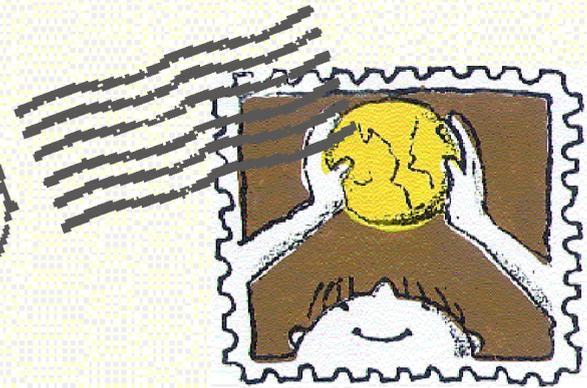


SUMITOMO CHEMICAL



.....

Environment, Health & Safety Report 1999

.....

Responsible Care Activities of

.....

Sumitomo Chemical Company, Limited

.....

Responsible Care refers to voluntary activities conducted by companies in the areas of environment, safety, and health throughout the entire product life cycle. Currently, there are Responsible Care associations in 42 countries.

Our Code of Conduct: Nine Guiding Principles

1. We will respect Sumitomo's business philosophy and act as highly esteemed "good citizens."
2. We will observe national and international laws and regulations and will carry out business activities according to our corporate rules.
3. We will develop and supply useful, safe products and technologies that will contribute extensively to the progress of society.
4. We will take voluntary and active initiatives to achieve zero-accident and zero-injury operations and to preserve the global environment.
5. We will conduct business transactions based on fair and free competition.
6. We will endeavor to make our workplace sound and energetic, and every one of us will make efforts to become a professional who has advanced skills and expertise in his or her field of responsibility.
7. We will actively communicate with our various stakeholders, such as shareholders, customers, and regional communities.
8. We, as a corporate member of an international society, will esteem the culture and custom in each region around the world and contribute to the development of those regions.
9. We will strive for the sound development of our Company through business activities conducted in accordance with the guiding principles stipulated hereinabove.



An abundance of greenery creates a pleasant environment at the Oita Works.

Contents

From the Company President	1	Sumitomo Chemical's Environment-Friendly	
Responsible Care Management	2	Products and Processes	A
SUMITOMO CHEMICAL'S RESPONSIBLE		ENVIRONMENT-FRIENDLY PRODUCT LINEUP.....	A
CARE ACTIVITIES.....	2	Water Purification Products.....	A
Corporate Policy on Product Quality,		Agricultural and Greenification Products.....	B
Safety, and Environment.....	2	Environmental Products for Household Purposes.....	C
The Responsible Care Committee.....	3	Recycling-Related Products.....	D
Responsible Care Rules and Regulations	4	SUSTAINABLE CHEMISTRY.....	E
Responsible Care Internal Audit System.....	5	Responsible Care Data	F
ISO 14001 Certification.....	6	PROFESSIONAL INDIVIDUALS.....	F
Employee Education.....	6	ENVIRONMENTAL PROTECTION	
Consciousness Raising.....	6	AND SAFETY-RELATED INVESTMENT.....	F
Support from Corporate Research Laboratories.....	7	OCCUPATIONAL HEALTH AND SAFETY.....	F
PROMOTING RESPONSIBLE CARE THROUGHOUT		ENERGY SAVING.....	G
THE LIFE CYCLE OF OUR PRODUCTS.....	8	WASTE DISPOSAL MANAGEMENT.....	G
From Research and Development		PREVENTION OF AIR POLLUTION	
through Manufacturing.....	8	AND WATER CONTAMINATION.....	H
Safety in Logistics Operation.....	9	VOLUNTARY CONTROL	
Reducing Waste.....	9	UNDER THE PRTR SYSTEM.....	I
Chemical Safety Management.....	9	Communicating with Society	J
PRODUCT QUALITY ASSURANCE.....	0	International Development	K
Policy for Quality Assurance Activities.....	0	Company Outline	K



Working for the Benefit of People, Society, and the Earth



Many chemical substances are indispensable to the quality of life that we enjoy today. Despite the benefits they provide, however, their misuse can endanger the environment and human health. To prevent such misuse, companies that handle chemical substances have joined in an international alliance to undertake voluntary activities in the areas of environment, health, and safety with the aim of supporting sustainable development. Such initiatives are known as Responsible Care (RC).

Sumitomo Chemical Company, Limited, views RC activities as an essential prerequisite to the future development of its business activities, both at home and abroad, and to the fulfillment of its social and international responsibilities. This report is intended to introduce the reader to how the Company worked to implement comprehensive, efficient RC activities in fiscal 1998, ended March 31, 1999.

As you see herein, we took various measures to enhance our management of chemical substances during the year. Most visible were improved reporting activities in accordance with the Pollutant Release and Transfer Register (PRTR) system, which was made law in Japan in July 1999 (Law Concerning the Reporting of Emissions of Specified Chemical

Substances and the Promotion of Measures to Improve the Management of Such Emissions). Also, in March 1999 we achieved one of our major environmental targets of obtaining ISO 14001 certification for all our manufacturing plants in Japan. We also maintained our impeccable safety record, with zero employee absentee days due to work accidents.

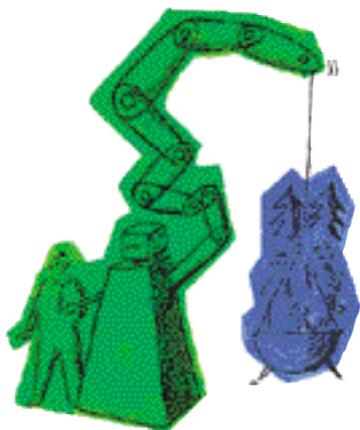
In line with its Corporate Policy on Product Quality, Safety, and Environment, Sumitomo Chemical is committed to mustering all its capabilities to promote RC activities in every area of its operations, including R&D, production, logistics, and marketing. We welcome readers' opinions on this report.

Akio Kosai

President

In April 1994, Sumitomo Chemical formulated its Corporate Policy on Product Quality, Safety, and Environment.

The corporate policy expresses Sumitomo Chemical's commitment to giving customer satisfaction, maintaining zero-accident and zero-injury operations, ensuring the safety of raw materials, intermediaries, and products, and making efforts to reduce the environmental burden of products at all stages in their life cycles. Sumitomo Chemical's employees are fully aware of this policy and act on the basis of its commitments as they constantly strive for improvement and strictly observe legal requirements.



Corporate Policy on Product Quality, Safety, and Environment

In conformity with the business philosophy of the Sumitomo Group, our Company fulfills its responsibility to develop, manufacture, and supply a variety of products which satisfy the fundamental necessities of human life and contribute to the growth of society. Since its establishment, Sumitomo Chemical has managed its activities on the basic principles of (i) ensuring "customer satisfaction," (ii) maintaining "zero-accident and zero-injury operations," and (iii) promoting "co-prosperity with society."

With due respect to these principles, our Company is determined to conduct all activities, including production, research and development, sales, and distribution, in accordance with the following policy related to product quality, safety, and environment.

1. To supply high-quality products and services that satisfy customer needs and ensure safety in their use;
2. To maintain zero-accident and zero-injury operations and the safety of our employees and neighboring communities;
3. To ascertain the safety of raw materials, intermediates, and products and prevent our employees, distributors, customers, and consumers from being exposed to any possible hazard;
4. To continually assess and reduce environmental loads at all operational stages, from product development through disposal and to exert all practical environmental protection measures.

All sections and employees of our Company shall be fully aware of the significance of this policy and shall always strive to improve operational performance, while of course abiding by all relevant laws, regulations and standards.

