

# CSR Report 2004

Responsible Care, Social, and Economic Activities of Sumitomo Chemical Company, Limited



Responsible Care refers to voluntary activities conducted by companies in the areas of the environment, health, and safety throughout their products' entire life cycles. As of June 2004, there were Responsible Care associations in 47 countries.

**SUMITOMO CHEMICAL**

## CSR Report 2004

Since 1998, Sumitomo Chemical Company, Limited, has issued an annual *Environment, Health & Safety Report* that focuses on the Company's Responsible Care activities—primarily environmental and safety activities. We have changed the title of our seventh report to *CSR Report* to reflect a broader coverage of corporate social responsibility (CSR) initiatives, including social and economic activities.

Through this report, we aim to promote greater understanding of the Company's CSR activities among a wide variety of groups—from customers, shareholders, and investors to local residents, students, and NPOs—and, to this end, have worked to make the subject matter approachable by presenting major initiatives in a topic-based format, using photographs, figures, and subtitles to enhance readability. Also, detailed data on our Responsible Care activities has been compiled in a separate document.

This report was prepared with reference to the Global Reporting Initiative (GRI)'s *Sustainability Reporting Guidelines* (2002 issue) and the Japanese Ministry of the Environment's *Environmental Reporting Guidelines* (fiscal 2003 issue) and *Environmental Performance Indicators for Businesses* (fiscal 2002 issue).

The environmental performance data included in this report reflects the aggregate performance of Sumitomo Chemical and 13 major consolidated subsidiaries and the environmental accounting data reflects the aggregate performance of Sumitomo Chemical and 17 Group companies (14 domestic, 3 overseas).

Major consolidated subsidiaries are companies with production departments that generate annual net sales of ¥10 billion or more.

In this report, "Sumitomo Chemical Group" refers to Sumitomo Chemical Company, Limited, and its 13 major consolidated subsidiaries (with the exception of the environmental accounting information on p.15, which includes 17 consolidated subsidiaries) and "Sumitomo Chemical" refers to Sumitomo Chemical Co., Ltd. The names of the 13 major consolidated subsidiaries are listed at the bottom of p.14.

Period covered by this report: April 1, 2003, to March 31, 2004

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# Corporate Social Responsibility through Sustainable Chemistry

Nowadays corporations can no longer afford to focus solely on the pursuit of economic value or financial performance. It is becoming more important than ever for companies to demonstrate their commitment to corporate social responsibility (CSR) through such activities as legal compliance (including corporate ethics and societal standards), global environmental protection, proper employment practices, and social contributions. To contribute to the sustainable development of society, Sumitomo Chemical seeks to achieve the best possible performance in the "triple bottom line" of environmental, social, and economic parameters in the pursuit of its CSR initiatives.

Sumitomo Chemical's business originated with the manufacture of agricultural fertilizer by effectively utilizing sulfur dioxide, a hazardous by-product of copper smelting. Since its inception, therefore, the Company has been committed to addressing environmental issues and improving the quality of life. Over the decades, we have developed many useful new products with the aim of contributing to the development of society and earning its trust. The concept of CSR is deeply ingrained in our management philosophy and corporate vision.

Today Sumitomo Chemical is promoting "sustainable chemistry" initiatives by capitalizing on its unique characteristics as a chemical manufacturer. Sustainable chemistry refers to the continuous pursuit and development of technological innovations in chemistry to efficiently provide society with useful products and processes while minimizing the environmental burden. By utilizing the vast portfolio of sophisticated technologies we have accumulated over the years and continuing to develop highly innovative technologies, we believe that we can play a vital role in the sustainable development of society.

In our environmental initiatives, we are fully committed to Responsible Care, which constitutes a vital cornerstone of Sumitomo Chemical's corporate management. Responsible Care refers to voluntary activities by companies aimed at preserving the environment, maintaining safety, and safeguarding health throughout all stages of the product life cycle—from R&D to production, distribution, use and final disposal.

Among our major CSR initiatives in fiscal 2003, we strengthened our global compliance management systems throughout our domestic and overseas subsidiaries as well as at Sumitomo Chemical Company, Limited, itself. We also established a Compliance Committee in July of last year as a compliance surveillance body across the Sumitomo Chemical Group. In addition, we have achieved notable results in our manufacturing operations. For example, we commenced commercial operation of a new caprolactam production plant that uses a vapor-phase process, which from the perspective of sustainable chemistry is superior to conventional processing methods. We also brought into operation a plant using a novel propylene oxide production process that generates no by-products. In addition, we established an Occupational Safety and



Health Management System (OSHMS) at all of our manufacturing plants and research laboratories in Japan. Moreover, we granted a free license to the production technology for our Olyset mosquito nets as part of the "Roll Back Malaria Campaign" in Africa.

In April 2004, Sumitomo Chemical launched its new Three-Year Corporate Business Plan. This plan positions the further advancement of CSR as an important management objective. In order to establish Sumitomo Chemical as a global chemical corporation that is highly respected by society, I will continue to focus the Company's efforts to ensure robust legal and ethical compliance and active engagement in Responsible Care and social contribution activities, while working to enhance business performance.

This report provides an overview of Sumitomo Chemical's CSR performance, including an assessment of our Responsible Care activities as well as our social and economic objectives. Starting this year, we have changed the name of the report from the *Environment, Health and Safety Report* to the *CSR Report* and have revised the contents. We look forward to receiving your frank comments on our activities.

米倉弘昌

Hiromasa Yonekura  
President

# Sumitomo Chemical's Management Policy

Sumitomo Chemical is working to improve living standards and alleviate social problems through the creation of useful new technologies and products.

## For People, Society, and the World

Sumitomo Chemical's origins date back to 1913, when the Company used sulfur dioxide emissions from the Besshi Copper Mine in the Shikoku region of Japan to produce sulfuric acid and calcium super phosphate fertilizers. The Company not only solved an environmental problem by curbing pollutant emissions, but also helped to increase crop yields through the provision of useful fertilizers. Thus, ever since its establishment, Sumitomo Chemical has been committed to addressing environmental issues and improving living standards.

Although Sumitomo Chemical has diversified its operations over the years to keep abreast of the changing times, it has remained devoted to pursuing operations that benefit not only the Company itself, but also customers, other stakeholders, and society at large.

Today, the Sumitomo Chemical Group includes some 100 companies operating around the world in six business sectors: basic chemicals, petrochemicals & plastics, fine chemicals, IT-related chemicals, agricultural chemicals, and pharmaceuticals.

To meet the high expectations of business partners, shareholders, investors, regional communities, and other stakeholders, Sumitomo Chemical will continue to endeavor to leverage its R&D capabilities, technological prowess, and ability to supply quality products as a chemical company to benefit people, society, and the world.

### Sumitomo Chemical Business Principles

Sumitomo Chemical's origins go back to the "House of Sumitomo"—an enterprise with a history of copper mining operations spanning over 300 years—and it is from this source that the Company's fundamental business principles derive.

1. Sumitomo shall achieve strength and prosperity by placing prime importance on integrity and sound management in the conduct of its business.
2. Sumitomo shall manage its activities with foresight and flexibility in order to cope effectively with the changing times. Under no circumstances, however, shall it pursue easy gains or act imprudently.

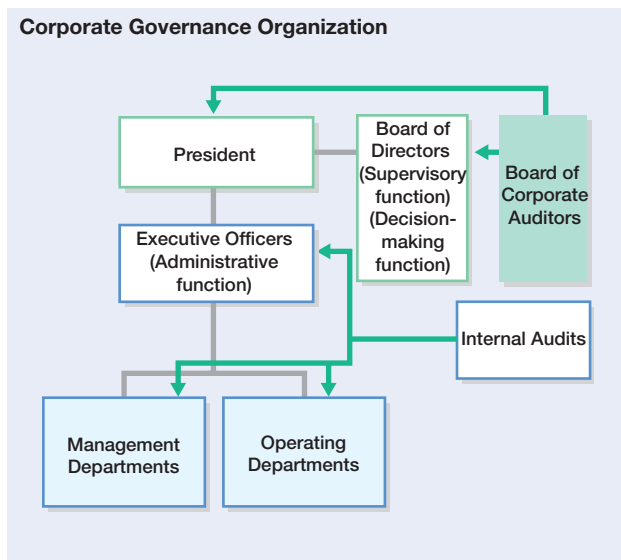
The first article refers to the importance of maintaining the trust of business partners and society and the second article to the importance of making strategic business decisions in response to the changing times and social environment. The second article also calls for refraining from the pursuit of easy gains—conducting thorough investigations and giving serious thought to business decisions so as not to be blinded by prospects of immediate gains.

## Corporate Governance

### Corporate Governance Framework

Against a backdrop of changing social and economic conditions, Sumitomo Chemical is striving to maximize shareholder value and reinforce the trust and support of customers, business partners, regional communities, and other stakeholders. We realize that corporate governance is key to achieving these objectives and will continue to make ongoing efforts to bolster corporate governance by expediting decision making, clarifying responsibilities pertaining to the execution of duties, enhancing and strengthening the compliance framework and internal audits, and promoting timely disclosure.

### Corporate Governance Organization



## Compliance

Sumitomo Chemical has promoted compliance-based management through the observance of laws, regulations, and Company rules in all corporate activities as well as the activities of various internal committees, including the Responsible Care Committee, the Antitrust Law Compliance Committee, and the Group Companies Auditing Committee.

On July 1, 2003, we formulated and put into effect the "Sumitomo Chemical Charter for Business Conduct" to codify standards for basic corporate activities and the *Sumitomo Chemical Business Conduct Manual* to provide concrete guidelines for adhering to these standards to further reinforce compliance-based management.

We are also committed to promoting compliance throughout the Group and are encouraging Group companies in Japan and overseas to adopt similar compliance programs.

### ■ Sumitomo Chemical Charter for Business Conduct

At Sumitomo Chemical, we believe that it is our social responsibility to conduct business activities in line with the principles of compliance and self-responsibility. Based on this belief, we have established the "Sumitomo Chemical Charter for Business Conduct" as the foundation of our compliance system.

**Sumitomo Chemical Charter for Business Conduct**

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 activities in accordance with our corporate rules.
3. We will develop and supply useful and safe products and technologies that will contribute significantly to the progress of society.
4. We will take voluntary and active initiatives to achieve zero-accident and zero-injury operations and preserve the global environment.
5. We will conduct business transactions based on fair and free competition.
6. We will endeavor to make our workplaces sound and energetic.
7. Every one of us will strive to become a professional and achieve advanced skills and expertise in our own field of responsibility.
8. We will actively communicate with our various stakeholders, including shareholders, customers, and local communities.
9. As a corporate member of an international society, we will respect the culture and customs of every region of the world and contribute to the development of those regions.
10. We will strive for the continued development of our Company through business activities conducted in accordance with the guiding principles described here.

### ■ Sumitomo Chemical Compliance System and Its Organization

#### • Sumitomo Chemical Business Conduct Manual

This manual stipulates rules to be followed to promote compliance-based management through the observance of laws, regulations, and business ethics. The *Sumitomo Chemical Business Conduct Manual* is distributed to all directors and employees and provides detailed guidelines for conduct in the following five areas: relationship with society; relations with customers, business partners, and competitors; relationships with shareholders and investors; rules concerning employees; and rules concerning the Company and the Company's assets.

#### • Establishment of a Compliance Committee

The Compliance Committee was established as an internal control system wherein directors supervise operations with the aim of overseeing and supporting the effective implementation of compliance-based management. It is the committee's duty and right to investigate and supervise operations and recommend improvements as necessary to ensure Companywide compliance with laws and regulations.



#### • Establishment of "Speak Up System"

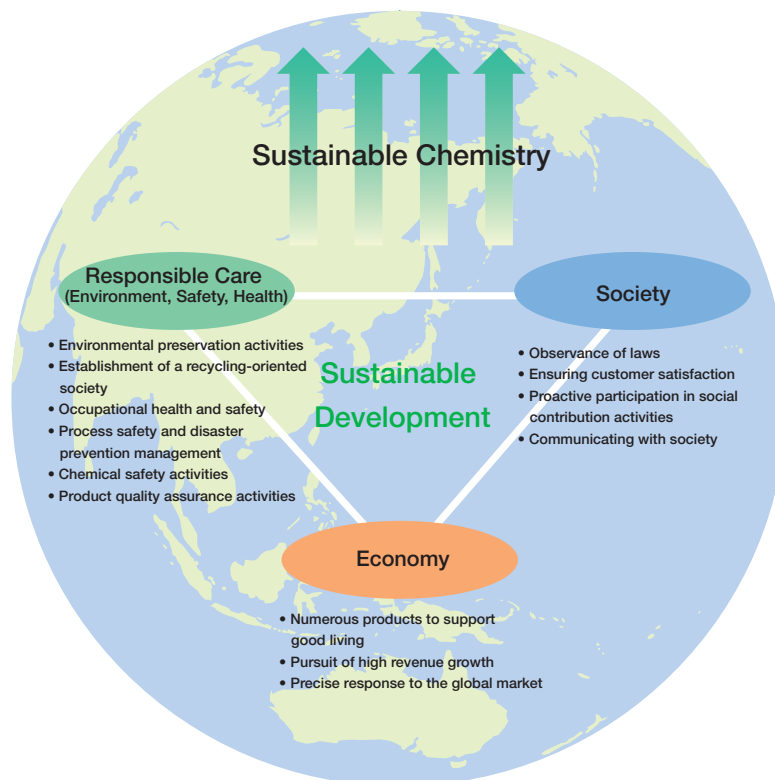
We established the "Speak Up System" to provide employees with an outlet for reporting non-compliance or suspected non-compliance should immediate resolution through the normal process of reporting to a superior prove difficult. The "Speak Up System" promises to serve as an effective tool for preventing illegal or unfair practices and promoting self-regulation through the rapid identification and rectification of such acts.

# Promoting Sustainable Chemistry

Sumitomo Chemical is seeking to implement CSR by leveraging sustainable chemistry to provide highly useful products developed through breakthroughs in chemical technology in a manner that is desirable for the environment and society.

Our Vision for Sumitomo Chemical in the 21st Century

A Truly Global Chemical Company



## ■ What is Sustainable Chemistry?

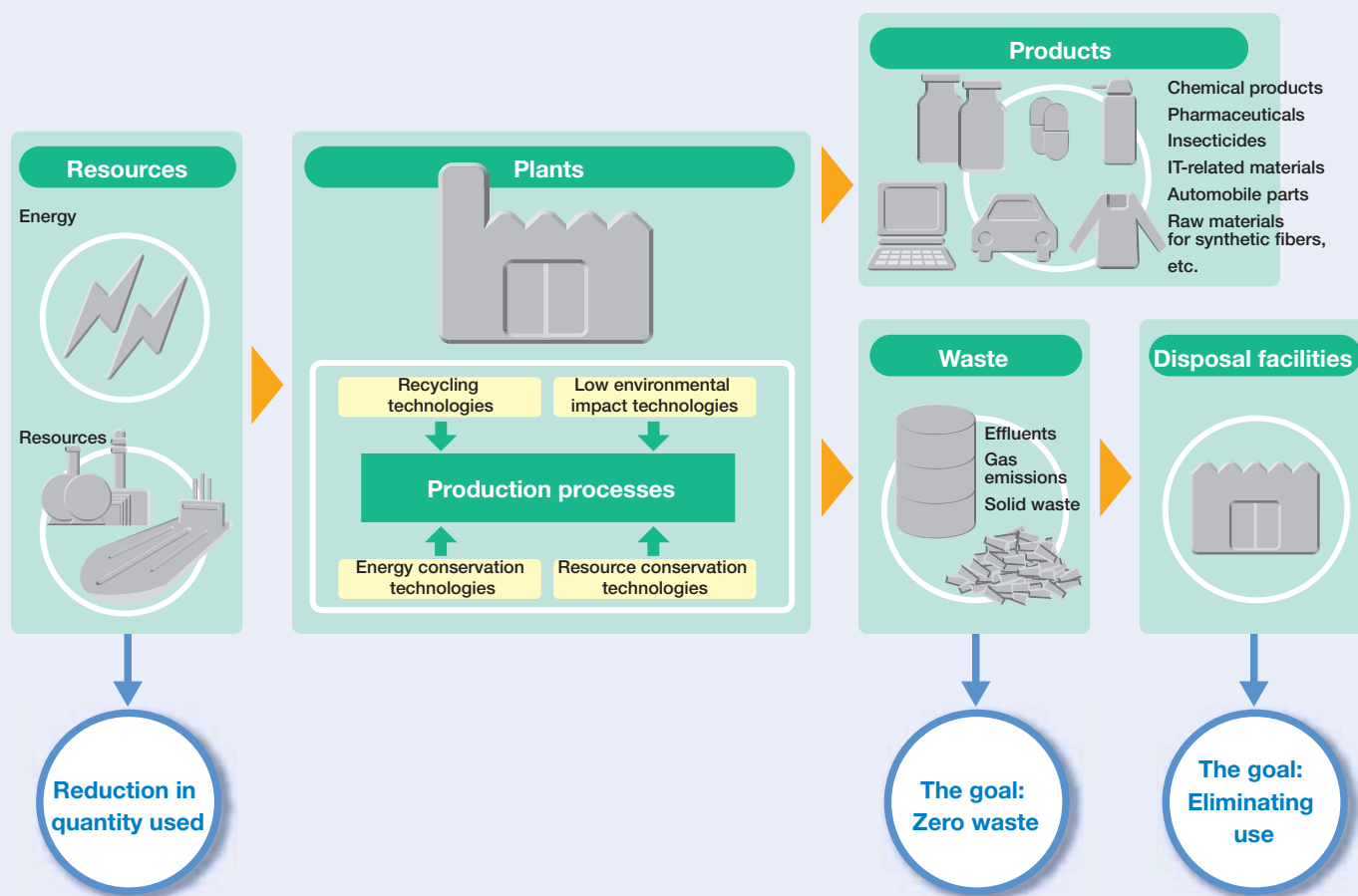
As a chemical company, we aspire to improve living standards and alleviate social problems through the creation of useful new technologies and products.

