperation Agency (JICA) can take sabbaticals to participate in JICA projects.

■ Tedorigawa Clean Operation (Mikawa Plant)

Every July, residents of the city of Matto and the towns of Kawakita, Tatsunokuchi, Teraimachi and Tsurugi, in Ishikawa Prefecture, get together for a one-day clean up of the Tedorigawa river, a major waterway that has its source in the famed Mt. Hakusan. DIC's Mikawa Plant is a regular participant in this program, dubbed the "Tedorigawa Clean Operation." In 2003, 45 of the plant's employees braved an early start-time on July 12 to take part.

■ Plant Tours for Local Junior High School Students (Saitama Plant)

The Saitama Plant is a participating sponsor in a three-day annual program, organized by the Saitama Prefectural Board of Education and the Ina District Board of Education, which gives junior high students the opportunity to experience life in adult society. In fiscal 2003, the Saitama Plant invited 16 students from three junior high schools in the Ina district to participate in work at the plant.

■ Eco-Fair Ichihara (Chiba Plant)

A key part of the city of Ichihara's Environment Month, Eco-Fair Ichihara is a major event that attracts approximately 5,000 visitors every year. The 2003 fair was held on June 21 in the civic auditorium and its parking lot. As a member of Ichihara's environment council, a group of 41 companies in the city, the Chiba Plant assists with the planning and staging of this event. The council also organizes visual displays and exhibits relating to environmental protection activities at local plants with council members on hand to provide explanations for interested fair visitors.

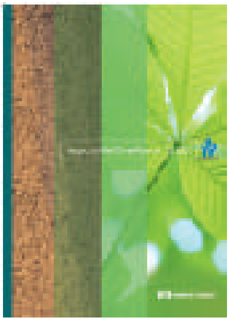
IN THE COMMUNITY

Responsible Care Report

Copies of DIC's *Responsible Care Report 2003* were distributed to the head office, plants and the DIC Central Research Laboratories for internal use and for handing out to visitors to the Company. An English-language version of the report was also prepared for DIC Group companies overseas.

Japanese- and English-language versions of DIC's Responsible Care reports for the past five years are also available on DIC's web site.

Responsible Care Report 2003

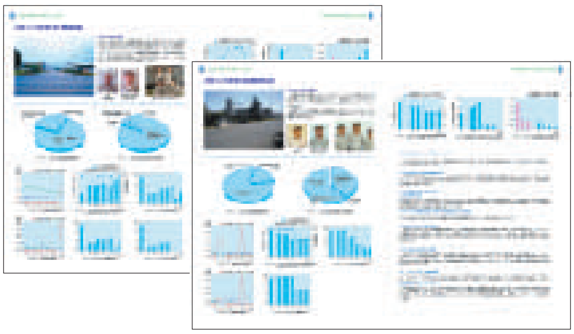


Top page of DIC's English site (http://www.dic.co.jp/eng/index.html)

URL for Responsible Care reports: http://www.dic.co.jp/eng/rc/index.html

■ Site Reports

With the aim of providing accurate information to the public, five DIC plants also prepare site reports, which are dedicated Responsible Care reports, and distribute them at presentations organized for their local communities. The Kashima, Mikawa, Sakai and Yokkaichi plants have been preparing site reports since fiscal 2002, while the Saitama plant began doing so in fiscal 2003.



Community Conferences

In fiscal 2003, the Yokkaichi Plant hosted a JRCC community meeting. Principal DIC plants regularly host these meetings, which are organized by the JRCC to promote dialogue with local communities.

Participation in Industry Activities Aimed at Promoting the Safe Management of Chemical Substances

■ Long-Range Research Initiative (LRI)

LRI is a voluntary program launched by the International Council of Chemical Associations (ICCA) in 1999. Through this program, the global chemicals industry sponsors basic research aimed at broadening our understanding of the relationship between chemical substances, human health and the environment. The JCIA has been a participant in LRI since 2000. DIC has supported this initiative since its inception and currently has two representatives on the LRI planning and management panel.

■ High Production Volume (HPV) Chemicals Initiative

The Organization for Economic Development (OECD) is currently implementing a program to assess the toxicity of approximately 1,000 HPV chemicals, that is, chemicals with annual global production volumes in excess of 1,000 tons. The ICCA, on behalf of the global chemicals industry, is cooperating with the OECD through the HPV Chemicals Initiative to accelerate the assessment process. A leading proponent of this initiative, DIC is a sponsor for assessments in the plastics category and a cosponsor for assessments in the pigments category, which are being conducted in Europe.