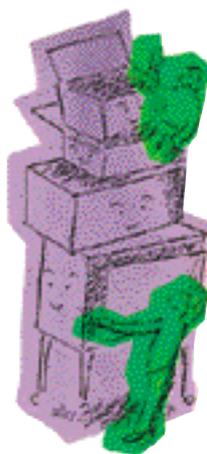
Akio Kosai, President

A handwritten signature in black ink, appearing to read 'Akio Kosai' in Japanese characters.

Sumitomo Chemical Company, Limited

April 1, 1994

In January 1995, Sumitomo Chemical reinforced its internal organization to promote Responsible Care initiatives more comprehensively and efficiently.



The Responsible Care Committee

Sumitomo Chemical's Responsible Care Committee comprises the board members in charge of the Company's four business sectors, the board members in charge of administrative departments, and the heads of each of the five manufacturing works. The Committee is responsible for the implementation of the Company's Corporate Policy on Product Quality, Safety, and Environment as well as the long-term planning, coordination, and supervision of RC-related matters. Furthermore, to implement specific RC measures, committees have been set up at each of the Company's manufacturing works and research laboratories.

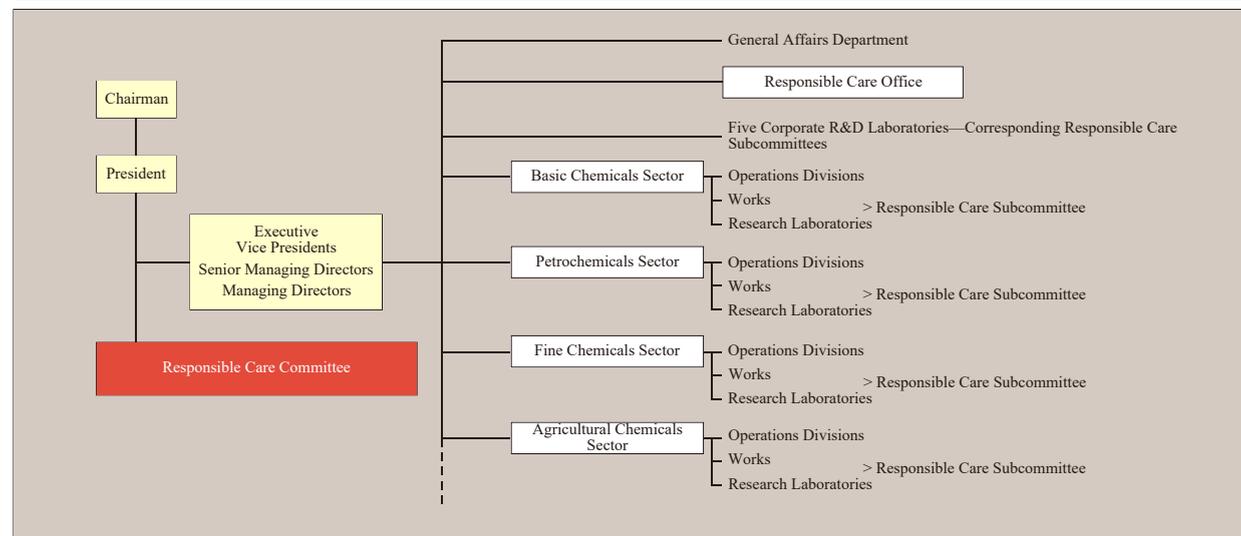
Responsible Care Office

The Responsible Care Office is responsible for environmental safety, accident prevention, and occupational health and safety as well as for ensuring the safety of chemicals in the Company's business operations. The office also acts as the secretariat to the Responsible Care Committee.



The Responsible Care Committee

Sumitomo Chemical Responsible Care Organization



Sumitomo Chemical has established a Responsible Care Activities Policy to develop specific initiatives that enable the Corporate Policy on Product Quality, Safety, and Environment to be applied in practice.

Responsible Care Rules and Regulations

To ensure that all Sumitomo Chemical employees carry out their duties, thoroughly recognizing both the Corporate Policy on Product Quality, Safety, and Environment and the Responsible Care Activities Policy, the Company has produced these policy statements in pocket-sized form and distributed them to all employees.

In addition, the Company has established various classifications of regulations that are intended to develop the Responsible Care provisions into a specific codified form. The regulations encompass environmental management, process safety management, chemical safety management, etc. Besides, to conduct Responsible Care audits, the Company has established a number of corporate guidelines, including those for Responsible Care internal audits, environmental audits, occupational safety audits, and chemical safety management audits.



Pocket-sized booklets distributed to all employees

To promote Responsible Care activities, Sumitomo Chemical is improving its internal audit processes by strengthening audit resources.

Responsible Care Internal Audit System

A two-stage process comprising specialized audits and a general audit is adopted to maximize the thoroughness and quality of internal RC audit activities. In fiscal 1999, the quality of internal RC audits was further strengthened by the introduction of an expert auditor system.

Specialized environmental and safety audits are performed by teams of RC, environmental, and safety audit specialists as well as general audit teams over a period of two to three days. These teams are headed by expert auditors appointed by the chairman of the RC Committee.

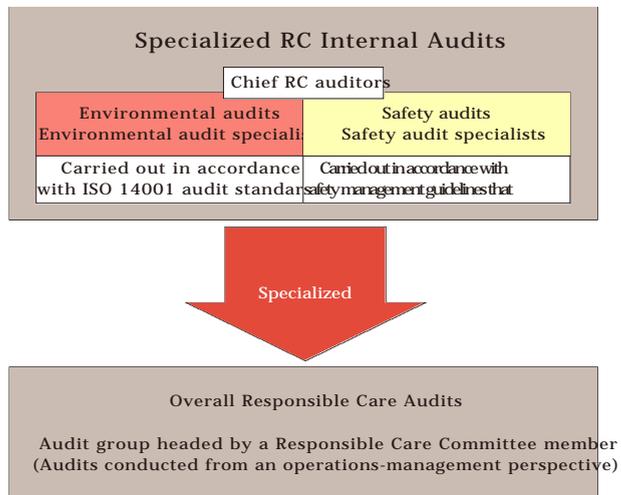
Based on the report of specialized audits, an audit team headed by a member of the RC Committee carries out a general audit from an operations-management perspective.



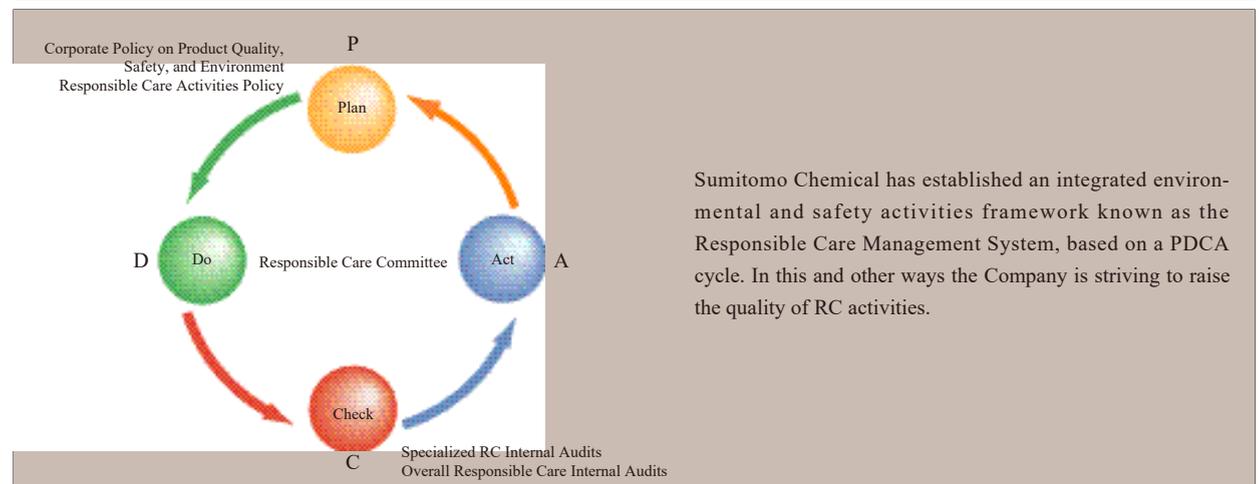
Safety audit



Environmental audit



Responsible Care PDCA (Plan, Do, Check, Act) Cycle



ISO 14001 Certification

Sumitomo Chemical promotes environmental protection activities—an integral part of RC—in accordance with ISO 14001 certification, an internationally recognized set of standards for environmental management systems.