To this end, Sumitomo Chemical is promoting CSR in the pursuit of economic development and the implementation of environmental, safety, and product quality assurance as well as social activities. These initiatives enable the Company to play a major role in promoting the sustainable development of society and, at the same time, to continue with its own development, coming closer to realizing its goal of becoming a truly global chemical company in the 21st century.

Sumitomo Chemical is promoting sustainable chemistry as a component of its CSR initiatives. Sustainable chemistry refers to the concept of providing highly useful products developed through breakthroughs in chemical technology in a manner that is desirable for the environment and society.

Specifically, sustainable chemistry refers to the development and adoption of revolutionary chemical technologies that not only lower the consumption of energy and resources, but also reduce or eliminate the output and use of raw materials, chemical products, and/or by-products that are harmful to the environment and human health. As a chemical corporation in the 21st century, Sumitomo Chemical is pursuing sustainable chemistry. To promote the sustainable development of mankind and society, Sumitomo Chemical is striving to incorporate sustainable chemistry—which takes into account the environment, society, and the economy—in all aspects of its corporate activities, from manufacturing processes to all stages of the product life cycle.

## Sustainable Manufacturing Processes



### ■ Development of Green Processes and Clean Products

The production of chemical products needed by society often entails the use of precious resources and energy and the generation of unwanted by-products, waste, and hazardous materials. It used to be thought that these were the unavoidable consequences of manufacturing useful products; however, the chemical industry has been focusing on finding ways to reduce the health hazards and environmental impact posed by the disposal of the large amounts of waste and hazardous substances resulting from mass production. As a result, sophisticated pollution control technologies have been developed and Japan has become a world leader in environmental impact reduction technology.

Sumitomo Chemical has gone a step further by aggressively working to develop green processes and produce clean products from a sustainable chemistry perspective. Green processes aim to reduce the generation of waste, hazardous materials, and by-products—ultimately to zero—and promote resource and energy

conservation by revising conventional manufacturing processes. Green processes aim to shift the focus from the treatment and recovery of waste and hazardous materials to the use of sophisticated technologies to eliminate the generation of unwanted materials at the source. These technologies are an important strategic element of eco-design. Through tireless R&D targeting functional catalysts—the keys to chemical synthesis—and years of accumulating related applied technologies for commercial plants, Sumitomo Chemical has successfully developed a number of revolutionary green processes that achieve substantial energy and resource conservation, reduce environmental impact on the atmosphere and waterways, and reduce waste generation. We are also looking to develop and produce clean products that not only offer environmental, safety, and health advantages over conventional products but replace them.

## Fiscal 2003 CSR Highlights

### ■ Production of Caprolactam\* Using New Vapor-Phase Technology Starts

On February 17, 2003, a new plant at our Ehime Works began the commercial production of caprolactam using a new vapor-phase technology that was developed as part of sustainable chemistry efforts. Thanks to the new production process, which combines Sumitomo Chemical's vapor-phase Beckmann rearrangement process and Italian petrochemical company EniChem Co., Ltd.'s ammoximation process, the new plant boasts an annual production capacity for caprolactam of 65,000 tons. This new process is extremely eco-friendly. Unlike conventional caprolactam production processes that generate large amounts of ammonium sulfate, the only by-product produced by the new technology is water. The new process also requires far fewer raw materials, has a much shorter production process, and uses silicas—which can be returned to the earth without processing—for catalysts in the first production step, ammoximation, as well as the second production step, vapor-phase Beckmann rearrangement.

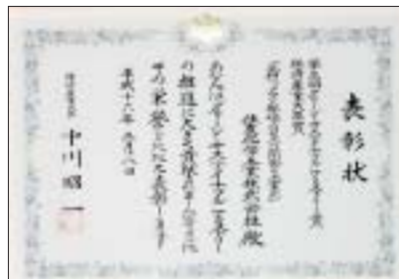
\* Caprolactam is the raw material used in nylon 6—a very common synthetic fiber. Approximately 70% of nylon 6 is used for fiber production and 30% in the manufacture of such industrial materials as engineering plastics and films.



### ■ Sumitomo Chemical Wins Ministry of Economy, Trade and Industry Award at the Green & Sustainable Chemistry Awards

At the third annual Green & Sustainable Chemistry Awards, Sumitomo Chemical received the Ministry of Economy, Trade and Industry's Award for its vapor-phase Beckmann rearrangement process for caprolactam production, which has been used commercially at the Ehime Works since February 2003. The awards are given for "chemistry that is friendly to people and the environment" and are sponsored by the Green & Sustainable Chemistry Network—a network of 22

organizations, including the Japan Chemical Industry Association. Sumitomo Chemical's innovative by-product-free process was recognized for its contribution to progress in the industry.



### ■ Production of Propylene Oxide Using a Highly Economical, Environment-Friendly Process Launched

In May 2003, a new plant at the Chiba Works began commercial production of propylene oxide using a new proprietary process that is not only highly economical, but also energy efficient and offers substantially reduced environmental impact on surrounding areas due to reduced gas and effluent emissions. In contrast to conventional chlorine processes that generate waste and effluents containing chlorine, Sumitomo Chemical's process is by-product free and has a low environmental impact.





### ■ Participation in NEDO Joint Research on Energy Conservation

Sumitomo Chemical has been commissioned, along with Fuji Oil Company, Ltd., and Chiyoda Corporation, to work on a joint research product being conducted by the New Energy and Industrial Technology Development Organization (NEDO). When NEDO issued a request for fiscal 2003 proposals for its Strategic Development of Energy Conservation Technologies project, Sumitomo Chemical submitted a proposal for the feasibility study phase. Research conducted at Sumitomo Chemical's and Fuji Oil's petrochemical complexes in Chiba Prefecture on the development of technologies for energy sharing in industrial complexes using pinch technology confirmed that recovering and sharing exhaust heat that had previously escaped into the atmosphere and promoting the joint use of recovered electricity can save tens of thousands of tons of energy per year (in terms of crude oil equivalents) and greatly contributes to CO<sub>2</sub> reduction.



Chiba Works

### ■ Working to Eradicate Malaria with Olyset Mosquito Nets

In Africa, every year more than one million people die from mosquito-transmitted malaria. As a partner in the World Health Organization (WHO)-promoted, "Roll Back Malaria Campaign," Sumitomo Chemical provided the production technology for WHO-certified, long-lasting insecticidal nets (LLINs) free of charge to the Tanzanian mosquito net manufacturer A to Z Textile Mills, Ltd. Thanks to the incorporation of an insecticide into the resin from which the nets' thread is spun, *Olyset* mosquito nets offer long-term efficacy that lasts even if the net is washed. In fact, after washing the effective ingredient will once again rise to the fibers' surface.

We have provided this technology to enable local mass production, which we hope will bring about widespread use of the nets by rapidly making them available at a low price.



### ■ Occupational Safety and Health Management System in Use throughout the Company

In fiscal 2003, Sumitomo Chemical put into operation an Occupational Safety and Health Management System (OSHMS) at all its plants and research facilities—establishing a framework under which everyone in the Company can work together to promote occupational safety and health. Furthermore, in May 2003 the Chiba Works received OSHMS certification from the Japan Industrial Safety and Health Association (JISHA). Sumitomo Chemical aims to earn OSHMS certification for all its plants and research facilities in the future.

### ■ Sumitomo Chemical Awarded Highest Environmental Management Rating, "Green Top Runner"

Sumitomo Chemical was ranked a "Green Top Runner" for fiscal 2003 by the Sustainable Management Rating Institute (SMRI), an organization associated with the Sustainable Management Forum of Japan, a nonprofit organization. This environmental management rating is unique in that it evaluates not only corporations' environmental preservation activities but also the soundness of their management and social activities and, as such, is one index used in Japan to measure CSR performance. "Green Top Runner" is the SMRI's highest environmental management rating.

# Responsible Care Management

Responsible Care refers to corporations' voluntary activities aimed at preserving the environment, safety, and health in all phases of the product life cycle, while deepening bonds of trust with society through dialogue. These activities can be broadly

## What Is Responsible Care ?

### Corporate Policy on Product Quality, Safety and the Environment

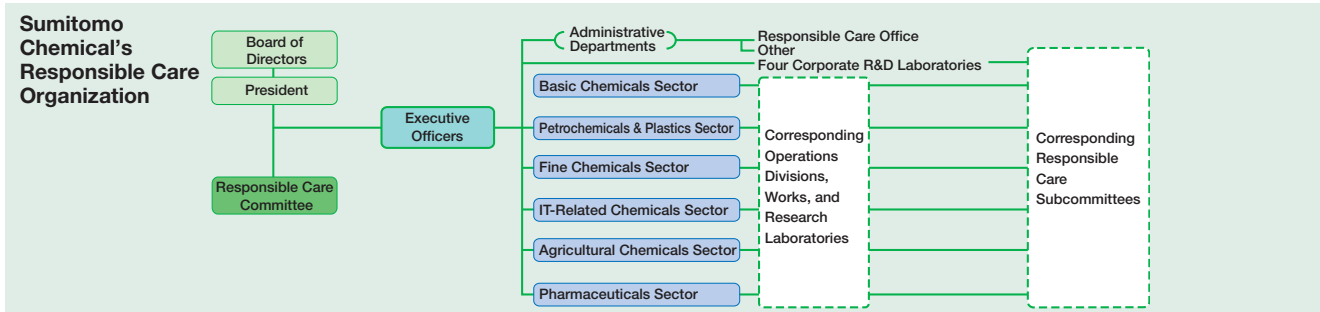
In January 1995, Sumitomo Chemical formulated the "Policy for Responsible Care Activities," thereby increasing the relevance of the "Corporate Policy on Product Quality, Safety and the Environment," which was established in April 1994, by clearly specifying objectives and the methods for realizing them. In the "Corporate Policy on Product Quality, Safety and the Environment," the President states the Company's commitment to ensuring customer satisfaction; maintaining zero-accident and zero-injury operations; ensuring the safety of raw materials, intermediates, and products; and reducing environmental impact in all phases of the product life cycle. The President also declares that all employees are to be aware of this policy and constantly work to improve operational performance while, of course, observing the law.

### Responsible Care Activity Framework

Sumitomo Chemical has established a Responsible Care Committee to promote comprehensive, efficient Responsible Care initiatives from a long-term perspective. The committee comprises



the board members in charge of the Company's six business sectors, the board members in charge of the administrative departments (general affairs, legal, personnel, IR & public relations, corporate planning & coordination, finance & accounting, procurement & logistics, Responsible Care), and the heads of each of the five manufacturing works.



**Corporate Policy on Product Quality, Safety and the Environment**  
 June 29, 2000  
 (Established April 1, 1994)

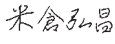
In conformity with the business philosophy of the Sumitomo Group, our Company fulfills its responsibility to develop, manufacture and supply a variety of products which satisfy the fundamental necessities of human life and contribute to the growth of society. Since its establishment, Sumitomo Chemical 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, R&D, marketing and sales, and logistics, in accordance with the following policy related to product quality, safety, and the 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 neighboring communities and our employees
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 assess and reduce environmental impact at all operational stages, from product development to 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.

Hiromasa Yonekura, President  
 Sumitomo Chemical Company, Limited



**Policy for Responsible Care Activities**  
 Established January 1995  
 Responsible Care Committee

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

- 1. Objectives**
  - 1) Stable operations without accidents or injuries, and a good working environment
  - 2) Assessment and reduction of environmental load to maintain co-prosperity with society
  - 3) Technological improvement to ensure environmental protection and safety throughout the life cycle of a product, thereby contributing to the growth of business
- 2. Methods**
  - 1) To abide by regulations on the environment and safety at home and abroad, and improve environmental and safety management standards while abiding by international standards
  - 2) To keep the Company well organized, including in such areas as internal regulations, with clearly defined responsibilities of each section carried out in a timely manner
  - 3) To promote the planning, implementation, and improvement of management of environment and safety through Responsible Care audits
  - 4) To educate and train employees to better understand and implement Responsible Care activities
  - 5) To develop technologies and products to reduce environmental impact at every stage of the product life cycle, from R&D, manufacture, and distribution to disposal, to satisfy social needs
  - 6) To support the Responsible Care activities of affiliated companies, including those located overseas

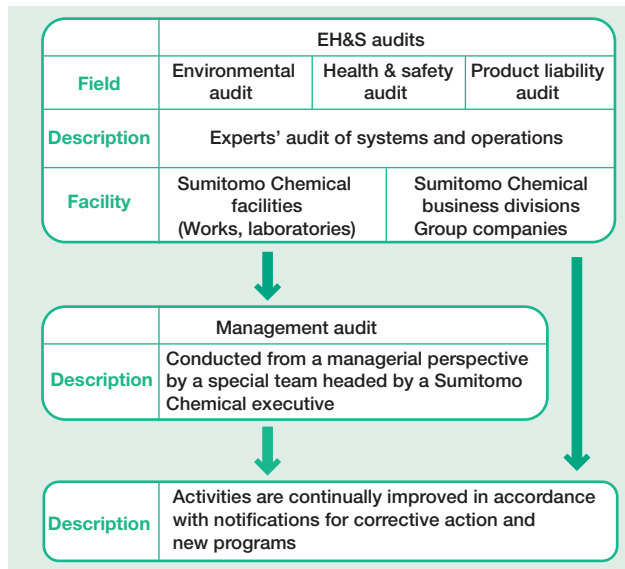
categorized into four areas: environmental preservation, process safety and disaster prevention, occupational health and safety, and product stewardship. In addition, Sumitomo Chemical's Responsible Care initiatives extend to quality assurance activities.

**Responsible Care Audit System**

**Responsible Care Internal Audits**

By completing the full Plan, Do, Check, Act (PDCA) cycle for Responsible Care activities, we are enhancing the level of such activities. In addition, we periodically conduct Responsible Care audits to ensure that Responsible Care activities are being implemented correctly. We conduct two types of Responsible Care audits to examine activities from different perspectives. Environment, Health & Safety (EH&S) audits are conducted by environment, safety, and product liability experts, and management audits are conducted from a managerial perspective by a special team headed by a member of the Responsible Care Committee. In fiscal 2003, Responsible Care audits were conducted according to the schedule below. Each of the works and research laboratories is striving to achieve ongoing improvements in Responsible Care by implementing corrective actions and preventative measures based on audit results.

**Responsible Care Audits**



**Responsible Care Audits Conducted at Works and Research Laboratories (FY2003)**

	Ehime Region	Chiba Region	Osaka Region	Oita Region	Misawa Region	Tsukuba Region
Management Audit	August 22	November 14	August 27	October 24	September 5	July 18
EH&S Audit	July 10-11	August 7-8	June 26-27	September 11-12	July 24-25	June 13

**A Review of the Fiscal 2003 Audits**

**Remarks from Inishie Oka, General Manager\*, Responsible Care Office (Responsible Care strategies and audits)**

\*As of June 2004

**Could you give us an overview of the fiscal 2003 Responsible Care audits?**



In fiscal 2003, audits were completed at each of the Company's works and R&D facilities in five different regions, including Ehime; the Tsukuba Research Laboratory; five of the Company's business sectors; eight domestic Group companies; and two overseas Group companies. EH&S audits and management audits were conducted at Sumitomo Chemical's works and R&D facilities in six regions. In general, the audits of Sumitomo Chemical's Responsible Care activities were favorable; however, several areas were indicated as needing improvement. The fiscal 2003 audits were carried out at Group companies for the second time and progress was seen across the board despite tougher audits due to such factors as an enhanced checklist, clearly indicating that the Sumitomo Chemical Group's Responsible Care activities are headed toward a higher level.