■ Support for the Development of Regulatory Systems for Chemical Substance Management

As a member of JCIA's working group on the Law Concerning the Evaluation of Chemical Substances and Regulation of their Manufacture, etc., DIC has played a major role in efforts to introduce amendments to the law in line with a bill passed by the Japanese Diet and has submitted several key recommendations.

DIC has also studied the new regulatory framework proposed by the EU, the Registration, Evaluation and Authorisation of Chemicals (REACH) system, and has put forward suggestions to the EU via the JCIA. In addition, DIC has sought to contribute to domestic policy-making efforts by exchanging views with government representatives on the safe management of chemical substances.

On a related front, DIC has submitted a proposal aimed at minimizing chemical substance-related risks for workers to the MHLW's Study Group for Determining Chemical Substance Management Practices to Ensure Occupational Safety.

Third-Party Verification

レスポンシブル・ケア®

September 27, 2004

To: Koji Oe
President, Dainippon Ink and Chemicals, Incorporated

Akio Yamamoto
Chairman, Verification Advisory Committee

Yasuo Tanaka
Chief Director, Responsible Care Verification Center

Purpose of Verification

The purpose of verification was to enable us, as experts in the chemicals industry, to offer our opinions on the following aspects of the 2004 Responsible Care report of Dainippon Ink and Chemicals, Incorporated:

1. Rationality of methods used to calculate and aggregate performance indices and accuracy of figures
2. Consistency between information in the report and reference materials/material evidence
3. Evaluation of Responsible Care activities
4. Distinguishing features of the report

Verification Procedures

- Head office: We interviewed, obtained reference materials from and listened to explanations by persons responsible for individual businesses and for compiling data to (a) investigate the rationality of methods used to aggregate and adjust performance indices collected from individual sites (sales offices and plants), and (b) ensure consistency between information in the report and reference materials/material evidence.
- Gunma Plant: We visited this site and interviewed, obtained reference materials from and listened to explanations by persons responsible for individual businesses and for compiling data to (a) investigate the rationality of methods used to calculate and aggregate performance indices submitted by the site to the head office, and (b) ensure consistency between information in the report and reference materials/material evidence.
- We conducted samplings to verify the accuracy of performance indices and information in the report.

Opinions

1. Rationality of methods used to calculate and aggregate performance indices and accuracy of figures
   - Methods used to collect and aggregate performance indices at the head office and the Gunma Plant were rational and figures were accurate.
   - The figures used were accurate within the areas investigated.
2. Consistency between information in the report and reference materials/material evidence
   - We verified that information contained in the report is consistent with the reference materials/material evidence. At the proposal stage, we recommended several changes to improve the accuracy and readability of the text. These recommendations have been implemented and in our opinion the published text warrants no further amendment.
3. Evaluation of Responsible Care activities
   - The Company can be commended for its efforts to integrate production facilities and install cogeneration systems, which have enabled it to achieve a significant reductions in energy use and CO_2 emissions.
   - At the Gunma Plant, exhaust from the ink production line, which uses a significant amount of volatile solvents, are controlled through centralized treatment and compression or combustion. The Company can be commended for its forward-looking efforts to install similarly environment-friendly production equipment at other sites.
4. Distinguishing features of the report
   - The Company can be commended for including its Responsible Care policy and organization for promoting Responsible Care activities, and for reporting extensively, using concrete examples, on its environment-, safety- and health-related activities and the results thereof. We believe, however, that the Company could improve the report in future by enhancing its reporting on its disaster prevention activities.

DIRECTORY


Ishikari Plant


Gunma Plant
(Certified under ISO 14001 in February 1998)


Tatebayashi Plant
(Certified under ISO 14001 in July 2002)


Saitama Plant
(Certified under ISO 14001 in December 1997)


Kashima Plant
(Certified under ISO 14001 in July 1996)


Tokyo Plant
(Certified under ISO 14001 in December 1997)


Chiba Plant
(Certified under ISO 14001 in December 1997)


Mikawa Plant
(Certified under ISO 14001 in September 1997)


Komaki Plant
(Certified under ISO 14001 in March 1998)


Yokkaichi Plant
(Certified under ISO 14001
in February 1998 and April 2001)


Shiga Plant
(Certified under ISO 14001 in July 1999)


Suita Plant
(Certified under ISO 14001 in July 1998)


Sakai Plant
(Certified under ISO 14001 in September 1997)


Fukuoka Plant


DIC Central Research Laboratories

For information on ISO certification of DIC facilities, refer to the DIC web site's ISO page (http://www.dic.co.jp/eng/rc/iso.html).

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