At the end of fiscal 1998, all five of the Company's manufacturing works attained ISO 14001 certification.

Works and certification number

Ehime Works: JCQA-E-018

Chiba Works: 97ER 04

Osaka Works: JQA-E-90072

Oita Works: JQA-E-90152

Misawa Works: JQA-EM0355

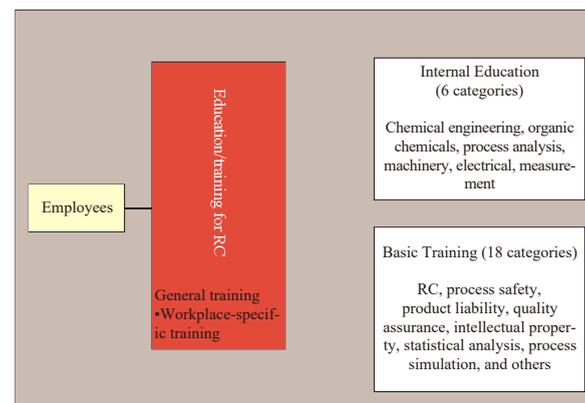


ISO 14001 certificates

Employee Education

Sumitomo Chemical has various education and training programs for each level of employee. Among others, those for RC constitute an important part. In particular, curricula designed for specialist staff in manufacturing, logistics, R&D, operations management, and procurement fields require them to duly obtain knowledge of RC as professionals at a chemical company.

Responsible Care Education and Training



Consciousness Raising

The management of Sumitomo Chemical, from the President to the general manager of each manufacturing works and research laboratory, is continually working to convey the RC message to the Company's employees.

In addition, the Company endeavors to raise employee awareness of RC through such initiatives as special awards for those business operation units that achieve outstanding success in RC activities.

Furthermore, the Company makes the most of internal communication tools, such as the Company's intranet and in-house magazines, to publicize RC activities or convey messages from the management to employees.



Awards are given to employees from business operating units that have excelled in RC activities.

A wide range of technical data relating to environmental safety, process safety, accident prevention, occupational health and safety, and chemical safety is essential for the promotion of RC.

Two of our corporate research laboratories provide integrated technical backup in such areas as the environment and safety.



Support from Corporate Research Laboratories

Environmental Health Science Laboratory

Sumitomo Chemical's Environmental Health Science Laboratory is one of the largest toxicological research facilities in Japan. At the facility, approximately 200 staff use state-of-the-art technology to evaluate the safety and impact on the environment of raw materials, intermediates, and products.



Environmental Health Science Laboratory

Process & Production Technology Center

Staff at Sumitomo Chemical's Process & Production Technology Center study and develop integrated process safety technologies as well as carry out the comprehensive evaluation and research of materials for equipment. The facility plays an important role in achieving the Company's zero-accident, zero-injury operation.



Particle explosion tests

Promoting Responsible Care throughout the Life Cycle of Our Products

RC involves giving the utmost consideration to environmental and safety issues throughout the life cycles of chemicals, from research and development to final disposal, by formulating and implementing voluntary initiatives and working to improve environmental and safety standards in the chemical industry.

As a chemical manufacturer, Sumitomo Chemical develops and markets a wide range of chemical products that contribute to the quality of life. At the same time, it devotes constant attention to the safety and environmental aspects of these products at every stage of its operations, from research and development to final disposal.

From Research and Development through Manufacturing

In April 1994, Sumitomo Chemical drew up its Corporate Policy on Quality, Safety, and Environment as part of its plans to promote a shift from a statutory compliance-based management approach to one centered on self-regulatory principles. At the same time, Safety Management Guidelines were introduced to improve safety evaluation at all stages of the development process and promote measures to reduce environmental impact and achieve zero-accident and zero-injury operations.

In September 1997, the Company revised its Industrial Development Regulations to clarify RC responsibility and specify RC issues that should be dealt with at research, development, industrialization, market launch, and final disposal stages. In addition, regulations and guidelines to RC objectives were established.

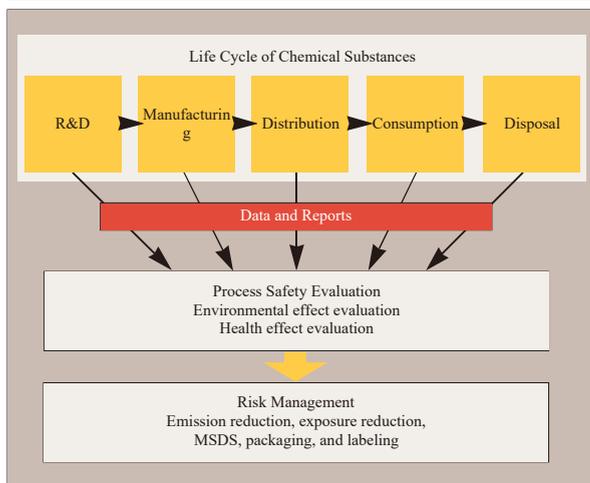
At the industrial development and production planning stage, assessments of accident prevention, environment pro-

tection, and chemical safety risks are made through the following four steps:

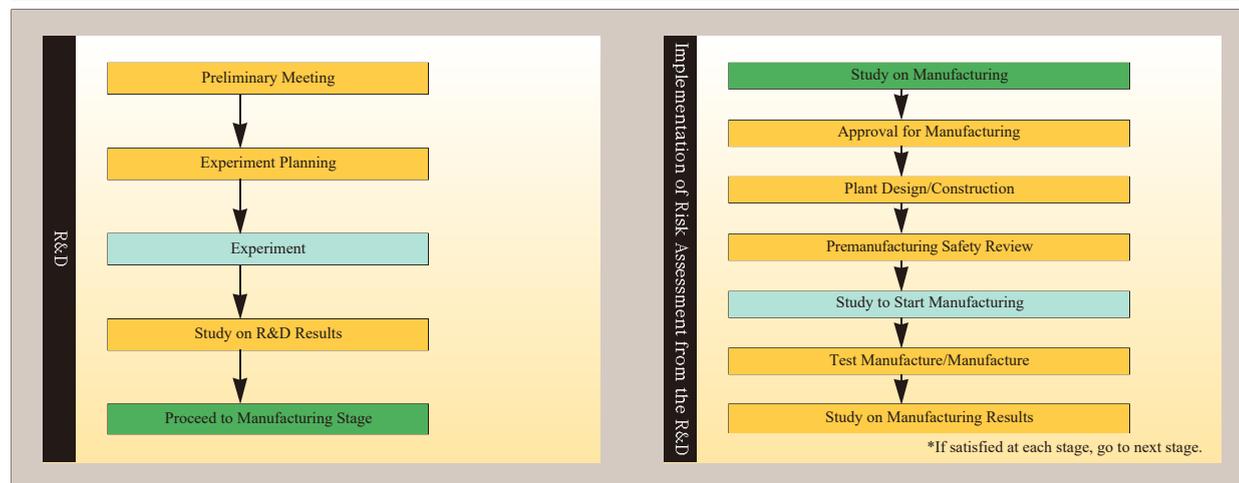
1. Detailed survey and evaluation of information regarding chemical substances
2. Collection and evaluation of data
3. Studies on the installation of plants and equipment for manufacturing
4. Provision of information to all related parties

Product design and production standards are based on the results of these assessments. As shown in the diagram below, only after safety standards are satisfied at any given stage can the process progress to the next stage.