**What do you see as the primary role of audits of Responsible Care activities?**

The audits play a critical role in ensuring execution of the PDCA cycle—which is fundamental to Responsible Care activities—and thus serve as an effective check. In addition, the audits are a key source of support for Group companies' Responsible Care activities. Overall, solid progress is being made toward major targets.

**What steps are being taken to improve the audits? Also, what measures are being implemented to enhance the skills of auditors?**

Ongoing initiatives are being made to improve the audits, including the standardization and systemization of audit procedures to boost efficiency, the enhancement of audit checklists and other preliminary procedures, and the participation of scientists and other experts in audits. In addition, various measures are being implemented to raise the skills of auditors. For example, auditors participate in training programs given by outside organizations and oversee internal audits to hone their skills.

# Safety-Related Research Initiatives Supporting Responsible Care Activities

In accordance with our guiding principal that safety always comes first, Sumitomo Chemical is carrying out a wide variety of safety-related research.

## World-Leading Research on Human and Environmental Safety

Interview with Iwao Nakatsuka, Executive Officer, Environmental Health Science Laboratory (EHSL)

### Could you tell us about the EHSL, where world-leading research is being conducted?

The EHSL currently has around 200 scientists with a broad range of specialties undertaking cutting-edge, safety-related research in various fields. In line with Sumitomo Chemical's policy that safety always comes first, the Company is using state-of-the-art life science technologies to foster a more accurate, in-depth, and effective pursuit of human and environmental safety.

### What areas of research is the EHSL focusing on?

Historically, toxicological research has been done on the molecular and genetic levels in a step-by-step fashion. However, recent, rapid advances in genome science have brought Sumitomo Chemical's attention to the importance of genome-level toxicological research, and the Molecular Biology Group is now engaging in toxicogenomics research. The principle of toxicogenomics research is to identify gene families that undergo similar changes when exposed to toxic substances and then analyze data on changes in genetic expression triggered by chemical substances to predict toxicity. There are high expectations for toxicogenomics as it has proved useful in elucidating mechanisms of toxicity which has been difficult to date and stands a good chance of becoming a groundbreaking method of rapidly, efficiently evaluating toxicity. Sumitomo Chemical is currently participating as a research leader in the Comprehensive Chemical Substance Assessment and Management Program's Development High Precision Summary Toxicity (Hazard) Assessment System Project—a government project headed by the New Energy and Industrial Technology development Organization (NEDO).

### What other achievements are being made?

One of the things that we have been studying for many years is nuclear receptors. These receptors are located in the nuclei of cells and have long been regarded as an important target of toxicological research because they bind with endocrine hormones to trigger various hormone actions. Knowledge gained through years of receptor research is being leveraged in diverse fields, including the assessment

of endocrine disruptors. For example, these receptor technologies are used in the AhR luciferase assay—a bioassay method for obtaining a simplified measurement of dioxins. When dioxins bind with dioxin receptors (AhRs), the



reporter gene (luciferase) is expressed. The AhR luciferase assay uses the luciferin-luciferase reaction to measure reporter gene expression, which, in turn, gives a simplified measurement of dioxin levels. This assay is easier to use than conventional dioxin analysis methods and is expected to dramatically reduce the time required to conduct analyses as well as costs. The Ministry of the Environment and the Ministry of Land, Infrastructure and Transport are now considering making this assay the official method of dioxin analysis.

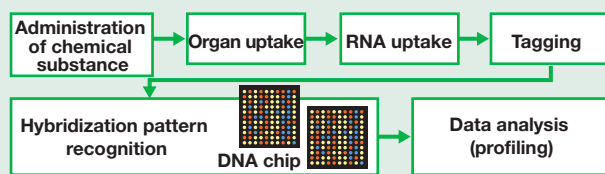
### What progress is being made in areas other than toxicity assessment?

The EHSL's Environment Group has developed a simulation model that predicts exposure to aerosol pesticides among people using such agents in a closed environment. With this innovative model, the environment is divided into aerosol particles, air, and interior materials (flooring, walls, ceiling); parameters are set for each area, including the diffusion rate, the decomposition rate, structural changes in particles, and the adherence of the agent used; and a differential equation that describes the agent's behavior in terms of fugacity pressure is used to predict contact with the agent. Scientists are showing keen interest in this model, which has even garnered coverage from an academic society concerned with indoor air-quality issues.

### Lastly, what are the EHSL's future aspirations?

Throughout the 21st century, we will continue to see demand for improvements in diet, health, environment, and lifestyle. I believe that these needs will be met with all kinds of useful chemical products, including pesticides and pharmaceuticals. The EHSL's mission is to evaluate the safety of Sumitomo Chemical's products in a proper, scientific manner. To achieve this, it is crucial that we keep abreast of world events and relevant technological trends to stay on the cutting edge of assessment technologies. In addition, consensus building with society is an important task that we intend to look into in the future.

### Principle of Toxicogenomics



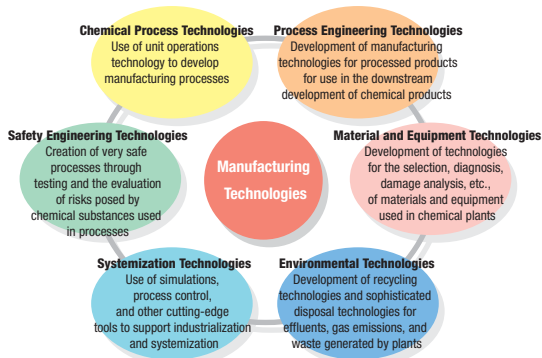
## Pursuit of Cutting-Edge Responsible Care Manufacturing Technologies

Interview with Hiroshi Ishimaru, Director, Process & Production Technology Center

### Please describe the role of the Process & Production Technology Center.

The Process & Production Technology Center comprises the Process Group and the Industrial Processing Technology Group, which conduct research on the development of chemical process technologies entailed in the construction of new plants and the improvement of existing plants. It also includes several specialized groups, which provide technological support for the development of chemical process technologies as well as support for production activities at works through process engineering technologies, material and equipment technologies, safety engineering technologies, systemization technologies, and environmental technologies. In particular, the center's safety engineering and material and equipment research facilities are among the best in Japan as is its record of achievements in these areas.

The center is responsible for making the transition from basic laboratory research to commercial production smooth. The center leverages the latest scientific knowledge and manufacturing technologies, examines the most economical processes, conducts trial runs at pilot plants, and carries out computer simulations to establish processes and basic designs. In the course of these endeavors, the safety of chemical substances, processes, and equipment as well as such environmental factors as life cycle cost, energy and resource conservation, discharge load, and waste are examined and evaluated from many angles to ensure that only the very best technologies are adopted. Other important roles of the center are to ensure that operations remain stable after a commercial plant goes on line, monitor the viability of processes and equipment in operation, and compile and evaluate data through the creation of databases.



### Could you give a few examples of developments in which the center has played a major role?

One example is the establishment of facilities for the production of caprolactam, using a vapor-phase method, which was made possible through the culmination of experience gained over the years. This is a revolutionary manufacturing process that makes use of a new

zeolite catalyst—the fruit of 20 years of R&D conducted by the Basic Research Department. The hallmark of this process is that it



does not produce ammonium sulfate as a by-product because sulfuric acid is not needed as a raw material. Conventional processes produce 1.6 to 4 tons of ammonium sulfate per ton of product, and disposal of this by-product has been problematic both from an economic and environmental standpoint. Also, eliminating the highly corrosive sulfuric acid from the reaction enables the use of lower-grade materials, thereby reducing equipment costs by around 30% and contributing to system simplification.

Sumitomo Chemical's goal of putting sustainable chemistry into practice is achieved in this process through the use of fluidized bed reaction and refining technologies to maximally leverage the new catalyst's performance, the continuous recycling of depleted catalyst, and the on-site combustion and subsequent heat recovery from the minuscule amount of waste oil produced as a by-product. From the outset, the development of this process was carried out in close cooperation with our customers with the aim of providing a product of the finest quality to meet their high expectations. This development earned us the Ministry of Economy, Trade and Industry's Award at the third annual Green & Sustainable Chemistry Awards.

Another good example is a hydrochloric acid oxidation process that took about eight years to develop and achieves chlorine recycling. The disposal of hydrochloric acid generated as a by-product of the manufacturing process for vinyl-chloride monomer as well as isocyanates—the raw material for urethane—had long been an issue due to oversupply of the chemical. We set out to solve this problem by developing a new process that uses a new catalyst to convert hydrochloric acid into useful chlorine. A commercial plant that employs this process commenced operation in May 2003 and now boasts an annual capacity of roughly 100,000 tons. This process offers superior safety and environmental performance. It converts hydrochloric acid to chlorine that can be reused within the plant; conserves energy by using heat produced from its exothermic reaction as a heat source; and, for a process dealing with a highly corrosive substance, is economical as well as extremely safe in terms of equipment, materials, and structure. There is a great need for this process and demand from a wide variety of customers is projected, mainly in North America and Asia.

We will continue to strive to realize sustainable chemistry through the development of processes and specialty technologies that are economical, safe, and environment-friendly—manufacturing technologies that embody Responsible Care.

# Results of Fiscal 2003 Responsible Care Activities

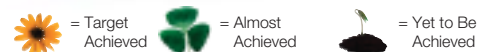
Sumitomo Chemical has set specific targets for its Responsible Care activities, to direct activities in the areas of environmental preservation, process safety and disaster prevention, occupational health and safety, chemical product safety, quality assurance, and audits.

Highlights of Sumitomo Chemical's Responsible Care activities in fiscal 2003 in the areas of environmental preservation, safety, and quality assurance are presented below.

## Primary Responsible Care Initiatives: Targets and Progress in Fiscal 2003

### Major environmental preservation, safety, and quality assurance initiatives

	Theme	Goal	Measures Taken
Environmental Preservation	Global environmental protection	Prevention of global warming	Reduction of CO <sub>2</sub> emissions
		Prevention of ozone layer depletion	Reduction of CFC emissions
	Establishment of a recycling-oriented society	Energy conservation	Improvement in the efficient use of energy
		Waste reduction	Reduction of the amount of waste generated and promotion of recycling
	Preservation of the living environment and prevention of health hazards	Proper handling of Pollutant Release and Transfer Register (PRTR) substances	Promotion of PRTR risk management
		Prevention of soil and groundwater contamination	Promotion of soil and groundwater contamination risk management
PCB measures		Proper storage and disposal of PCB waste	
Safety	Promotion of occupational health and safety	Prevention of occupational accidents	Use of OSHMS (Occupational Safety and Health Management System) to reduce potential risks
	Promotion of process safety and disaster prevention activities	Prevention of major accidents	Reduction of process-related risks
	Promotion of chemical product safety management	Ensuring the safety of chemical products	Enhancement of safety information on and proper management of chemical substances
Quality Assurance	Promotion of quality assurance activities	Prevention of quality issues	Proper management of quality information attained from customers (complaints, requests, etc.)



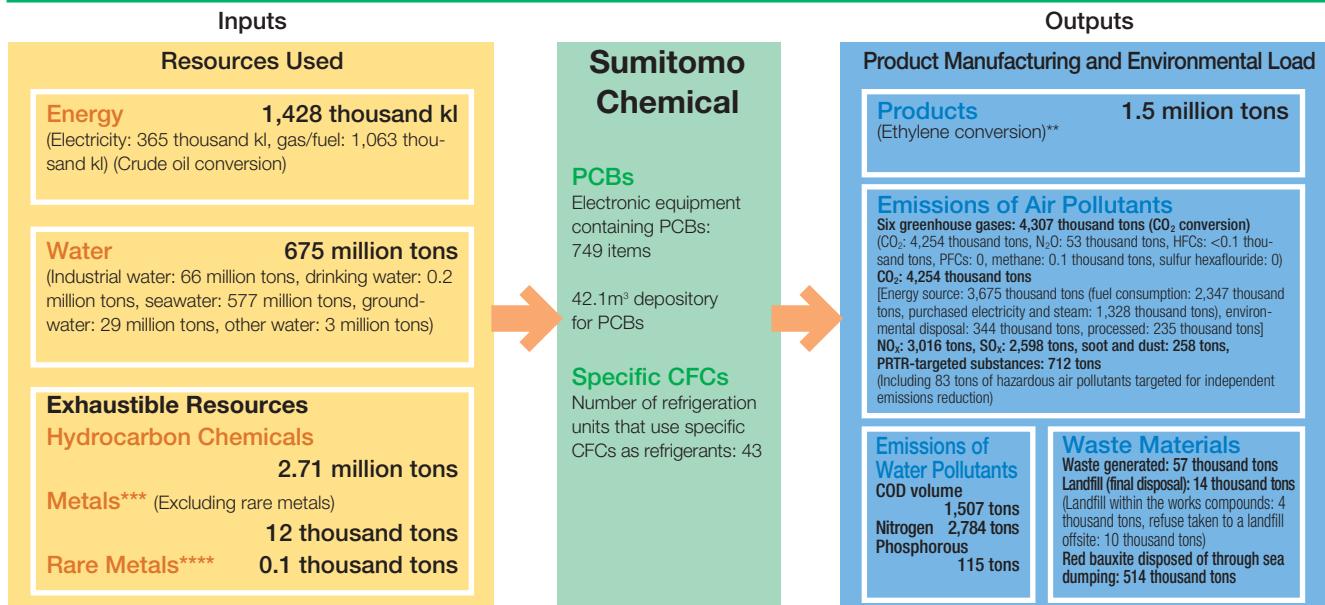
Target	Performance in Fiscal 2003	Progress
Reduce CO <sub>2</sub> emissions rate from fossil fuel consumption by 10% from the fiscal 1990 level by fiscal 2010	<ul style="list-style-type: none"> <li>Reduced CO<sub>2</sub> emissions rate from fossil fuel consumption by 0.8% from the previous fiscal year</li> <li>Reduced CO<sub>2</sub> emissions rate from fossil fuel consumption by 8.9% from fiscal 1990</li> </ul>	
Eliminate the use of refrigeration units that use specific CFCs as coolants by 2025	<ul style="list-style-type: none"> <li>Eliminated two refrigeration units that use specific CFCs as coolants</li> <li>Devised a medium- to long-term replacement plan for equipment using CFCs as coolants</li> <li>No coolant leaks occurred</li> </ul>	
Improve the annual energy consumption per-unit rate by more than 1%	<ul style="list-style-type: none"> <li>Achieved a 0.7% improvement in annual consumption per-unit rate as compared with the previous fiscal year</li> <li>Achieved an 11.8% improvement in annual consumption per-unit rate as compared with fiscal 1990 (96.7% achievement rate)</li> </ul>	
Reduce waste and landfill volume in fiscal 2010 by 85% compared with the fiscal 1990 level Reduce the amount of red bauxite disposed through sea dumping in fiscal 2005 by 10% compared with the fiscal 2000 level	<ul style="list-style-type: none"> <li>Reduced final disposal volume by 21.6% compared with the previous fiscal year, or 67.9% compared with fiscal 1990</li> <li>Reduced the amount of red bauxite disposed through sea dumping by 1.1% compared with the previous fiscal year, or 6.7% compared with fiscal 2000</li> </ul>	
Reduce total emissions (air and water) of substances subject to the PRTR Law in fiscal 2010 by 50% compared with the fiscal 2002 level	<ul style="list-style-type: none"> <li>Reduced total emissions of substances subject to the PRTR Law by 12.2% compared with the previous fiscal year</li> </ul>	
Keep hazardous materials strictly within Company premises and ensure careful management of these materials	<ul style="list-style-type: none"> <li>Soil contamination surveys, evaluations, and required improvements are near completion</li> <li>Monitoring of groundwater has confirmed that hazardous materials have not spread off-site</li> <li>Sumitomo Chemical continued to monitor groundwater</li> </ul>	
Promote the appropriate storage and recovery of PCB waste and complete PCB waste treatment by March 2014	The Company continued to implement strict recovery and appropriate storage of PCB waste	
Achieve zero accidents that result in lost workdays for employees of Sumitomo Chemical or its affiliate companies <ul style="list-style-type: none"> <li>Frequency rate of lost-workday injuries: Less than 0.1</li> <li>Severity rate of lost-workday injuries: Less than 0.01</li> </ul> Frequency rate of lost-workday injuries = (number of lost-workday injuries/man-hours) x one million Severity rate of lost-workday injuries = (number of lost workdays/man-hours) x 1,000	In fiscal 2003, there were four accidents resulting in lost workdays at Sumitomo Chemical and two at affiliate companies; therefore, we failed to reach our target of zero accidents Sumitomo Chemical: <ul style="list-style-type: none"> <li>Frequency rate of lost-workday injuries: 0.39</li> <li>Severity rate of lost-workday injuries: 0.553</li> </ul> Affiliate companies: <ul style="list-style-type: none"> <li>Frequency rate of lost-workday injuries: 0.22</li> <li>Severity rate of lost-workday injuries: 0.001</li> </ul>	
Achieve zero major accidents	<ul style="list-style-type: none"> <li>Conducted process risk assessment and implemented safety measures</li> <li>Revised the long-term earthquake retrofitting plan</li> <li>Revised disaster prevention assessment guidelines</li> </ul>	
Conduct risk assessments to evaluate the impact of chemical products on the environment	Conducted risk assessments of 74 chemical products	
Establish a hazardous material information reporting system that complies with the revised "Law Concerning the Examination and Regulation of Manufacture, Etc., of Chemical Substances"	Created a reporting system for information on hazardous materials gained from toxicity studies conducted by Sumitomo Chemical and other parties that complies with the newly revised "Law Concerning the Examination and Regulation of Manufacture, Etc., of Chemical Substances"	
Ensure operation of QIS (customer Quality Information System)	Promoted QIS registration, continued to make improvements to the system, and worked to boost awareness and understanding of QIS at the department level	

# Environmental Impact and Environmental Accounting

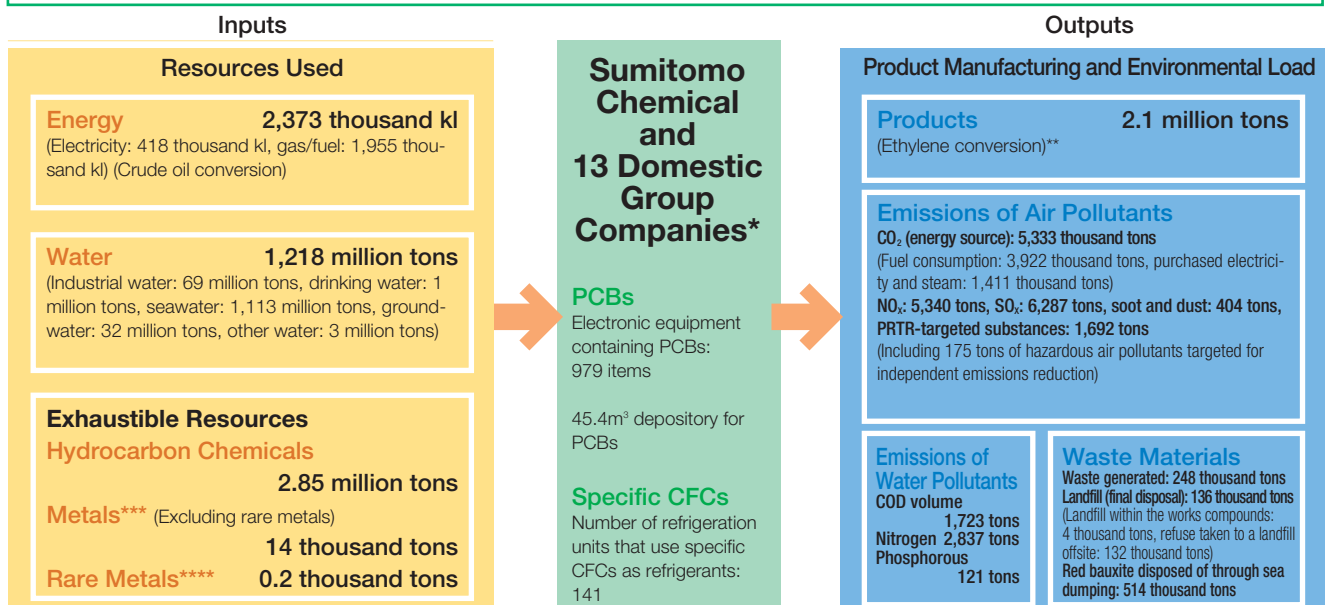
The top management at Sumitomo Chemical is fully committed to protecting the environment and ensuring the safety of chemical products and is filtering these ideals through to every member of staff at the Company. Since fiscal 2002, Sumitomo Chemical has gathered consolidated environmental performance data for the Company and its domestic Group companies. In addition, Sumitomo Chemical is continuously gathering and evaluating data on environment-related expenses, investments, and economic results in line with its environmental accounting program, which was introduced in fiscal 2000. Sumitomo Chemical's environmental impact and environmental accounting performance in fiscal 2003 is outlined below.

## Environmental Impact of Production Activities

### Non-Consolidated



### Consolidated



\* The 13 domestic group companies are as follows: Sumitomo Pharmaceuticals Co., Ltd.; Koei Chemical Co., Ltd.; Taoka Chemical Co., Ltd.; Sumitomo Joint Electric Power Co., Ltd.; Sumika Fine Chemicals Co., Ltd.; Sumika Color Co., Ltd.; Nihon Medi-Physics Co., Ltd.; Chiba Polyethylene Co., Ltd.; Nippon A&L Inc.; Thermo Co., Ltd.; Sanzen Kako Co., Ltd.; Kaito Chemical Industry Co., Ltd.; and New STI Technology, Inc.

\*\* Certain assumptions were made in calculations, due to the difficulty in attaining weight-based figures for some products.

\*\*\* The following 12 metals were included in calculations: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

\*\*\*\* The following seven rare metals, which are stockpiled by the Japanese government, were included in calculations: nickel, chromium, tungsten, cobalt, molybdenum, manganese, and vanadium.



## Environmental Accounting

In line with its environmental accounting program, which was introduced in fiscal 2000, Sumitomo Chemical is continuously gathering and evaluating data on environment-related expenses, investments, and economic results.

### • Environmental Accounting Objectives

- 1) Improve environmental protection efficiency by numerically analyzing environmental activities
- 2) Decision-making based on a long-term environmental perspective
- 3) Improve enterprise transparency through the disclosure of information

### • Items Related to Environmental Accounting

- 1) Scope: Sumitomo Chemical and 17 domestic and overseas Group companies
- 2) Period under review: Fiscal 2003 (April 1, 2003, to March 31, 2004)
- 3) Classification: Ministry of Environment guidelines are followed in principle
- 4) Independent review: Conducted by AZSA Sustainability Co., Ltd.
- 5) Tabulations are made on a consolidated basis: 17 principal consolidated affiliates (14 domestic, 3 overseas). In fiscal 2002, tabulations were made for 16 consolidated affiliates (13 domestic, 3 overseas).

### • Environmental Accounting Results

The Sumitomo Chemical Group's environmental accounting in fiscal 2003 shows investments of ¥8.8 billion, expenses of ¥21.7 billion, and economic effects of ¥4.5 billion on a consolidated basis. The direct economic effects from environmental measures are mainly the results of energy conservation, resource conservation, and recycling, the computation of which has been limited to that which can be reliably calculated.

In comparison with fiscal 2002, Sumitomo Chemical's investments increased ¥1.4 billion, and expenses edged up ¥1.1 billion on a non-consolidated basis. Investments rose due to facilities expenditure for a production process for caprolactam that uses vapor-phase technology and a production process for propylene oxide that does not generate by-products. The commencement of commercial operations at these two plants led to a substantial increase in environmental equipment-related depreciation and amortization costs as well as material and utilities costs. However, environmental damage costs fell ¥1.1 billion due to the near completion of soil contamination surveys and clean-ups. Economic benefits rose ¥1.6 billion from the level in fiscal 2002, owing to a ¥1.3 billion increase from resource conservation associated with the two aforementioned plants and a ¥0.3 billion rise from energy conservation—primarily from thermal recovery at the Chiba Works.

On a consolidated basis, investments grew ¥5.4 billion and expenses increased ¥2.1 billion. The marked rise in investments was attributable to increased investments on a non-consolidated basis and investments in denitration and other environmental equipment for Group companies' thermal power plants to be used in the fuel conversion process. Higher expenses, equipment-related depreciation and amortization costs, material and utility costs at Sumitomo Chemical, and the addition of a Group company to the scope of environmental accounting resulted in a ¥0.3 billion rise in expenses. Total economic benefits climbed ¥1.6 billion, reflecting the non-consolidated economic effects.

### Environmental Costs

(Billions of yen)

Classification	Main Implementation	Fiscal 2003				Fiscal 2002			
		Parent Only		Consolidated		Parent Only		Consolidated	
		Investment	Expense	Investment	Expense	Investment	Expense	Investment	Expense
<b>Business Area Costs</b>		4.0	10.5	8.5	16.4	2.4	8.6	2.9	13.5
<b>Breakdown</b>	<b>Pollution Prevention Costs</b>	(1.1)	(6.1)	(5.3)	(9.9)	(1.3)	(5.4)	(1.7)	(8.2)
	<b>Global Environmental Conservation Costs</b>	(0.0)	(0.2)	(0)	(0.2)	(0.2)	(0.4)	(0.2)	(0.5)
	<b>Resource Circulation Costs</b>	(2.9)	(4.2)	(3.2)	(6.3)	(1.0)	(2.8)	(1.1)	(4.8)
<b>Upstream/Downstream Costs</b>	Green purchasing, recycling and recovery procedures for products, remaking into products, undertaking appropriate treatments, recycling costs associated with containers and packaging, environment-friendly products and services	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
<b>Administration Costs</b>	Costs associated with environmental education, environmental management systems, and monitoring and measuring the environmental impact of business activities and products; environmental organization operation	0.0	0.6	0.0	0.8	0.0	0.5	0.0	0.8
<b>R&amp;D Costs</b>	Development of products contributing to environmental protection, research of energy-conservation processes	0.3	3.0	0.3	3.1	0.4	2.7	0.4	2.9
<b>Social Activity Costs</b>	Protecting the natural environment and enhancing its scenic beauty and greenery, supporting community initiatives aimed at environmental protection, supporting environmental conservation groups, environment-related paid contributions and surcharges	0.0	0.5	0.0	0.9	0.1	0.5	0.1	0.9
<b>Environmental Remediation Costs</b>	Environmental rehabilitation of contaminated environments and other environmental damage, reserve fund to cover environmental rehabilitation	0.0	0.3	0.0	0.3	0.0	1.4	0.0	1.4
<b>Total</b>		4.3	14.9	8.8	21.7	2.9	13.8	3.4	19.6

### Economic Effects

(Billions of yen)

Results	Fiscal 2003		Fiscal 2002	
	Parent Only	Consolidated	Parent Only	Consolidated
Expense Reductions Due to Energy Conservation	0.7	0.7	0.3	0.4
Expense Reductions Due to Resource Conservation	1.9	2.3	0.6	0.8
Expense Reductions Due to Recycling Activities	1.2	1.6	1.4	1.7
<b>Total</b>	3.8	4.5	2.2	2.9

# Environmental Preservation Activities

Sumitomo Chemical's far-reaching environmental preservation initiatives extend from the surrounding local environment to the global environment and are achieving solid results.

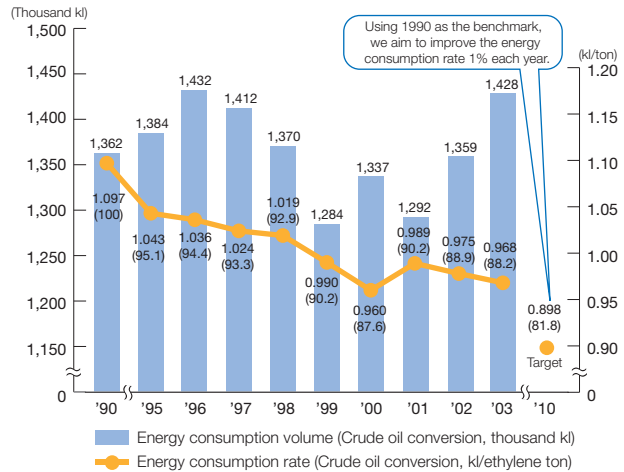
## Energy Saving—0.7% Year-on-Year Improvement in the Energy Consumption Rate

Sumitomo Chemical is working to achieve its goal of improving its energy consumption rate by at least 1% per year by improving operating methods, promoting thermal recovery, enhancing the efficiency of equipment, introducing cogeneration systems, and creating new processes and streamlining existing processes through the development of high-performance catalysts.

In fiscal 2003, Sumitomo Chemical used 1,428 thousand kl of energy (crude oil conversion), reflecting a 5.1% rise from the previous fiscal year due to increased production volume. However, thermal recovery for ethylene, benzene, toluene, and xylene and other energy-saving measures produced a 0.7% improvement from the previous year's level in the energy consumption rate.

Assigning fiscal 1990 a value of 100 in the energy consumption index, the fiscal 2003 target was 87.8, compared with the 88.2 actually achieved, for an achievement rate of 96.7%.

### Energy Consumption Volume and Energy Consumption Rate



Notes: 1. Numerical values appearing inside the parentheses are the index values (1990=100).  
2. Figures for fiscal 2002 have been revised due to improvements in the accuracy of the data.

## Measures to Prevent Global Warming—0.8% Year-on-Year Reduction in CO<sub>2</sub> Emissions from Fossil Fuel Consumption

In curbing CO<sub>2</sub> emissions through the promotion of energy-saving measures, Sumitomo Chemical is striving to reduce its CO<sub>2</sub> emissions rate from fossil fuel consumption by 10% from the fiscal 1990 level by fiscal 2010. In fiscal 2003, the parent company released CO<sub>2</sub> emissions totaling 4,254 thousand tons, a 5.9% increase compared with fiscal 2002, due to increased production volume. This is a 16.3% increase compared with fiscal 1990.

However, in fiscal 2003, Sumitomo Chemical's CO<sub>2</sub> emissions rate from fossil fuel consumption declined 0.8% compared with fiscal 2002, or 8.9% compared with fiscal 1990.

### Volume of CO<sub>2</sub> Emissions

(Thousands of tons)

Fiscal Year	Total Emissions	Fossil Fuels		Management of Discharge into Environment		
		Fuel Consumption	Purchased Electricity, Steam	Incineration	Waste-water	Process
1990	3,658	2,169	1,035	283	22	149
2001	3,819	2,144	1,144	292	18	221
2002	4,019	2,237	1,232	284	22	244
2003	4,254	2,347	1,328	323	21	235

Notes: 1. Process refers to production process emissions other than energy consumption.  
2. Figures for fuel consumption do not include electricity and steam sold outside the Company.

### Emissions of Six Greenhouse Gases

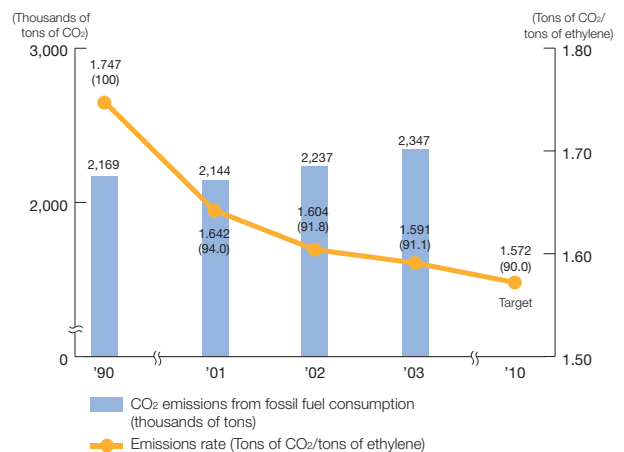
Sumitomo Chemical released approximately 4,307 thousand tons (CO<sub>2</sub> conversion) of six greenhouse gases regulated by the Law Concerning the Promotion of Measures to Cope with Global Warming, reflecting a 5.7% increase from the previous fiscal year. CO<sub>2</sub> emissions accounted for 4,254 thousand tons, and emissions of the other five gases totaled 53 thousand tons.

#### Emissions of Six Greenhouse Gases [Thousands of tons (CO<sub>2</sub> conversion)]

Substance	Fiscal Year	
	2002	2003
CO <sub>2</sub>	4,019	4,254
Methane	0.1	0.1
N <sub>2</sub> O	56	53
Hydrofluorocarbons (HFCs)	0.2	<0.1
Perfluorocarbons (PFCs)	0	0
Sulfur hexafluoride	0	0
<b>Total</b>	<b>4,075</b>	<b>4,307</b>

Note: The fiscal 2002 N<sub>2</sub>O figure has been revised due to improvements in the accuracy of the data.