Risk Management of Chemical Substances



Assessment from R&D to Manufacturing



Safety in Logistics Operation

Sumitomo Chemical strives to ensure chemical safety throughout the logistics process by working closely with logistics agents to establish safety standards and by conducting necessary training and other accident-prevention activities. The Company also distributes Material Safety Data Sheets (MSDSs), Yellow Cards (instruction cards for emergency response), and Guidance for Emergency Response in the Transportation and Handling of Hazardous Materials and prepares broad emergency response measures.

Sumitomo Chemical develops logistics systems with reduced impact on the environment through the recycle, reuse, and industry standardization of transport materials and packaging.



Ensuring safety in chemical transportation: the Yellow Card

Reducing Waste

Sumitomo Chemical is working to reduce the amount of industrial waste, promote the recycling of resources, and ensure the appropriate management of waste products.

The Company is actively working with other chemical manufacturers to overcome the above problems through its participation in the Plastic Waste Management Institute and similar industry organizations.

Through the development of a high-performance catalyst for the manufacturing process and similar innovations, Sumitomo Chemical has increased the production yield while reducing energy and resource consumption. Furthermore, the Company is working to develop new technologies that reduce by-products generated in the manufacturing process and improve the recovery and effective use of those by-products.

The Company is developing products useful for recycling as well as developing and marketing products that are easily recyclable.



The Sumibox-Patacon, useful for the separate collection of recyclable items

Chemical Safety Management

In 1983, Sumitomo Chemical established an in-house system named Toxicity Assessment System for Chemical Substances (TASCS) to collect, analyze, and evaluate safety data for chemical products. Customers' requests were taken into account in designing the system.

The system enhances the Company's chemical safety management by enabling risk assessment and risk management through the proper analysis and evaluation of safety information for a chemical substance with regard to usage conditions.

The data collected in this reporting system is compiled in the Company's chemical product safety database, CHEM-SAFE2, which ensures a smooth flow of information within the Company and is used in MSDSs*. The Company has continued to comply with such reporting systems as the Pollutant Release and Transfer Register (PRTR) that was made law in July 1999.**

* MSDS completion was at 95% in 1998.

** Law Concerning the Reporting of Emissions of Specified Chemical Substances and the Promotion of Measures to Improve the Management of Such Emissions.

Sumitomo Chemical formulates long-term plans and activities under its Product Quality Committee to ensure compliance with the Product Liability (PL) Law.

Policy for Quality Assurance Activities

To implement the Corporate Policy on Product Quality, Safety, and Environment, the Company has determined specific objectives and methods to realize them as follows:

Objectives

- 1 Efficient supply of products with international competitiveness in terms of safety, quality, cost, and delivery readiness
- 2 Prevention of significant irregularities in product quality and safety
- 3 Product quality improvement and cost reduction for better performance of the Company

Methods

- 1 To give priority to customers' safety and satisfaction
- 2 To establish quality assurance systems, define responsibility and promote standardization
- 3 To educate employees for better understanding of quality assurance and product safety
- 4 To improve the mode of work and the standard of management by utilizing scientific management methodology
- 5 To activate the PDCA (the cycle of plan, do, check, and act)

November 8, 1994
Product Quality Committee



ISO 9002 certificates

ISO 9002 Certification

Sumitomo Chemical has received ISO 9002 certification for international product quality assurance at all five of its works. The names and ISO registration numbers are as follows:

Ehime Works:	JCQA-0019	Osaka Works:	JQA-0721
	JCQA-0320	Oita Works:	JQA-1069
Chiba Works:	JQA-0829	Misawa Works:	JQA-0752

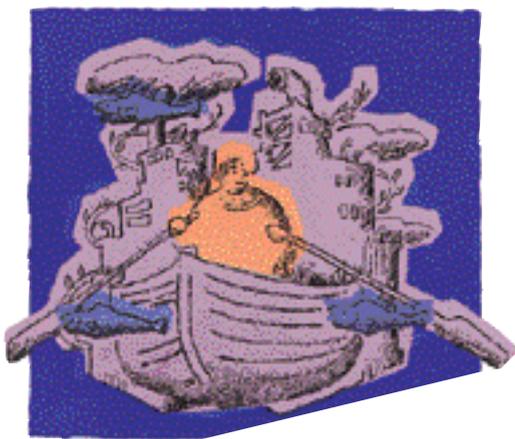
Company Organization Relating to Quality Assurance

In 1994, Sumitomo Chemical established the Quality Assurance Department (which became the Responsible Care Office in January 2000) and clarified product quality management responsibilities.

Furthermore, the Company has set up quality assurance sections at each manufacturing works. These sections are responsible for the quality management of raw materials, intermediates, and products as well as for managing product safety, analysis, and testing.

Water

Sumitomo Chemical has not only installed comprehensive water purification systems to treat wastewater emitted from its own plants, it also makes full use of its industry-leading technological capabilities to offer a large number of technologies and products that play an important role in the prevention of water contamination.



Agents for water purification

Water Treatment Agents

n Sumifloc organic polymer flocculant

Sumifloc is widely used as a flocculation and sedimentation treatment for many types of wastewater.

n Aluminum sulfate inorganic flocculant

This product is used to purify water supplies and treat sewage and wastewater from factories.

n Sumix inorganic flocculant

Sumix aluminum polychloride has superior flocculation capabilities that make it particularly effective in purifying water at temperatures at or under 5°C, very hard water, highly turbid water, and alkaline water.

n Sodium aluminate inorganic flocculant

Sodium aluminate is an auxiliary precipitate water treatment which, when combined with aluminum sulfate, increases water purification capability.

n Duolite ion-exchange resins

Duolite ES-371 N ion-exchange resin has been widely acclaimed for its effectiveness with respect to the removal of boron from water at large-scale effluent treatment facilities.

Water Purification Products



Environment-friendly dyes

Dyestuffs

n Let's dyeing, a new environment-friendly dyeing method

Sumitomo Chemical has developed a new dyeing method called Let's dyeing that reduces the volume of inorganic salts in effluent from dyeing factories. Sumifix Supra E-XF and Sumifix Supra NF dyes are best suited for the Let's dyeing method.

n Sumifix HF new environment-oriented dye series

Sumifix HF, a new reactive dye series with high fixation, was developed to achieve a high color yield with minimum dyeing auxiliaries, thus reducing the amount of colored water and inorganic salts in effluent from dyeing factories.

n Sumifix WF reactive dyes for wool

Acid-mordant dyes and metal-complex acid dyes, which contain heavy metals harmful to the environment and health, have traditionally been used for wool dyeing. Sumitomo Chemical developed Sumifix WF, a new reactive dye series that is heavy-metal-free yet suitable for wool dyeing.

The Green Mother Earth

Sumitomo Chemical is making a significant contribution to the coexistence and coprosperity of mankind and the earth through the Company's agricultural and greenification technologies and products.



Agricultural and Greenification Products



Coated seeds have improved budding and disease resistance.

n Agricultural and household pesticides

Agricultural chemicals and fertilizers are essential for growing crops and cultivating and protecting forests. Sumitomo Chemical gives priority to safety and the environment in developing products. When a plague of desert locusts occurred in Africa in 1988, both the Food and Agricultural Organization and the World Health Organization recommended using our insecticide Sumithion because of its safety and effectiveness.

The Company is devoting attention to developing not only traditional agricultural and household pesticides but also innovative new products that use plant and animal biomechanisms. Examples of such product development include Sumiseven P and Lomica plant growth regulators and Sumilaru insect growth regulator.

n Coated seeds¹

Coated seeds are good for use in automated sowing, offering increased efficiency in large farms. Coated seeds are used to sow seeds of trees as a possible means of preventing desertification.



Environment-friendly coated fertilizers

n Coated fertilizers: SR Coat, Super SR Coat

The use of coated fertilizers—fertilizers coated with organic materials—increases efficiency and reduces the burden on the environment because such fertilizers need be applied less frequently and in lower quantities than conventional fertilizers.

n Water-absorbant resin: IGETAGEL

IGETAGEL is a super water-absorbant resin that is mixed into soil to increase its water retention. Research is currently being carried out at a number of locations to develop applications for the stabilization of desert dunes and soil on steep slopes.

n Irrigation system products: Sumidrip, Sumisansui¹

The Company's products for use in irrigation systems—including Sumidrip, an irrigation hose, and Sumisansui, a sprinkler—are used to greenify dry land.

¹ Marketed by the Company's subsidiary Sumika Agrotech Co., Ltd.

Daily Life

Sumitomo Chemical offers environment-friendly products for use in everyday life.



Environmental Products for Household Purposes



Sumithermal floor-heating system utilizes electricity generated at night.

n Sumithermal floor-heating system²

The Sumithermal system stores the surplus electricity made available by reduced demand at night and releases it during the day to power a floor-heating system, smoothing out the peaks in the daily demand for electrical power.

The residential heating system Sumithermal LUNAKIT has been developed jointly with Kansai Electric Power Co., Inc.

n Sumibox-Patacon foldable box²

The Sumibox-Patacon is a series of light, foldable boxes made from polypropylene that have been adopted for storage and removal as well as a wide range of other uses in homes and offices.

n Sunply polypropylene double wall sheet and

Sumipanel thick hollow panel²

Polypropylene sheets and panels are lighter and have more resistance to water and weather than similar wood- and paper-based products; they also enable the recycling of resins and contribute to forestry resource protection. Demand for these products has been increasing.



Dioxin-absorbant film used in garbage bags

n Suiaru-Power dioxin-absorbant film

Sumitomo Chemical has developed Suiaru-Power dioxin-absorbant film, a new complex resin film that absorbs heavy metals and such poisonous gases as the dioxins produced at garbage incineration facilities.

Garbage bags made from the film have been approved by local government bodies. In addition, the development of other product applications, such as kitchen-use water drainage garbage bags and functional papers, is under way.

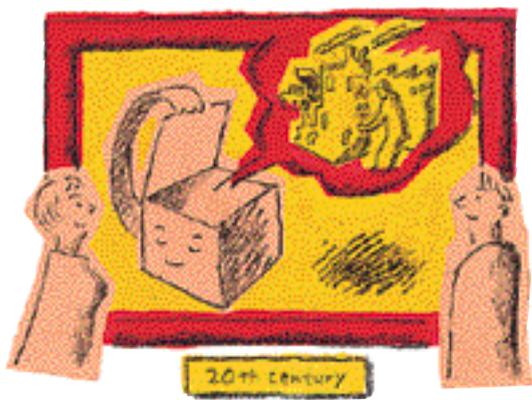
n Sumikaflex ecological wallpaper binding agent

In light of environmental issues related to dioxins and plasticizers, which have spurred demand for a change to water-based paint compounds, Sumitomo Chemical is developing such environmentally sound products as Sumikaflex, an ethylene emulsion wallpaper binder that provides quality on a par with or superior to existing products.

² Marketed by the Company's subsidiary Sumika Plastech Co., Ltd.

Recycling

Sumitomo Chemical is helping society make the transformation from an era of mass production and consumption to one centered on recycling through the development of suitable technologies and products.



Recycling-Related Products



Katawork polypropylene molding panels contribute to environmental protection.

n Katawork polypropylene panels

A polypropylene panel for molding concrete that acts as a substitute for commonly used plywood from the South Sea Islands, Katawork is excellent for use in construction and extremely economical. Katawork is an environmentally sound product that can be recycled.

n Sumitomo TPE polyolefinic thermoplastic elastomer

A polyolefinic speciality resin, Sumitomo TPE polyolefinic thermoplastic elastomer is experiencing strong demand from such industries as automotive manufacturers for vehicle interior parts.

Demand is expected to expand in other areas, as this plastic is recyclable and easy to dispose of by incineration.

n Klintate, Klinalpha² polyolefin agricultural films

Klintate and Klinalpha are special polyolefin films for agricultural use. After use they can be used as fuel material or easily recycled to make resins.

n Sumitomo Press Mold (SPM) technology

SPM technology, a skin material and core resin lamination molding system, is attracting attention in Japan and overseas because of its superior plastic recycling qualities.



IGETABOND is expected to facilitate the recycling of polyethylene terephthalate (PET) bottles.

n Paint-removal technology

Sumitomo Chemical has developed paint-removal technology that is considered a key process in the recycling of used car bumpers.

n Plastic compatibilizer IGETABOND

IGETABOND has made a significant contribution to the manufacture of a wide range of polymer alloys. In addition, it is being promoted as a compatibilizer for the recycling of PET bottles and polyethylene bottle caps.

n Sumipex Extra MMA (methyl methacrylate) resin for large-scale blow and foam molding

Sumitomo Chemical's technology has enabled MMA resin, known for its high transparency and weatherability, to be used for large-scale blow and foam molding. It is expected that Sumipex Extra's range of applications will expand as a result of its recyclability.

n Sumirez Resin paper-strengthening finishing resin

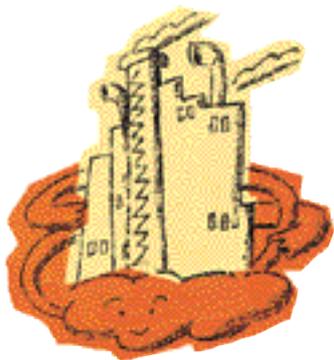
Paper recycling is increasing as paper pulp companies make efforts to reduce the use of forestry resources. Sumirez Resin, which increases the strength of recycled paper, has a wide range of applications.

² Marketed by Sumika Plastech Co., Ltd.

Sustainable Chemistry

Recently, the terms sustainable chemistry and green chemistry have become increasingly familiar in the world. These terms basically refer to chemical technologies that reduce and eliminate the use and production of chemical raw materials, products, and by-products that are harmful to the environment and people's health.

Sumitomo Chemical has vigorously taken up the challenge of introducing sustainable chemistry into its operations. Measures undertaken include the development of energy-efficient and resource-saving processes to control CO₂ emissions and other contributors to global warming. At the same time, the Company is working actively to develop processes that place an even lighter burden on the environment, thereby reducing the environmental impact on air and water.



Sustainable Chemistry



Resorcinol manufacturing technology developed using Sumitomo Chemical's proprietary technology

Low environmental impact process development

Sumitomo Chemical has been developing manufacturing processes that have a low environmental impact by eliminating the quantity of hazardous material produced. Such processes include a process for the direct oxidation of MMA monomer, the raw material for methacrylic resin; a hydroperoxide process for manufacturing resorcinol, an adhesive for rubber; and a nonmercury dyeing process using 1-aminoanthraquinone.

n Direct oxidation process for MMA monomer, the raw material for methacrylic resin

n Hydroperoxide process for resorcinol, an adhesive for rubber

n 1-aminoanthraquinone and nonmercury dyeing process

n Water-based solvent process for household insecticides

n Geometrical isomer control technology, asymmetrical polymer processes, plant growth regulators



A researcher experiments to develop new biotechnology processes.