### CO<sub>2</sub> Emissions from Fossil Fuel Consumption and Corresponding Emissions Rate



Note: Numerical values appearing inside the parentheses are the index values (1990=100).

## Pollutant Release and Transfer Register—12.2% Year-on-Year Reduction in Release Volumes of PRTR-Targeted Substances

Based on the results of risk assessments and release evaluations, Sumitomo Chemical has set itself the new target of **reducing release volumes (air and water) of Pollutant Release and Transfer Register (PRTR)-targeted substances by 50% from fiscal 2002 levels by fiscal 2010**. The achievement of this goal is expected to result in a 30% decline from fiscal 2000 levels in the volume of volatile organic chemicals released into the air in fiscal 2010.

Sumitomo Chemical is currently systematically promoting various measures aimed at reducing release volumes of PRTR-targeted substances. In fiscal 2003, the Company released a total of 813 tons of such materials, achieving a 12.2% drop from the previous fiscal year thanks to efforts to curb release volumes. In addition, the volume of volatile organic chemicals released into the air fell 87 tons from the previous fiscal year.

The Company transferred a total of 1,848 tons of PRTR-targeted substances, reflecting a 1,436 ton rise from the previous fiscal year due to the suspension of industrial waste incinerator operations at the Osaka Works.

### Release and Transfer of PRTR-Targeted Substances (Tons)

Fiscal 2003	Amount Released			Amount Transferred		
	Air	Water	Subtotal	Sewerage	Waste	Subtotal
PRTR-targeted (88 substances) (Non-consolidated)	711.5	101.4	812.9	3.0	1,845.2	1,848.2
PRTR-targeted (Consolidated)	1,691.5	130.1	1,821.6	18.1	6,620.7	6,638.8
JCIA-targeted (133 substances) (Non-consolidated)	1,074.2	196.4	1,270.6	7.5	2,682.5	2,690.0

### Sumitomo Chemical's PRTR Measures to Date

Since fiscal 1994, Sumitomo Chemical has conducted annual PRTR inspections to track the release and transfer of materials targeted by the Japan Chemical Industry Association (JCIA), and worked to reduce the release volumes of such materials. The JCIA initially targeted 43 substances, but by fiscal 2002 the scope of inspections had expanded to include 480 chemical substances, including 354 chemicals identified by the PRTR Law. Sumitomo Chemical's PRTR initiatives include the development of a PRTR database system to enable faster, more accurate data collection; the implementation of risk assessments of all chemical substances with high release volumes; the examination and analysis of the disclosed PRTR data for fiscal 2001; and the establishment of the aforementioned target.

Fiscal 2002	Amount Released			Amount Transferred		
	Air	Water	Subtotal	Sewerage	Waste	Subtotal
PRTR-targeted (81 substances) (Non-consolidated)	798.9	127.1	926.0	2.2	409.9	412.1
PRTR-targeted (Consolidated)	2,094.7	154.9	2,249.6	16.2	3,850.7	3,866.9
JCIA-targeted (120 substances) (Non-consolidated)	1,421.1	213.0	1,634.1	8.0	586.8	594.8

Note: Consolidated figures reflect totals for the parent company and its 13 domestic group companies.

### List of PRTR-Targeted Chemicals Released and Transferred in Fiscal 2003 (Non-Consolidated)<sup>1</sup>

(Tons)<sup>2</sup>

PRTR-Targeted Substances	JCIA-Targeted Substances	Name of Chemical Compound	Amount Released					Amount Transferred		
			Air	Water	Soil (Excl. landfill)	Landfill	Total Amount Released	Sewerage	Waste	Total Amount Transferred
○	○	Vinyl acetate	253.0	0.4	0.0	0.0	253.4	0.0	13.2	13.2
○	○	Toluene	215.4	0.5	0.0	0.0	215.9	<0.1	649.7	649.7
	○	Methyl isobutyl ketone	104.7	2.0	0.0	0.0	106.7	0.0	59.2	59.2
○	○	Methyl methacrylate	57.6	0.0	0.0	0.0	57.6	0.0	14.1	14.1
	○	Methyl alcohol	49.6	0.3	0.0	0.0	49.9	3.1	479.7	482.8
	○	Acetone	48.7	3.9	0.0	0.0	52.6	<0.1	25.9	25.9
	○	Cyclohexane	44.5	0.0	0.0	0.0	44.5	0.0	0.0	0.0
○	○	Benzene	41.7	0.5	0.0	0.0	42.2	0.0	0.0	0.0
	○	n-Hexane	32.8	0.0	0.0	0.0	32.8	1.4	149.4	150.8
○	○	Chlorobenzene	19.6	<0.1	0.0	0.0	19.6	0.0	525.3	525.3
	○	Triethylamine	18.1	8.6	0.0	0.0	26.7	0.0	38.9	38.9
○	○	Epichlorohydrin	17.6	0.4	0.0	0.0	18.0	0.0	0.0	0.0
○	○	Acrylonitrile	15.4	0.0	0.0	0.0	15.4	0.0	0.0	0.0
○	○	Xylene	14.1	<0.1	0.0	0.0	14.1	<0.1	262.3	262.3
	○	Cumene/isopropyl benzene	12.5	0.1	0.0	0.0	12.6	0.0	0.0	0.0
○	○	Chloroethylene (also known as polyvinyl chloride)	12.2	<0.1	0.0	0.0	12.2	0.0	0.0	0.0
○	○	Chloroethane	12.1	0.0	0.0	0.0	12.1	0.0	0.0	0.0
	○	Ethyl acetate	11.4	0.0	0.0	0.0	11.4	0.0	2.7	2.7
○	○	1,2-dichloroethane	10.8	0.0	0.0	0.0	10.8	0.0	221.0	221.0
		Subtotal of the 19 above-listed substances	991.8	16.7	0.0	0.0	1,008.5	4.5	2,441.4	2,445.9
		Total 133 substances used by Sumitomo Chemical (FY2003) <sup>3</sup>	1,074.2	196.4	0.0	0.0	1,270.6	7.5	2,682.5	2,690.0

<sup>1</sup> In line with changes in the PRTR Law regarding reporting on PRTR-targeted substances, as of fiscal 2003, the list covers chemicals with production or use amounts exceeding one ton per year, excluding dioxins and class-one chemicals identified by the PRTR Law. The list previously covered chemicals with production or use amounts exceeding five tons per year. The list covers class-one chemicals identified by the PRTR Law with production or use amounts exceeding 0.5 ton per year as in previous years. The following standard was used to categorize chemicals on the list: amounts exceeding 10 tons released into the air.

<sup>2</sup> The PRTR Law indicates the use of kilograms (rounded off to two significant figures) for expressing weight but in this report the numerical values are expressed in tons.

<sup>3</sup> The fiscal 2002 total of 120 targeted chemicals inspected rose to 133 in fiscal 2003 due to changes in the PRTR Law regarding reporting on PRTR-targeted substances.

Note: Detailed PRTR data is included in the Sumitomo Chemical CSR Report 2004 Data Book.

**Measures to Prevent Air and Water Pollution—12.3% Year-on-Year Reduction in Water Use**

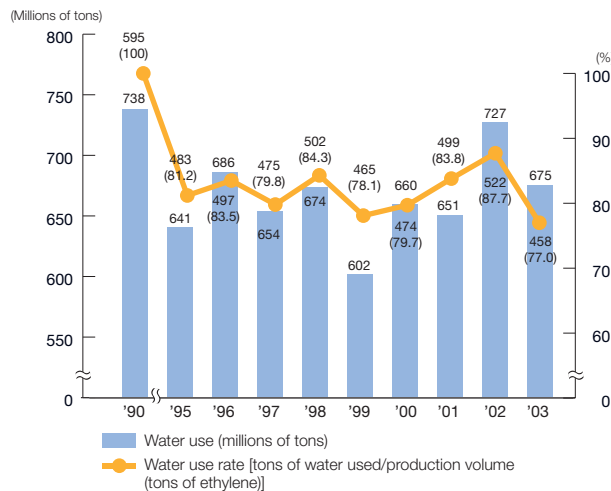
Sumitomo Chemical is taking aggressive steps to preserve both the purity of water and the atmosphere. The Company is developing numerous technologies designed to prevent air and water pollution; working to reduce the amount of SO<sub>x</sub>, NO<sub>x</sub>, and soot and dust released into the atmosphere and the levels of COD as well as nitrogen and phosphorous released into waterways; and making concerted efforts to conserve water.

To this end, Sumitomo Chemical has set the following two targets: **to constantly strive to keep levels of COD, and emissions of NO<sub>x</sub>, SO<sub>x</sub>, soot and dust, nitrogen, and phosphorous below voluntary control levels and to make efficient use of water resources.**

**Atmospheric Emissions of SO<sub>x</sub>, NO<sub>x</sub>, and Soot and Dust**

Since 1970, Sumitomo Chemical has achieved a marked reduction in the release of SO<sub>x</sub>, NO<sub>x</sub>, and soot and dust into the atmosphere, and, from 1980 to the present, has maintained this low level of emissions. Furthermore, the Company has concluded cooperative agreements with municipalities at each of its manufacturing works, establishing voluntary control levels that are stricter than the standards set by laws and regulations. Although emissions of SO<sub>x</sub> and soot and dust have risen over the past several years due to increased use of high-sulfur crude oil, they are still substantially below the voluntary control levels.

**Water Use and Water Use Rate**



Note: Numerical values appearing inside the parentheses are the index values (1990=100).

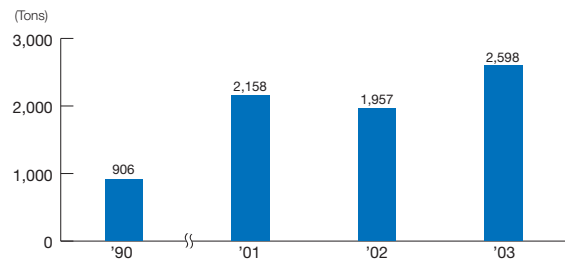
**Water Emissions—Levels of COD, Nitrogen, and Phosphorous**

Sumitomo Chemical has also concluded cooperative agreements with municipalities to establish voluntary control levels for levels of COD as well as nitrogen and phosphorous released into waterways that are stricter than the standards set by laws and regulations. Recently, nitrogen emissions have increased slightly as a result of a product composition related rise in the volume of effluent containing nitrogen.

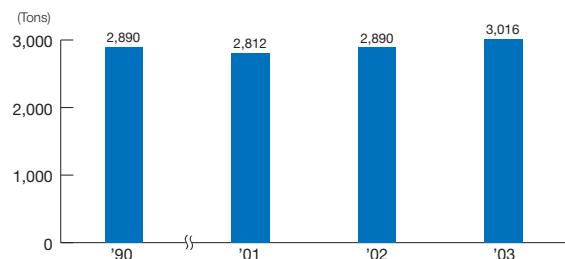
**Water Use**

In fiscal 2003, water use dropped 7.2% from the previous fiscal year, to 675 million tons, owing mainly to improved productivity and the more efficient use of water. In addition, the water use rate improved 12.3% compared with the previous fiscal year, or 23% compared with fiscal 1990.

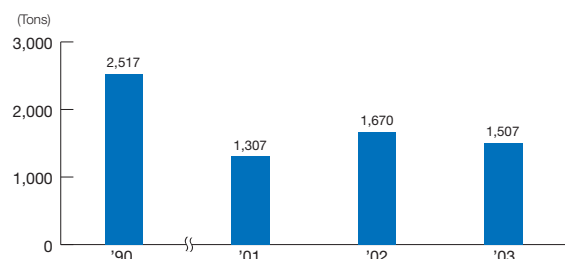
**SO<sub>x</sub> Emissions**



**NO<sub>x</sub> Emissions**



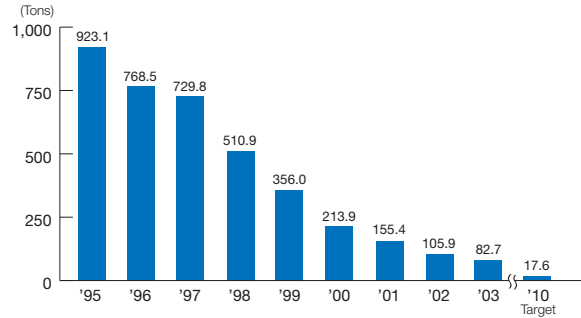
**COD**



**Voluntary Control of Hazardous Air Pollutants—Goal of Reducing Emissions 75% from Fiscal 1999 Level Achieved**

Sumitomo Chemical currently handles nine of the 22 substances that the Ministry of the Environment has designated as requiring priority action. The Company has installed water absorption towers on tanks shipping acrylonitrile to curb acrylonitrile emissions, installed an activated carbon absorption tower in gas lines to curb benzene emissions, and stopped using 1,3-butadiene as part of efforts to reduce emissions of these substances. As a result, in fiscal 2003, total emissions declined 21.9% from the previous fiscal year, to 82.7 tons. This is a 77% reduction from the fiscal 1999 level—exceeding our target of **reducing emissions by 75% from the fiscal 1999 level by fiscal 2003**. Starting in fiscal 2004, these reduction targets will be integrated with those of PRTR-targeted substances. The Company plans to reduce emissions of hazardous air pollutants by 95% from the fiscal 1999 level by fiscal 2010.

**Voluntary Control of Hazardous Air Pollutants—Total Emissions of Nine Substances**



**Measures to Prevent Soil Pollution**

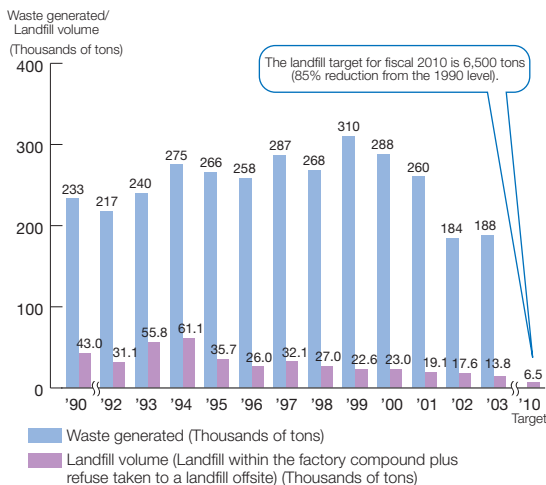
Sumitomo Chemical has long considered soil pollution a priority among environmental pollution risks and has conducted soil contamination investigations and implemented measures to combat the problem. In line with voluntary management policies centered on **keeping the handling of hazardous materials strictly within Company premises and ensuring the careful management of these materials**, Sumitomo Chemical conducted surveys at all works to assess performance in this area. The Company has nearly completed necessary surveys and restorations (soil clean-up of

non-Company land previously used as a waste disposal facility). As a result, in fiscal 2003, environmental damage costs declined ¥1.1 billion from fiscal 2002, to ¥0.3 billion. Fiscal 2003 environmental damage costs were primarily attributable to groundwater monitoring costs and the additional installation of monitoring wells associated with the aforementioned voluntary management policies. Groundwater monitoring has confirmed that hazardous materials remain within Company premises. Sumitomo Chemical will continue to monitor groundwater in the future.

**Reducing Waste**

Sumitomo Chemical is striving to reduce, reuse, and recycle waste to achieve its goal of **reducing landfill waste in fiscal 2010 by 85% from the fiscal 1990 level**. In fiscal 2003, landfill refuse amounted to 13.8 thousand tons, down 21.6% from fiscal 2002 and 67.9% from fiscal 1990.

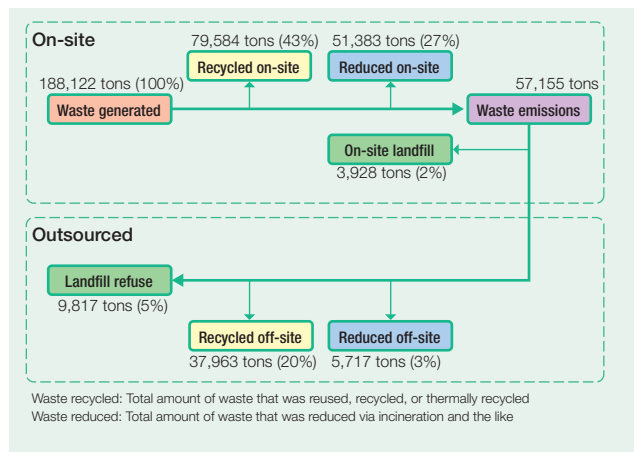
**Trends in Waste Generated and Landfill Volumes**



**Companywide System for Gathering Waste Data**

In April 2004, a Companywide system designed to promote more rapid and accurate gathering of waste data went into operation.

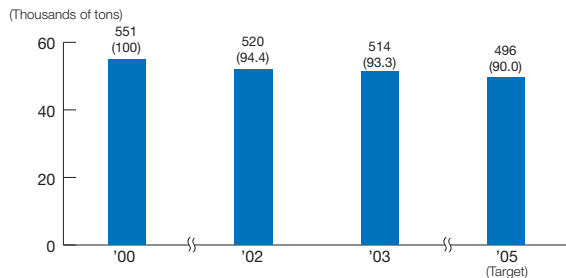
**Waste Disposal Flow Chart and Results (Fiscal 2003)**



### Reducing Red Bauxite—1.1% Year-on-Year Reduction in Sea-Dumping Disposal

In fiscal 2003, the volume of red bauxite disposed of through sea dumping declined 1.1% from the previous fiscal year, to 514 thousand tons—representing a 6.7% reduction from the fiscal 2000 level. Sumitomo Chemical has set **the target for 2005 of reducing the volume of red bauxite disposed of through sea dumping to 10% below the fiscal 2000 level.**

#### Trends in Red Bauxite Sea-Dumping Disposal Volumes



Note: Numerical values appearing inside the parentheses are the index values (2000=100).

#### Sea-Dumping Disposal of Red Bauxite

Red bauxite, which is the natural bauxite ore from which aluminum has been extracted, exists in nature and is composed of mineral constituents and saltwater.

Sumitomo Chemical is currently conducting the sea-dumping disposal of red bauxite in accordance with Japanese domestic law—the Law Relating to the Prevention of Marine Pollution and Maritime Disaster—based on the Convention on the Prevention of

Marine Pollution by Dumping of Wastes and Other Matter 1972 (London Convention)—a convention, to which Japan is a party, that aims to prevent oceanic pollution caused by waste dumping. Materials are appropriately disposed of only after the safety of dumping is confirmed by analytical tests required by the aforementioned law.

In the past, Sumitomo Chemical disposed of red bauxite in landfill sites; however, quantitative restrictions on landfill sites led the Company to consider sea dumping as an alternative to land disposal. In 1991, Sumitomo Chemical starting disposing of small amounts of red bauxite through sea dumping, switching over completely to sea dumping in 1994.

While Sumitomo Chemical continues to use sea dumping to dispose of red bauxite, we have conducted extensive research focused on reducing the amount of red bauxite generated and making effective use of the substance and examined this issue from many angles over the years. Going forward, we will continue to aggressively promote research and investigations as we work to achieve our goal of reducing the volume of red bauxite disposed of through sea dumping in fiscal 2005 to 10% below the fiscal 2000 level.

In tandem with these initiatives, Sumitomo Chemical is conducting an environmental analysis of the ocean in cooperation with other companies in the chemical industry to verify from a wider scope the safety of red bauxite disposal through sea dumping.

### Reducing Dioxin Emissions—Strong Measures

Sumitomo Chemical properly treats and purifies exhaust gas and effluents emitted from specified facilities subject to air and water standards under the Law Concerning Special Measures against

Dioxins (waste incinerators, manufacturing plants for organic pigments, etc.) at the Company's treatment facilities to reduce the concentration of dioxins in these materials.

### PCB Recovery, Storage, and Treatment

In accordance with the Law Concerning Special Measures against PCB Waste, Sumitomo Chemical recovers PCB waste from capacitors, transformers, and other electronic devices that contain PCB insulating oil; stores this industrial waste, which is subject to special control, in specified areas within the Company's waste storage facilities; and ensures strict control of these materials.

Sumitomo Chemical plans to treat all its PCB waste by March 2014, ahead of the deadline specified in the Law Concerning Special Measures against PCB Waste.

Moreover, the PCB concentration of the insulating oil of devices that are believed to contain no PCB insulating oil (low-concentration PCB waste) is analyzed prior to disposal and any devices with PCB levels exceeding 0.5 mg/kg are treated as PCB waste.

#### PCB Waste Storage and Control as of March 31, 2003

	Number of PCB Containers	Total PCB Volume (m <sup>3</sup> )
Non-Consolidated	749 (710 stored, 39 in use)	42.1
Consolidated	979 (930 stored, 49 in use)	45.4

Note: Containers for low-concentration PCB waste are not included in the number of PCB containers.

### Measures to Prevent Ozone Layer Destruction—Eliminating the Use of Refrigeration Units that Employ Specific CFCs

Sumitomo Chemical maintains strict control of cooling devices that use specific CFCs (specific substances designated in the Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures) that are highly destructive to the ozone layer. The Company is committed to ensuring that CFCs are not arbitrarily released into the atmosphere from these devices and carries out proper recovery, transportation, and destruction of specific CFCs from refrigeration units upon disposal. We are systematically replacing these cooling devices with units that use CFC substitutes as we work toward our goal of **eliminating the use of refrigeration units that use the specific CFCs**

**CFC11, CFC12, CFC113, CFC114, and CFC115 as coolants by 2025.**

In fiscal 2003, Sumitomo Chemical replaced two cooling devices, bringing the number of units that use specific CFCs down to 43.

#### Number of Refrigeration Units in Use that Employ Specific CFCs as of March 31, 2004

Type	Number of Units	
	Non-Consolidated	Consolidated
CFC11	26	30
CFC12	17	103
CFC113	0	0
CFC114	0	0
CFC115	0	8
Total	43	141

### Life Cycle Assessments and Environmental Impact Evaluations

Sumitomo Chemical is actively participating in customers' product life cycle assessments (LCAs) and the compilation of industry-wide LCA inventory data for materials used in general-purpose products. In the future, a further expansion of the scope of data is planned.

Sumitomo Chemical is also working to find practical applications for product LCAs with the aim of making more effective investments

by gaining a quantitative understanding of the relationship between environmental cost and environmental impact in environmental investment. For example, we are considering creating an integrated index that uses LCAs to evaluate various types of environmental impact.

### Green Procurement

#### Meeting Customers' Green Procurement Needs

The automotive and electronics industries are at the core of efforts to reduce the amount of harmful substances in products and design products that can easily be recycled. As a supplier of raw materials, Sumitomo Chemical is proactively working to meet customers' green procurement needs.

#### Green Purchasing at Sumitomo Chemical

Sumitomo Chemical is actively promoting green purchasing (giving priority to products with lower environmental impact) in ordering office supplies and office equipment.

As a chemical company that supplies raw materials, a large portion of the materials that Sumitomo Chemical purchases are naphthas and other nature-derived materials, which makes it difficult to practice green purchasing. However, Sumitomo Chemical is making concerted efforts to practice green purchasing for individual materials whenever feasible.

# Safety Activities

In its safety activities, Sumitomo Chemical aims to ensure the safety of chemical products, production processes, and the distribution process as well as the safety and health of employees.

## Occupational Health and Safety

Sumitomo Chemical is implementing a variety of initiatives to ensure the safety and health of employees under the basic philosophy "Putting Safety First and Foremost."

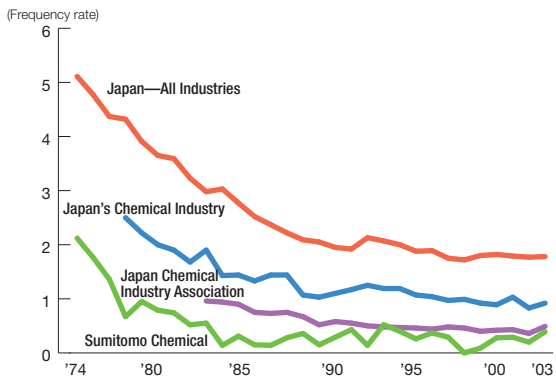
### Safety Performance

In fiscal 2003, there were four accidents resulting in lost workdays at Sumitomo Chemical and two at affiliate companies. Regrettably, Sumitomo Chemical was unable to achieve its target of zero accidents.

- **Sumitomo Chemical:** Frequency rate of lost-workday injuries: 0.39, severity rate of lost-workday injuries: 0.553
- **Affiliates:** Frequency rate of lost-workday injuries: 0.22, severity rate of lost-workday injuries: 0.001

Note: Frequency rate of lost-workday injuries refers to the frequency of lost-workday injuries per million man-hours. Severity rate of lost-workday injuries refers to the number of lost workdays per thousand man-hours and indicates the severity of injuries.

### Trends in the Frequency Rate of Lost-Workday Injuries



Note: Frequency rate of lost-workday injuries = (Number of lost-workday injuries/total annual man-hours) x 1,000,000

### Occupational Safety and Health Management System in Use throughout the Company

An OSHMS is a mechanism for going through the PDCA cycle, and through it a company voluntarily and continuously conducts occupational health and safety management. These systems aim to minimize the potential risks of work-related accidents at each plant, promote improved health for workers, ensure a comfortable working environment, and contribute to improved safety and health standards.

In May 2003, nine companies in Japan received OSHMS certification from the Japan Industrial Safety and Health Association (JISHA), including Sumitomo Chemical's Chiba Works—the first plant in Chiba Prefecture to receive certification. An OSHMS was introduced at the Ehime Works and Osaka Works in April 2002 and July 2002, respectively, and at the remaining plants and research facilities in April 2003. With an OSHMS in operation at all its plants and research facilities, the entire Company will work together to bolster occupational

health and safety initiatives with the aim of earning JISHA certification for the remaining four plants as well as four research facilities by fiscal 2006.

The independent efforts of our plants and research facilities have earned them several awards for occupational health and safety performance.

Award Recipient	Award	Activities that Earned the Award
Masataka Ishida, Safety and Health Department Manager, Chiba Works	Health, Labour and Welfare Minister's Award for Health and Safety-Related Efforts	The award was given in recognition of contributions made, serving as an administrator for associations and organizations, including service on a committee formed by members of the Chiba Labour Bureau and 15 private-sector companies, which drafted "Guidelines for Preventing Fires and Explosions in the Chemical Industry."
Agricultural Chemicals Research Laboratory (Takarazuka)	Japan Responsible Care Council (JRCC) Award for Safety Promotion	The award was given in recognition of the laboratory's outstanding safety record marked by six consecutive years of accident-free operation (fiscal 1997 to fiscal 2002) as well as 203 months free of accidents resulting in lost workdays as of May 31, 2003.
Takashi Otani, Environment and Safety Department, Ehime Works	National Industrial Safety and Health Convention's Green Cross Award	The award was given in recognition of significant achievements in industrial safety and health attained through years of concerted effort.



Manager Ishida of the Chiba Works received the Health, Labour and Welfare Minister's Award for Health and Safety-Related Efforts.

### Promoting Good Health

The Sumitomo Chemical Health Insurance Association subsidizes comprehensive medical examination and fitness center costs and offers family health consulting services as part of initiatives to help employees stay in good health. In addition, employees at all the Company's plants are enthusiastically involved in mountain climbing, walking, and a number of other recreational activity oriented groups. In fiscal 2003, the Oita Works' health-promoting "Re-energize Activities" included an excursion in which 38 participants—employees and their families—climbed Mt. Inomure, which is located on the west coast of the Kunisaki Peninsula, in Oita Prefecture.



## Process Safety and Disaster Prevention Management

The foremost task in accident and disaster prevention management is to establish safe processes that have undergone structured safety evaluation to prevent accidents and disasters. To this end, Sumitomo Chemical has introduced robust hazard analyses at plants, bolstered safety measures, and implemented self-regulated safety management beyond legal requirements.

### Plant Safety Management

Sumitomo Chemical undertakes safety assessments at each stage of development, from chemical process R&D to plant design, construction, operation, maintenance, and dismantling, in an effort to reduce the environmental burden and achieve zero-accident and zero-injury operations.

#### Management of Process Hazard Analysis

The Process Safety Review Committee convenes at every stage of the R&D and commercialization processes to deliberate on previously conducted process hazard assessments\* as stipulated by Process Development and Commercialization Regulations and Safety Management Guidelines. Nothing is forwarded to the next stage unless it has been proven to satisfy safety requirements. In addition, after all stages have been cleared, periodic reviews of process hazards are required at operating plants as well as whenever

a change is made at a plant as part of efforts to ensure meticulous process hazard management.

\* Process hazard assessments use scientific data and knowledge to evaluate such potential hazards as fires and explosions associated with substances handled so as to assess risks posed by plant operations and handling conditions.

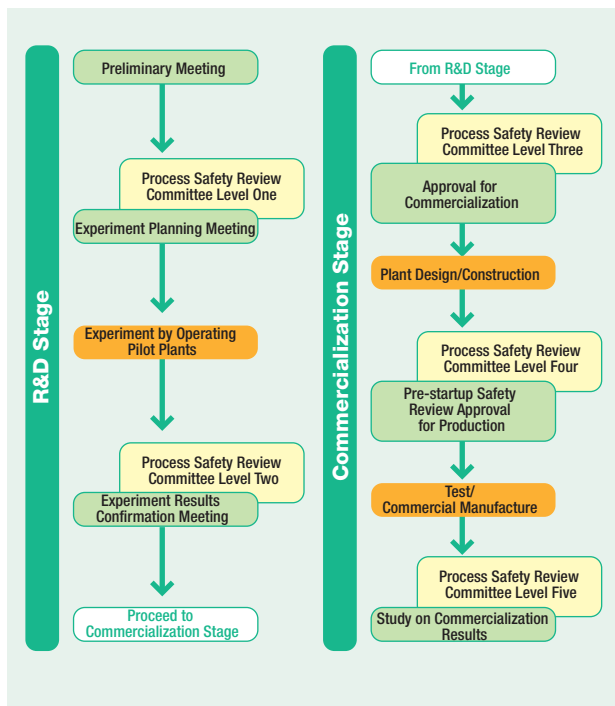
#### Management of Major Risks at Plants

Sumitomo Chemical is working to prevent major accidents by bolstering various safety measures. For example, we are establishing stronger successive safety measures for processes determined to be at risk of impacting areas beyond plant premises based on the results of accident scenarios for toxic substances handled at the plants. In addition, we have assessed the earthquake resistance of plants and buildings and are moving forward with earthquake safety reinforcement as necessary.

### Self-Regulated Safety Management

Sumitomo Chemical is working to bring voluntary safety control to an even higher level by establishing and enhancing support systems and tools designed to promote safety. These initiatives include the Process & Production Technology Center's support of process safety and disaster prevention management, the employment of a group of process safety advisors to support process safety management, the establishment of safety and disaster prevention guidelines, and the compilation of databases for information on safety (technical information and accident information) and chemical compatibility. We also aim to promote the development of young safety technicians by providing opportunities for participation in instruction conducted by process safety advisors, the creation of guidelines, the development of tools, and other activities.

### Risk Assessment from R&D to Commercialization



### On-the-Scene Comments on Process Safety and Disaster Prevention

For about a year and a half, starting in April 2002, I participated in the working group revising the guidelines for applying disaster prevention assessments. As part of the team, I was able to play a part in creating a system that makes chemical plants safer and helps maintain heightened safety. I will continue to nurture a healthy awareness of safety issues and strive to contribute to further improvements so that people in local communities will rest assured that Sumitomo Chemical plants are safe.



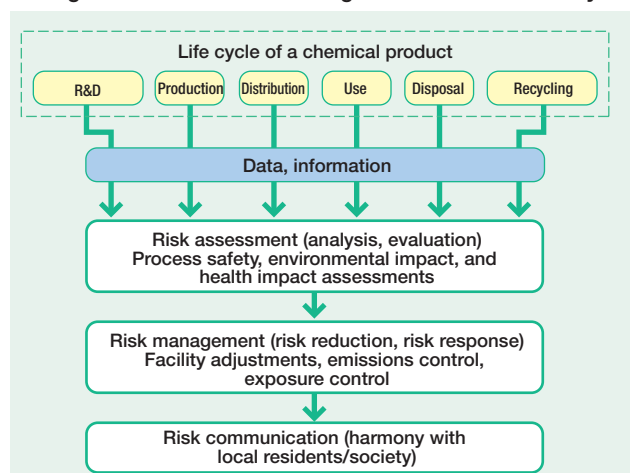
Takao Mizuno,  
Niihama No. 2 Production  
Department, Ehime Works

## Chemical Safety Activities

The primary role of Sumitomo Chemical's Environmental Health Science Laboratory (EHSL)—one of the largest safety assessment research facilities in Japan—is to conduct a spectrum of toxicological evaluations for the various items produced by Sumitomo Chemical Group companies.