Reduction of CO₂ emissions through lower energy consumption

Sumitomo Chemical has developed and improved many manufacturing processes for such products as isobutylene, gas-phase polypropylene, and gas-phase linear low-density polyethylene, that have led to increased energy efficiency and efficiency in the use of natural resources, thereby contributing to reduced CO₂ emissions. In addition, the Company has recently been working to develop a bioreactor that enables chemical reactions traditionally requiring high temperatures and high pressures to be carried out at normal temperatures and pressures. Sumitomo Chemical has already yielded significant results by applying the process to, for example, the manufacture of active ingredients for household insecticides.

n Gas-phase linear low-density polyethylene manufacturing facilities

n Isobutylene manufacturing facilities

n Gas-phase polypropylene manufacturing facilities

n Bioreactor

Professional Individuals

Sumitomo Chemical promotes a variety of activities designed to improve employees' professional knowledge concerning environmental and safety matters. Encouraging employees to obtain environmental and safety-related qualifications is one such activity.

Number of Employees with Environmental and Safety-Related Qualifications

National certification for plant operations.....	8,777
National certification relating to safety and hygiene.....	2,634
National certification for pollution prevention and waste treatment.....	1,267
ISO examiners and equivalents.....	17

The Company also aims to increase the number of qualified employees to ensure its environmental and safety performance.

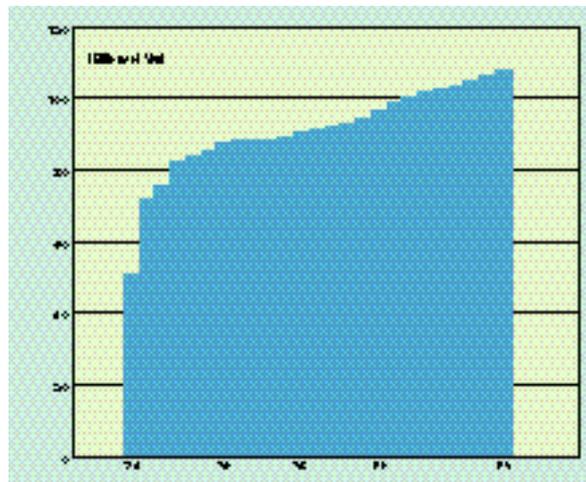
Environmental Protection and Safety-Related Investment

Sumitomo Chemical has long worked to implement environmental protection measures based on its commitment to zero-accident and zero-injury operations as well as to harmony and co-prosperity with local communities.

As a result, the Company has developed numerous products and processes with minimal environmental impact and has led the Japanese chemical industry in resolving environmental, safety, and energy and resource conservation problems. Today, the quality of Sumitomo Chemical's environmental and safety technologies and its related experience are highly evaluated throughout the world.

The Company's cumulative environmental protection and safety-related investment from 1971 to 1998 totaled ¥108 billion, 76% of which was directed toward environmental measures.

Accumulated Environmental Protection and Safety-Related Investment since 1971



Note: Environmental protection and safety-related investment that formed part of the expenditures on streamlining, new plants, additions to existing plants, or starting new businesses

Occupational Health and Safety

Maintaining the highest possible level of occupational health and safety is stipulated as a priority in Sumitomo Chemical's Responsible Care Activities Policy. Based on this policy, the Company vigorously implements measures outlined in annual management plans to realize zero-accident and zero-injury targets.

The progress of implementation and results of measures put forward in these annual management plans are carefully monitored and evaluated during RC internal audits. Measures for future plans are revised based on this analysis. In this way, Sumitomo Chemical continually strives to improve the standard of occupational health and safety.

Thanks to the diligent cooperation of all employees, Sumitomo Chemical realized its zero-accident and zero-injury targets at all manufacturing works, research laboratories, and other offices in fiscal 1998.



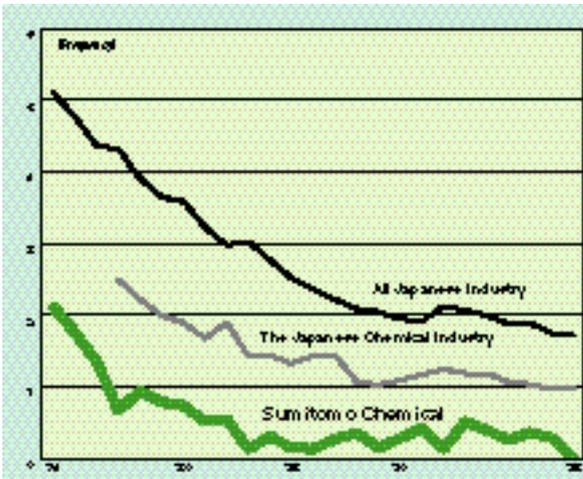
Energy Saving



Aiming for zero-accident, zero-injury operations

In recognition of its efforts in the fields of health and safety, Sumitomo Chemical has received numerous Ministry of Labor awards for safety management.

Annual Frequency of Injuries at Work

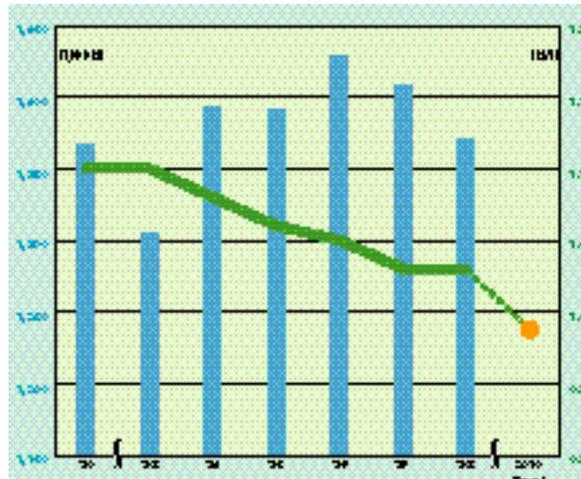


Note: Frequency rate = number of injured persons x 1,000,000/total working hours
(number of injured persons = number of persons absent from work for one day or more as a result of an accident)

Global warming is another environmental issue that Sumitomo Chemical is working actively to address as demonstrated by its efforts in saving energy. Since 1973, the Company has been creating energy-saving plans every three years.

The Company's goal is to reduce unit energy consumption to 10% below the 1990 level by 2010.

Energy Usage and Unit Energy Consumption



■ Energy usage (as crude oil)
■ Unit energy consumption (crude oil kl/ethylene t)

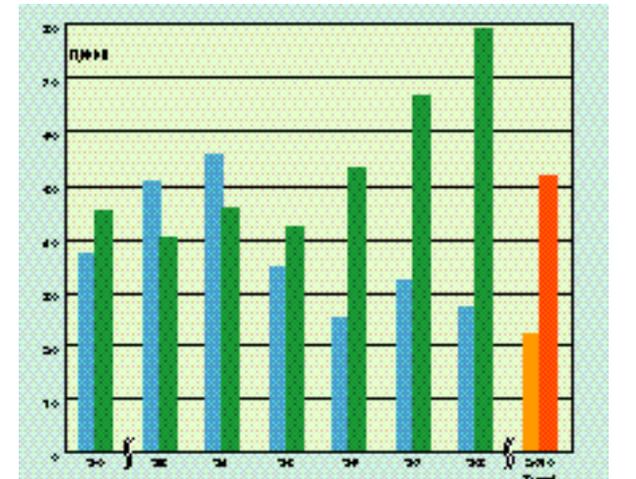
Waste Disposal Management

Sumitomo Chemical is constantly looking at ways to improve its performance in the areas of waste reduction and waste disposal. The Company aims to develop products and processes that increase energy and resource efficiency as well as to reduce the output of waste products and increase the recycling rate of resources, from the development stage through final disposal.