The EHSL conducts sophisticated toxicological research in diverse fields, ranging from genetics to the global environment, making full use of the latest scientific knowledge and technologies and the considerable know-how regarding toxicological evaluations it has gained from extensive experience. In addition, as the core laboratory supporting technological aspects of Responsible Care activities for chemical safety, the EHSL provides toxicological information and the results of risk assessments for each division of the Company and endeavors to ensure safety with regard to human health and the environment throughout our chemical products' entire life cycles, spanning development, use, and disposal.

### Management of Chemicals throughout the Product Life Cycle



### Implementation of Surveys and Risk Assessments

In fiscal 2003, the EHSL conducted various Responsible Care related surveys and risk assessments on 74 chemical products, which included evaluations of the environmental impact of gas emissions, the safety of wastewater from plants engaged in the manufacture of new chemical compounds (ecotoxicity tests, etc.), and the effects of accidental contact with chemicals (sensitization tests on animals, etc.). The EHSL focused in particular on establishing independent management criteria for toxicity assessments of materials eluted from products (resins) manufactured through processes that use new catalysts. Some catalysts break down into numerous components during the manufacturing process and when this happens trace amounts of these components may remain in the product. Therefore, we established new criteria for measuring these materials from a consumer safety perspective, making use of the latest scientific

knowledge and taking into consideration regulatory standards for additives.

### Enhancement and Proper Management of Chemical Safety Information

To facilitate and expedite the transfer of information within the Company, the compiled and analyzed data on products, intermediates, and raw materials is stored in a product safety database called CHEMSAFE2. In fiscal 2003, 72 new items of data were entered into the database, bringing the total number of entries to 3,077. It is also used as the database for Material Safety Data Sheets (MSDSs) to provide safety information to customers and ensure the safety of both the workplace and community.

In addition, Sumitomo Chemical is working to improve chemical safety management through its Toxicity Assessment System for Chemical Substances (TASCS), which was developed by the EHSL to promote the proper risk assessment of chemical substances in a wide range of fields.

On April 1, 2004, new reporting requirements on hazardous material information came into force with the enactment of the revised "Law Concerning the Examination and Regulation of Manufacture, Etc., of Chemical Substances." Thus, in addition to our existing Toxic Substance Control Act (TSCA) reporting system for information on hazardous materials, attained from experiments conducted on and off Company premises, we established a new system that conforms to the revised law.

### Contributions to Voluntary International Initiatives

#### Participation in Assessments of High Production Volume (HPV) Chemicals

Sumitomo Chemical is actively taking part in the voluntary HPV assessments (collection of required safety data and execution of hazard assessments) being led by the International Council of Chemical Associations (ICCA). The Company has assumed a leadership role for three of its 25 HPV substances, compiled reports for two of these substances, and is currently working on the remaining chemical's report. We will continue to engage in work on the remaining substances as a member of the chemical industry consortium and also as a sponsor.

#### Participation and Support for the Long-Range Research Initiative (LRI)

Sumitomo Chemical is also an active participant and supporter of the LRI program, which is being promoted by the ICCA—the same organization leading the aforementioned HPV program. Under this program, chemical industry associations in Japan, Europe, and the United States are working together on long-term voluntary research on the effects of chemical substances on human health and the environment.

## Safety in Logistics Operations

Under the motto “Putting Safety First and Foremost,” the Logistics Division has devised “Division Policies for Responsible Care Activities and Product Quality Control.” The division as a whole, including concerned logistics companies, is engaged in activities related to safety and the environment as well as quality control.

### ■ Safety Measures during Transport

To prevent accidents during transport, we are thoroughly informing shipping companies on relevant laws and regulations using a database of laws and regulations and working to promote observance of transportation safety rules and standards.

In addition, the Group company Sumika Logistics (West) Co., Ltd., received certification as a “truck company demonstrating outstanding safety” under a recognition program launched in fiscal 2003 by the Japan Trucking Association.

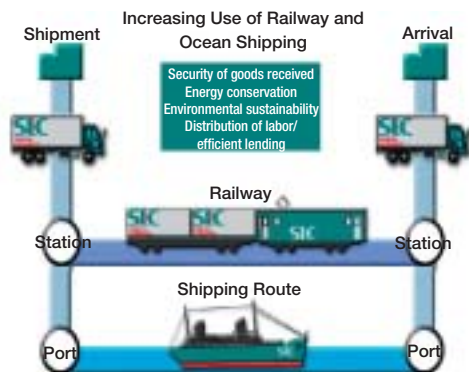
### ■ Emergency Procedures for Responding to Accidents

Sumitomo Chemical is establishing a nationwide rescue system covering the routes between plants and logistics companies to facilitate rapid response in the event of an accident during transport. We are also implementing emergency drills that include participation by shipping companies and working to ensure that Yellow Cards (instruction cards for emergency response) are being carried by personnel as required.

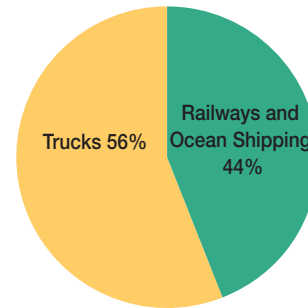
### ■ Environmental Safety Considerations for Transportation

Sumitomo Chemical has long been promoting a modal shift to railway and ocean shipping, which have a lower environmental impact, and developing logistics systems for reduced environmental impact

#### Promotion of a Modal Shift



### Shipment Volume by Shipping Method (Fiscal 2003)



through such measures as efficiently sharing shipping resources with other companies.

The Company promotes the use of flexible containers, standardized pallets, and recycled package materials when shipping products.

Sumitomo Chemical also provides guidance and support for logistics companies’ environmental and safety activities—including the acquisition of ISO 14001 and Green Management certification. Group company Sumika Logistics (West) acquired ISO 14001 certification in October 2003, and SLC Transport (East) Co., Ltd., earned Green Management certification from the EcoMo Foundation in February 2004.

### ■ Bolstering Logistics Quality Assurance Measures

Sumika Logistics (West) and Sumika Logistics (East) earned ISO 9001 certification in June 2001 and June 2002, respectively.

In addition, Sumitomo Chemical provides guidance and support for logistics companies’ quality assurance activities through Responsible Care and quality audits.

### ■ Sumitomo Chemical Logistics Council Activities

The Sumitomo Chemical Logistics Council comprises the 34 Japanese shipping companies with which Sumitomo Chemical conducts most of its business. The council maintains a nationwide network, with regional meetings convened in nine regions. Various logistics-related Responsible Care activities are being promoted jointly by all the council’s corporate members, who are striving to share know-how and improve management.

# Product Quality Assurance Activities

Sumitomo Chemical is striving to ensure product safety and quality as well as prompt, reliable product delivery—top priorities under the Company’s “Corporate Policy on Product Quality, Safety and the Environment.”

## Measures to Promote Customer Satisfaction

### Measures to Promote Customer Satisfaction

Sumitomo Chemical’s quality control efforts are based on the ISO 9001 system (2000 version). To enhance customer satisfaction, Sumitomo Chemical has switched from a paper-based to an electronic system to process customer complaints and requests more quickly and effectively. As a result, the Company has been able to incorporate customers’ feedback more fully in its quality assurance and product development activities.

### Comments from Customer Service Staff

The information that we receive from customers with regard to our products—be it suggestions, requests for improvement, or complaints—is invaluable to the creation of products that offer greater satisfaction and safety as well as stronger market competitiveness. Thus, we strive to put ourselves in our customers’ shoes and think of what they would want, ultimately joining forces with related departments to rapidly implement improvements.



Methacrylate Division’s office

### Reinforcing the Product Quality Assurance Framework

Sumitomo Chemical is constantly thinking about how it conducts its quality assurance activities as a chemical company. On July 1, 2004, we implemented a new Companywide product quality assurance system to clarify responsibilities and authorities in this area.

We also established a Quality Assurance Office for the IT-related chemicals sector, which centers on IT-related products, and the fine chemicals sector, which centers on pharmaceutical chemicals, to provide a framework for the uniform management and administration of quality-related issues. In addition, the offices of the basic chemicals sector, the petrochemicals & plastics sector, and the agricultural chemicals sector have each established a quality assurance team comprised of specialized staff, creating a clear quality assurance framework.

We aim to leverage these systems to further reinforce quality assurance and enhance customer satisfaction.

### Good Manufacturing Practice (GMP) Activities

Sumitomo Chemical’s pharmaceutical and pharmaceutical intermediate manufacturing activities require strict management in line with the Pharmaceutical Affairs Law’s Good Manufacturing Practice (GMP) requirements, which set the quality and production management standards for pharmaceuticals. Minimizing human error at the production stage, preventing the contamination or reductions in quality of pharmaceuticals, and designing a system to guarantee extremely high quality are the three key objectives that must be met to achieve GMP compliance. All four of the Company’s plants—the Ehime Works, Osaka Works, Oita Works, and Misawa Works—employ GMP management in the production of pharmaceuticals and pharmaceutical intermediates. We have introduced a GMP Internal Quality Audit system, wherein periodic inspections are conducted to ensure that GMP management is being properly implemented at plants, with the aim of bolstering the quality control of pharmaceutical and pharmaceutical intermediate manufacture and improving management.

Going forward, Sumitomo Chemical will redouble efforts to enhance GMP activities so that the Company can supply high-quality pharmaceutical products.



Pharmaceutical manufacturing facilities



Audit work

## Product Safety Measures

Ensuring the safety of the products provided to our customers is one of the Company's top priorities; Sumitomo Chemical recognizes that this is an essential part of CSR as well as being vitally important to the operation of a sound business.

Sophisticated technologies, a high level of experience, and a Companywide system are needed to perform correct evaluations of product safety and implement measures that will conclusively reduce risks. Even before the introduction of the Product Liability Law, Sumitomo Chemical, recognizing the importance of product safety activities, promoted the systematic implementation of measures to ensure product safety in all corporate activities, including development, production, sales, and aftercare service, to maintain the trust of customers.

Recently, activities promoting the recycling of used products, the effective utilization of resources, and environmental preservation have been flourishing. This has spurred demand on the part of buyers for products that are free of hazardous materials, which is part of a movement called green procurement.

The development and operation of systems that prevent hazardous materials from contaminating raw materials or being introduced

during manufacturing processes are fundamental to green procurement. It is also important that products are analyzed to confirm that they do not contain hazardous impurities.

Sumitomo Chemical proactively engages in green procurement oriented activities as part of its product safety initiatives and is earning a reputation for the high reliability of its products.

A wide range of tests and analyses are required for the correct assessment of safety, including acute toxicity and other health effects testing, marine life toxicity and other environmental impact testing, explosion and other safety engineering related testing, application-related quality and function testing, and trace constituent analysis. Moreover, advanced technologies and a Companywide system are needed to adequately conduct these tests and analyses.

The Sumitomo Chemical Group's personnel, technologies, and Companywide system have enabled it to achieve industry-leading levels of testing and analysis, and the Company draws upon these resources to implement highly reliable safety analyses and effective risk reduction measures.

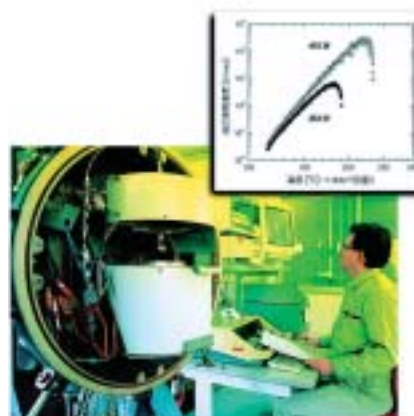
### Analysis of trace constituents in products

Analysis of trace impurities using energy dispersive X-ray analysis equipment



### Example of a safety engineering related test

Safety testing using runaway reaction measuring equipment



# As a Member of Society

As a member of society, Sumitomo Chemical is striving to enhance its relationships with local communities and employees.

## Co-Prosperity with Local Communities

Sumitomo Chemical's works conduct their operations upholding the Company's mission of prospering with the local communities. In this spirit, Sumitomo Chemical undertakes a variety of activities as a member of the local communities in which it operates.

### ■ Chiba Works: Ichihara and Sodegaura Young Inventors Club

As part of Sumitomo Chemical's local charitable activities, in April 2002, the Chiba Works established the Ichihara and Sodegaura Young Inventors Club in collaboration with the Japan Institute of Invention and Innovation (JIII) and the boards of education of the cities of Ichihara and Sodegaura. The Chiba Works provides full support for the club in terms of both management and funding.



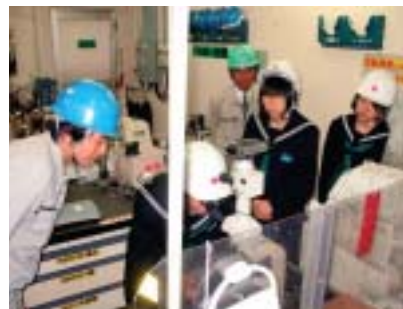
The JIII has established approximately 150 "inventors clubs" throughout Japan to provide elementary and junior high school students with an arena in which to pursue their scientific interests by taking part in industrial arts projects and scientific experiments.

The Ichihara and Sodegaura Young Inventors Club meets every other Saturday, when 47 volunteers from the Chiba Works, including engineers, provide instruction for 120 students. Mitsuo Kushima from the Chiba Works Engineering Department is an avid club instructor who has been commended by the City of Ichihara for his contributions to the community—receiving a special merit award at a ceremony held in November 2003 to commemorate the 40th anniversary of Ichihara becoming a city.

### ■ Ehime Works: Works Tours and Volunteer Lecturers

The Ehime Works conducts works tours every year to encourage further discourse with local residents. In fiscal 2003, three elementary schools, two junior high schools, one high school, and nearby residents' associations toured the plant. In addition, Hiroshi Ichihashi of Sumitomo Chemical's Basic Chemicals Research Laboratory has been visiting Niihama Municipal Miyanishi Elementary School about once a month to assist chemistry club

members in conducting a variety of experiments. In fiscal 2004, we increased the number of volunteer lecturers to four due to the program's popularity.



### ■ Misawa Works: Beautification Activities

On May 23, 2003, Misawa Works employees participated in Misawa City's beautification activities, which involve the planting of flowers and other greenery, by planting marigold seedlings along a stretch of road in front of the plant's main entrance during their lunch break. The activity attracted around 80 participants who planted 2,000 seedlings, forming a dazzling wall of yellow flowers that enhanced the beauty of the surrounding area.



### ■ Osaka Works: Opening Works Grounds and Gymnasium to the Public and Conducting Works Tours

The Osaka Works held its annual Wakaba Cup Goodwill softball and volleyball tournaments in April 2003 and opened its grounds and gymnasium to the public to promote good health among local residents. In addition, the Osaka Works offers tours of its facilities to local neighborhood associations and women's clubs and gives explanations on the environmental and safety measures being implemented.



### ■ Oita Works: Cleaning Areas along the Oita International Wheelchair Marathon Route

On November 16, 2003—the day of the 23rd Oita International Wheelchair Marathon—the supervisor of the Manufacturing Department led current and former Oita Works employees and their families in their annual cleanup of areas near the plant along the marathon's course.



### ■ South Korea Based Dongwoo Group: Proactive Volunteer Activities

A member of the Sumitomo Chemical Group, the South Korea based Dongwoo Group (Dongwoo Fine-Chem Co., Ltd., Dongwoo Optical Film Co., Ltd., and Dongwoo STI Co., Ltd.) provides support for the volunteer organization formed by employees at its Pyungtaek Works and Iksan Works. This organization is actively engaged in local charitable activities focused on helping children's shelters and its name "Dasaran" means "big love." In fiscal 2003, the group held its annual fund-raising event, collecting funds for three children's shelters located in Pyungtaek, Iksan, and Seoul. Group members also directly visit shelters to assist with such daily activities as cleaning and give facilities year-end presents, including food, heating fuel, soap, and cleaning materials. The three Dongwoo Group companies' charitable activities also include contributing to a local elementary school's environment beautification fund and providing clothing and drinks for marathon events. The Iksan Works' Dasaran organization is also planning on taking kimchi, a traditional Korean dish, to senior citizens who are living alone.

### ■ Risk Communication

Risk management—especially with regard to processes and toxic substances—is a key element of management for chemical manufacturers. Sumitomo Chemical's Responsible Care activities include aggressive risk management. The Company is keenly aware of the importance of risk communication in promoting co-prosperity with local residents in the spirit of its mission to develop along with local communities, and it actively gathers and discloses safety information, including information on accidents and investigations into their cause as well as information on accident prevention technologies.

The Chiba Works holds briefings for residents' association leaders and representative residents regarding periodic repairs before temporarily stopping plant operations, conducting inspections, and making necessary repairs.