The Company is particularly active in the area of plastic recycling—developing recycling technologies, using the life cycle assessment (LCA) process to improve product quality, and developing environment-friendly plastic process technologies.

The Company's aims for 2010 are to improve the recycling rate 15% compared with the 1990 rate and to reduce the amount of landfill 40%.

Recycling Rate and Amount of Landfill



■ Recycling rate = total amount of material recycled/total waste produced x 100
■ Total amount of buried waste

Prevention of Air Pollution and Water Contamination

Sumitomo Chemical is making efforts to protect air and water from pollution by reducing emissions of NO_x (nitrogen oxides) and SO_x (sulphur oxides) and the level of COD (chemical oxygen demand).



Wastewater treatment



Proprietary technology used for denitrification

In the 1970s, Sumitomo Chemical developed technologies for removing NO_x and SO_x that it introduced in its own plants as well as supplied to other enterprises both in Japan and overseas.

Sumitomo Chemical has contributed to reducing vehicle emissions by developing lightweight materials for vehicles, such as high-performance plastics.

In addition, Sumitomo Chemical is working to further environmental protection through its efforts in biotechnology. For example, the Company is participating in a government-sponsored project under the auspices of the New Energy and Industrial Technology Development Organization (NEDO) for enhancing the photosynthesis capabilities of water plants as a method of CO₂ fixation.

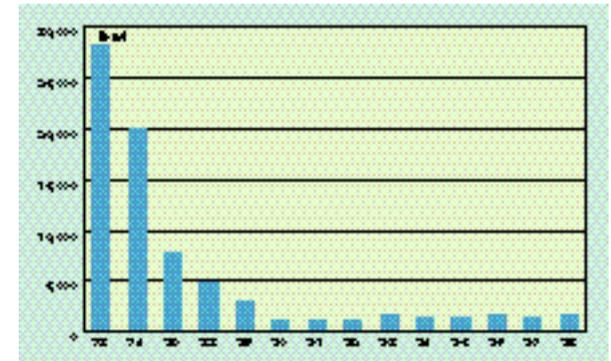


A device to cultivate water plant

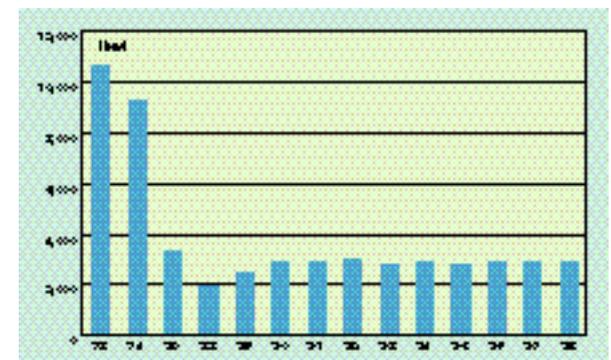


Research into CO₂ fixation using water plants

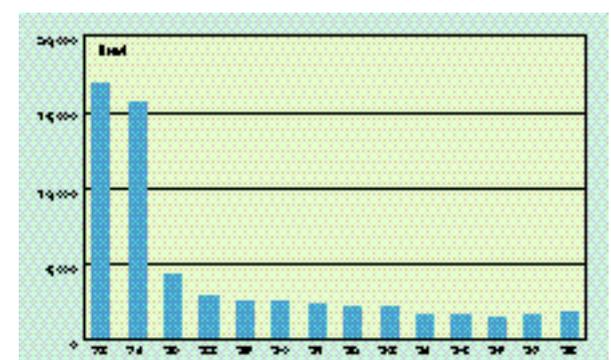
SO_x emissions



NO_x emissions



COD



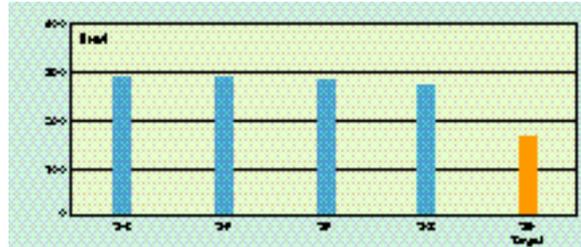
Voluntary Control under the PRTR System

In fiscal 1997, the Japan Chemical Industry Association (JCIA) conducted a survey on emissions of 284 substances specified for recording under the PRTR system. As a result of this survey, it was found that Sumitomo Chemical used 96 of these substances and produced a total annual emission volume of 1,590 tons, with airborne emissions accounting for 89.8% of the total and waterborne emissions for 10.2%. The amount of PRTR substances transported from the Company's production facilities was 167 tons.

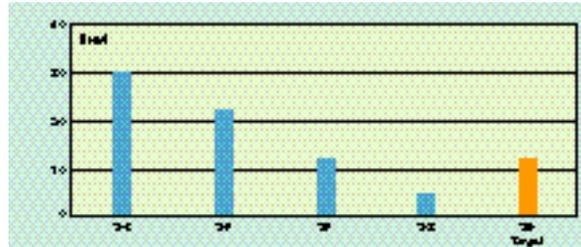
From a total of 22 substances for which the Japanese government strongly recommends reduction prior to other substances, JCIA has selected 12 for measures to reduce airborne emissions. The results of voluntary reduction efforts for nine such substances used by Sumitomo Chemical from fiscal 1995 through fiscal 1998 are shown in the graphs to the right.

(Annual emission figures are based on PRTR records prepared in accordance with JCIA)

Benzene

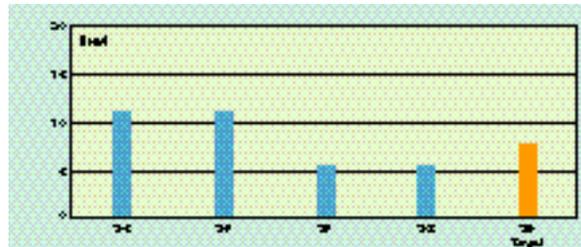


Vinyl chloride monomer



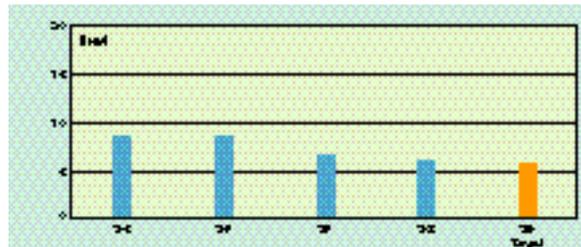
(Target for fiscal 1999 already reached)

Acrylonitrile

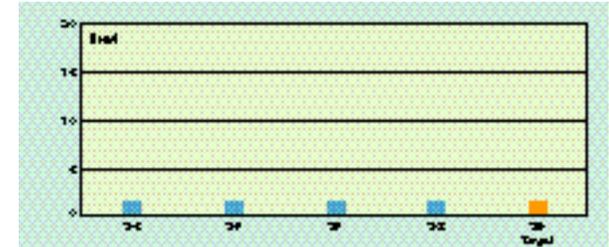


(Target for fiscal 1999 already reached)

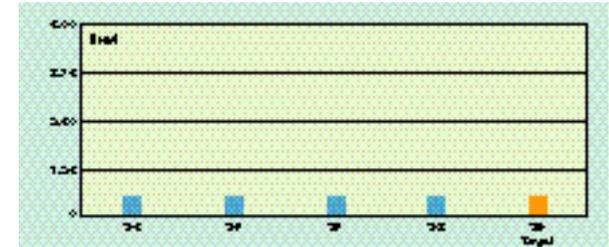
Dichloromethane



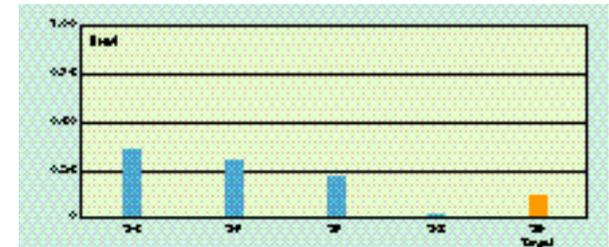
Ethylene oxide



1,3-butadiene

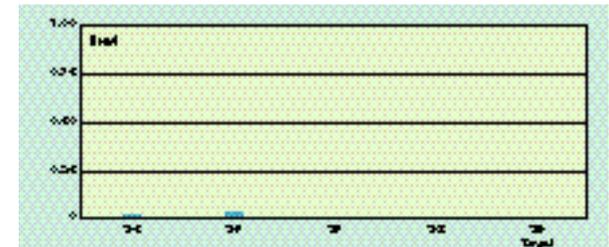


Formaldehyde



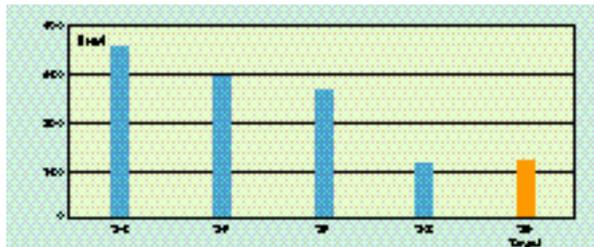
(Target for fiscal 1999 already reached)

Chloroform



(Target for fiscal 1999 already reached)

1,2-dichloroethane

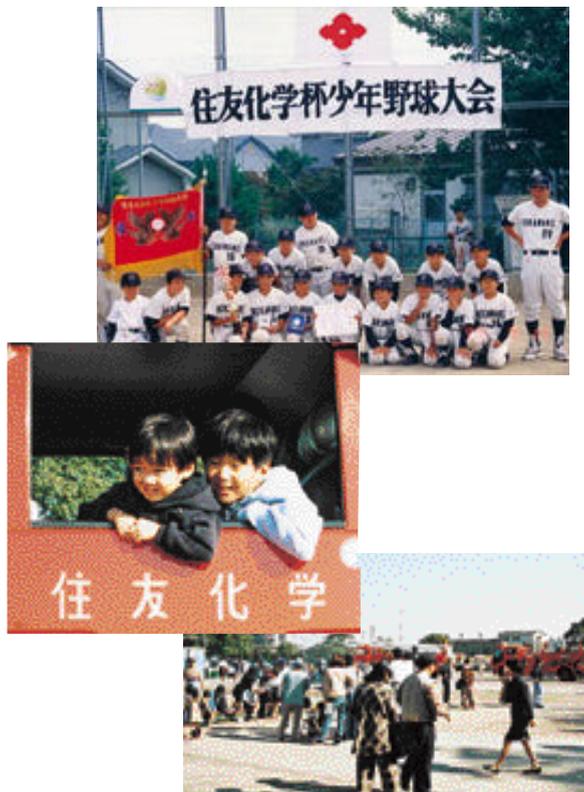


(Target for fiscal 1999 already reached)

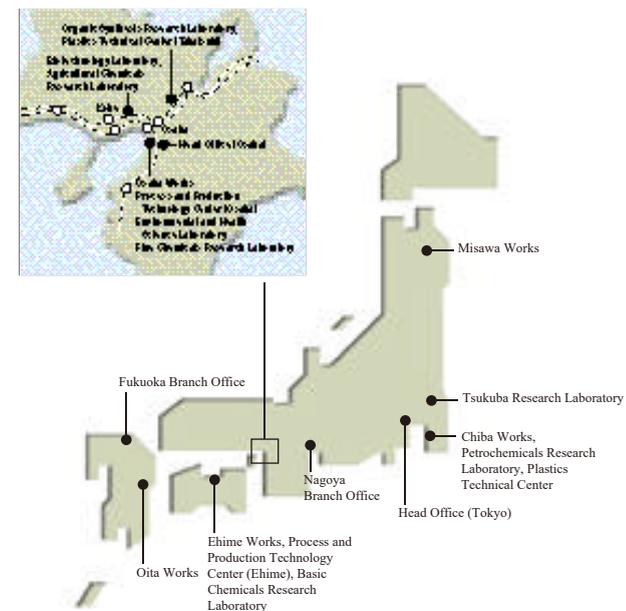
Sumitomo Chemical makes every effort to preserve the safety of the environment in the local communities around its works.

The Company has introduced numerous types of environmental protection equipment and facilities, established a continuous environmental monitoring system, and prepared chemical fire-fighting engines and other equipment in case of accidents. Moreover, environmental protection measures are reviewed regularly to ensure they comply with the latest local government regulations.

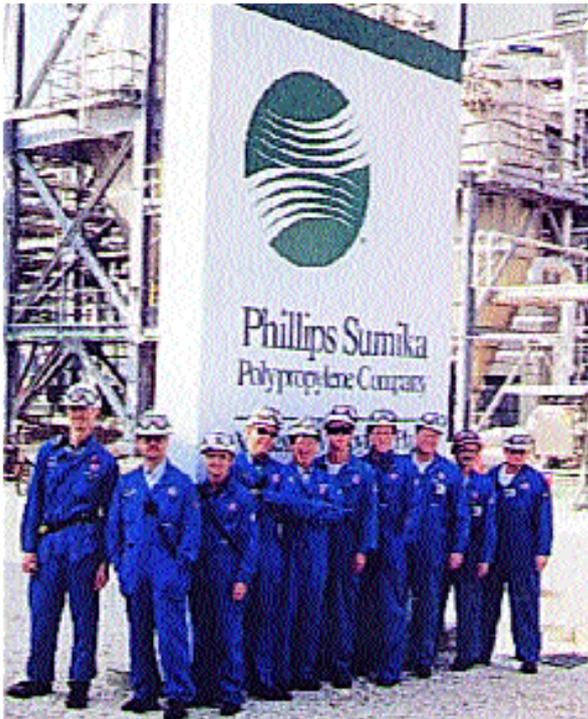
The Company's corporate aims are to develop in tandem with the regions in which the Company operates. As local citizens, the Company will continue to promote activities for the benefit of local communities as well as cooperate in local community activities.



1 Domestic Operations



Sumitomo Chemical conducts operations worldwide. While complying rigorously with the particular environmental standards applied in each country where it operates, the Company aims to promote Responsible Care through its international operations.



Polypropylene manufacturing plant in the United States



The petrochemicals complex in Singapore

Sumitomo Chemical has contributed extensively to environmental protection overseas through the application of its energy- and resource-saving and other technologies.

Sumitomo Chemical's origins date back to 1913, to a copper mine in Besshi, Ehime Prefecture. Sulphuric acid gas generated for smelting the copper produced there was a major environmental problem at the time. To overcome the problem, a process was developed to manufacture calcium superphosphate by using the gas. Thus, Sumitomo Chemical started its business as a fertilizer producer. Since its beginning, Sumitomo Chemical has been conscious of quality, environmental, and safety issues.

Business founded: September 22, 1913

Commenced business operations: October 4, 1915

Company incorporated: June 1, 1925

Capital: ¥81,465 million at March 31, 1999

Number of employees: 5,629 at March 31, 1999

Divisions: Basic Chemicals Sector

Petrochemicals & Plastics Sector

Fine Chemicals Sector

Agricultural Chemicals Sector

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レスポンシブル・ケア
Responsible Care

As a Responsible Care company, Sumitomo Chemical undertakes voluntary activities in the areas of safety, health, and the environment from the development through the disposal of chemical substances. In Japan, the Responsible Care mark is used by companies that are members of the Japan Responsible Care Council.

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This report has been printed in Japan using environment-friendly soybean oil ink.
Also, it has received the Ecomark for being printed on 100% recycled paper.