Sumitomo Chemical's Social Contributions

<p><b>Company Activities</b></p>	<ul style="list-style-type: none"> <li>• Participation in the “Roll Back Malaria Campaign” being promoted by the World Health Organization (WHO)</li> <li>• Contributions to national and local organizations, culture and sports events, overseas aid, and charitable corporations</li> </ul>  <p>An Olyset mosquito net is displayed during a World Bank exchange program.</p>
<p><b>Activities at Ehime Works</b></p>  <p>Ehime Works</p>	<ul style="list-style-type: none"> <li>• Granting usage of the grounds (kindergarten field day)</li> <li>• Evening festivals</li> <li>• Works tours</li> <li>• Opening works grounds to the public to observe the Niihama Taiko Festival (<i>Taiko</i>: portable, drum-shaped shrines)</li> <li>• Volunteer activities</li> <li>• Opening the historical reference library to the general public</li> </ul>  <p>Evening festival</p>  <p>Niihama Taiko Festival—Observation area provided by Ehime Works</p>
<p><b>Activities at Chiba Works</b></p>  <p>Chiba Works (facilities for polypropylene production using vapor-phase technology)</p>	<ul style="list-style-type: none"> <li>• Ichihara and Sodegaura Young Inventors Club</li> <li>• Participation in Anegasaki Industry Festival and Hometown and Industry Festival</li> <li>• Works tours</li> <li>• Clean-up activities near the works</li> </ul>  <p>Anegasaki Industry Festival</p>  <p>Cleaning the area along Route 16 in front of the Chiba Works</p>
<p><b>Activities in the Kasugade Area (Osaka)</b></p>  <p>Kasugade area</p>	<ul style="list-style-type: none"> <li>• Works tours</li> <li>• Opening athletic grounds and gymnasium to the public for sports events</li> <li>• Accepting interns</li> <li>• Local PR publication—<i>Kasugade</i></li> </ul>  <p>Works tour for local residents (Osaka Works)</p>  <p>PR newspaper <i>Kasugade</i></p>





<p><b>Activities at Misawa Works (Aomori)</b></p>  <p>Misawa Works</p>	<ul style="list-style-type: none"> <li>• Works tours</li> <li>• Clean-up activities near the works</li> <li>• Participation in the Misawa Festival</li> <li>• Participation in beech tree planting events</li> <li>• Participation in beautification activities</li> <li>• Donation of carp to elementary schools</li> <li>• Opening gymnasium to the public (safety lectures)</li> <li>• Local sports events</li> <li>• Sumitomo Chemical Cup (little-league baseball tournament)</li> <li>• Trash collection walk and a "ground golf" tournament</li> </ul>	 <p>Works tour for a residents' association</p>  <p>Sumitomo Chemical Cup (little-league baseball tournament)</p>
<p><b>Activities at Oita Works</b></p>  <p>Oita Works</p>	<ul style="list-style-type: none"> <li>• Participation in Tsurusaki dance festival</li> <li>• Cleanup activities near the works</li> <li>• Support of junior soccer tournament</li> <li>• Provision of cultural seminars on the Tsurusaki area</li> <li>• Local PR publication—<i>Tsurusaki</i></li> <li>• Participation in charity performance</li> </ul>  <p>Tsurusaki Cup (junior soccer tournament)</p>	 <p>PR newspaper <i>Tsurusaki</i></p>
<p><b>Activities at Agricultural Chemicals Research Laboratory (Hyogo)</b></p>	<ul style="list-style-type: none"> <li>• Laboratory tours</li> <li>• Cleanup activities near the laboratory</li> </ul>	



## Creating a Sustainable Work Environment

### Education and Training for Employees

Sumitomo Chemical aims to develop world-class professionals and bases its employee education on self-responsibility and voluntary, independent work toward specific personnel development targets so that employees with drive can succeed in their current position and move on to achieve their professional goals. The Company provides programs that indirectly assist employees in their endeavors. Specifically, Sumitomo Chemical offers competency and knowledge and skill development programs wherein employees set and work toward individual development goals. Competency is defined as the ability to produce results. Our goal is for all staff to proactively work to develop and enhance competency to achieve annual performance targets, which, in turn, will lead to improved job performance as well as Company performance. We also offer knowledge and skills training in the form of graded programs for management and staff as well as technological training to provide instruction on manufacturing technologies and enhance technological skills. Specific graded programs include development training, correspondence education, and e-learning on management strategy, marketing, certification acquirement, and language.

In addition, the Company sends employees overseas for language study as well as law school and business school education to develop staff that will drive forward global business development. Staff are also sent to research facilities and universities in Japan and overseas to boost expertise in high-tech fields.

We are also committed to maximizing the individual aptitude of every employee—from specialist staff to management—and are leveraging our career development system (CDS) to implement strategic employee rotations to ascertain the areas in which individual staff members can best employ their capabilities and to provide education and training so that each employee can become a true professional in their field.

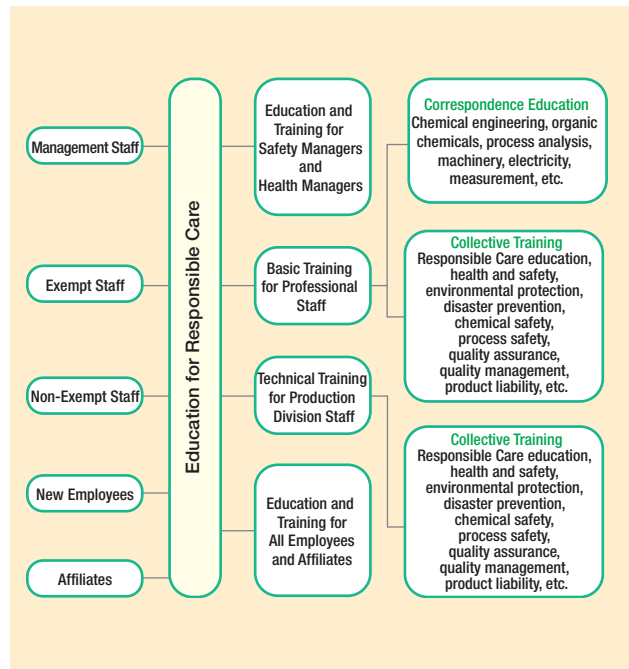
Sumitomo Chemical regards the development of world-class professionals as an important task that is key to achieving its vision for the 21st century of becoming a truly global chemical company and will continue to make concerted efforts in this area.

### Personnel Development Support Programs

Education and training to develop world-class professionals that excel

On the Job Training	Off the Job Training	Support for Personal Enlightenment
<b>Development of skills related to work execution</b>	<b>Knowledge and skill development training</b> <b>Advanced course</b> (Dispatch to business school, etc.) <b>Competency development training</b> (Graded courses according to job position, elective courses) <b>Basic training for specialists</b> <b>Graded training for employees upon promotion</b> <b>Technical training</b> <b>Language training</b> <b>Overseas study program</b> (Business school, accounting office, law school, etc.)	<b>Knowledge and skill development training</b> <b>Basic courses</b> (Business strategy, marketing, finance, human resource management, etc.) <b>Competency development guide</b> <b>External seminars, correspondence education, etc.</b>

### Education for Responsible Care



**Employee Assistance Programs**

Against the backdrop of an aging population, Sumitomo Chemical has in place a variety of employee assistance programs designed to enable employees who need to take an active role in childcare or senior care to continue to work and achieve a balance between work and family. Of note is the Senior Care Leave Program, which the Company introduced in 1991 before such programs were legally required. A large number of employees providing care for family members have used this system.

**• Leave of Absence**

Employees taking care of children may take a leave of absence until the child reaches the age of one, and employees providing care for family members may take a leave of absence of up to one year.

**• Shorter Workday Measure**

Employees transporting children to and from daycare and employees taking care of family members may shorten their workday by up to three hours.

**• Exemption from Late-Night Work and Limited Overtime**

Employees providing care for children or family members do not have to work late at night and may limit their overtime.

**• Accumulation of Lost Vacation Days**

Up to 60 days of cumulative lost paid vacation may be used by employees needing to care for children or family members.

**Employment of the Physically Challenged**

Sumitomo Chemical believes that society as a whole is responsible for improving welfare through the employment of physically challenged individuals and is working to play its part. As of June 1, 2004, the Company's employment rate for physically challenged individuals was 1.95%, which is higher than the legal requirement. In addition, we are working to build a framework to ensure that physically challenged individuals can work comfortably. To this end, we take into account each individual's particular condition when determining job placement and design a suitable position that will

enable staff to maximally leverage their abilities. We also make adjustments to facilities if necessary, including the construction of wheelchair ramps.

**Employment Rates for Physically Challenged Individuals over the Past Six Years** (Data as of June 1)

Fiscal year	1999	2000	2001	2002	2003	2004
Employment rate	1.91	1.98	1.94	2.01	2.04	1.95

**Human Rights Protection**

With respect to human rights, which have become a key international concern, Sumitomo Chemical is striving to create a cheerful workplace where all employees have a correct understanding and awareness of human rights issues and respect for the rights of others.

**Sumitomo Chemical Business Conduct Manual (Partially abridged excerpts)**

**Respect for Human Rights**

- Every member of this organization is expected to respect and accept differences in individual personalities and values.
- In the interest of preventing any act of sexual harassment from transpiring within the Company, sexually explicit language as well as any language that is suggestive of physical differences between men and women is strictly prohibited at any site where work duties are being executed.

**Prohibition of Unfair Discrimination**

- We are committed to cultivating an awareness of human rights and must realize rich social lives and business careers where people respect each other's differences.
- Each individual must fully understand that gender differences have no relation whatsoever to the execution of job duties and sexual discrimination must be prevented.

# Economic Activities

Focusing efforts in six business areas, Sumitomo Chemical is working to boost profitability by developing and supplying products and services that enrich people's lives. In fiscal 2003, net sales of ¥1,158.4 billion and net income of ¥34.3 billion were recorded on a consolidated basis. For detailed information on the Group's economic activities, please refer to the *Sumitomo Chemical Annual Report*.

## Business Activities



### Basic Chemicals Sector

Inorganics, synthetic fiber materials, methacrylate resins, alumina products, aluminum



### IT-Related Chemicals Sector

Semiconductor and liquid crystal materials (optically functional films, color filters, photoresists, high-purity chemicals, high-purity gallium, etc.)



### Petrochemicals & Plastics Sector

Plastics (polyethylene, polypropylene, etc.), plastics materials, synthetic rubber



### Agricultural Chemicals Sector

Plant protection chemicals, household and public hygiene insecticides, feed additives, fertilizers, animal health products



### Fine Chemicals Sector

Pharmaceutical bulk and intermediate products, rubber chemicals, dyestuffs



### Pharmaceuticals Sector

Pharmaceuticals, diagnostic reagents, health care products

### ■ Non-Consolidated Data

#### Fiscal 2003 Results

Capital:	¥89.7 billion	(as of March 31, 2004)
Net sales:	¥600.8 billion	
Recurring profit:	¥19.4 billion	
Net income:	¥16.0 billion	
Capital investment:	¥39.5 billion	
R&D expenses:	¥34.7 billion	
Number of employees:	5,191	(as of March 31, 2004)

### ■ Consolidated Data

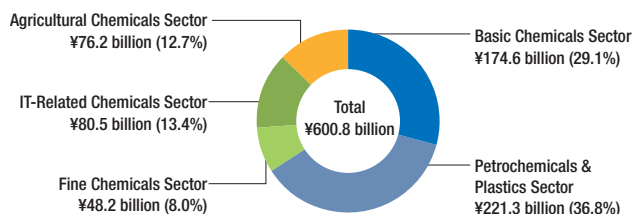
#### Subsidiaries and Affiliates:

Sumitomo Pharmaceuticals Co., Ltd., Koei Chemical Co., Ltd., Taoka Chemical Co., Ltd., The Polyolefin Company (Singapore) Pte. Ltd., Sumitomo Chemical America, Inc., Valent U.S.A. Corp., and others. Total: 110 companies (as of March 31, 2004).

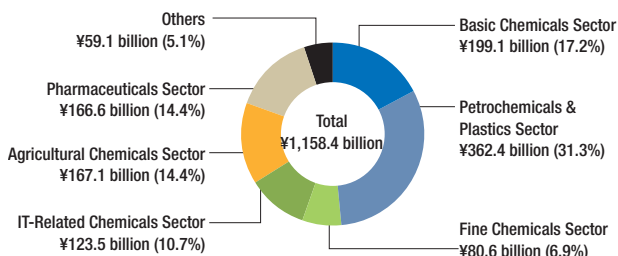
#### Fiscal 2003 Results

Net sales:	¥1,158.4 billion
Recurring profit:	¥66.3 billion
Net income:	¥34.3 billion
Capital investment:	¥110.2 billion
R&D expenses:	¥75.2 billion
Number of employees:	19,036 (as of March 31, 2004)

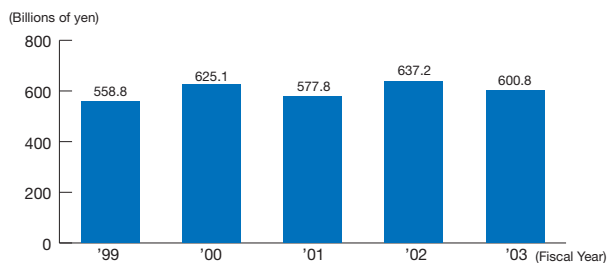
### Sales by Sector in FY2003



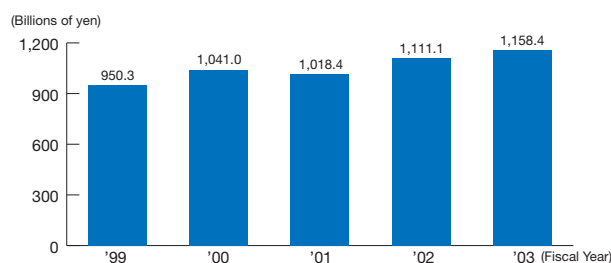
### Sales by Sector in FY2003



### Sales Trends



### Sales Trends



Sumitomo Chemical's new Three-Year Corporate Business Plan establishes a series of major milestones to guide the Company toward the achievement of its vision for the 21st century of becoming a truly global chemical company that is a major player in every area of its business operations.

### New Three-Year Corporate Business Plan

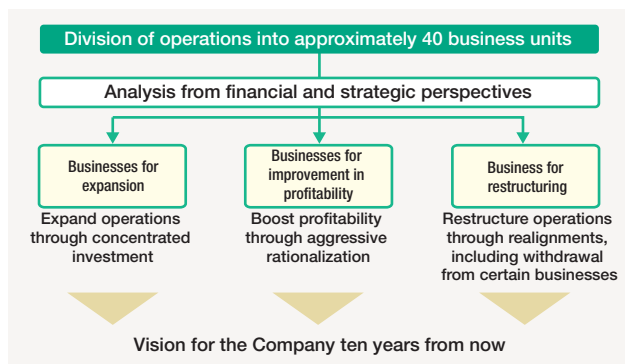
When we drew up the Three-Year Corporate Business Plan for fiscal 2004 through fiscal 2006, we considered what the optimal portfolio would be and what achievements we should aim for based on our vision for the Company 10 years from now and designed the new plan as the first step in realizing these goals. The objective of our operating policy is to strategically position businesses through selection and concentration to maximally leverage our core competencies. We have established three concrete approaches for meeting this objective. First, focusing investment in life sciences and IT-related chemicals fields. Second, promoting a shift to higher-value-added polyolefins and other bulk products and enhancing downstream capabilities in the fields of agricultural chemicals,

IT-related chemicals, and others. Third, enhancing overseas bases to boost the Company's global presence and accelerating business expansion in rapidly growing Asian markets.

As for the Company's financial structure, we will work to establish a sounder financial base by increasing shareholders' equity through profit growth, carefully selecting investments, improving investment efficiency, and minimizing risks.

In addition, Sumitomo Chemical will fully utilize the integrated management information system SAP, which went into full operation in 2004, to overhaul business operations, reinforce global management on a consolidated basis, and enhance CSR initiatives.

#### Clearly Positioning Businesses and Establishing a Solid Portfolio



#### The Sumitomo Chemical Group's Vision of the Company for the 21st Century

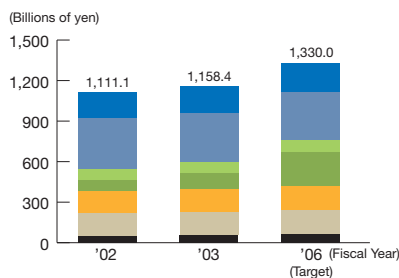
##### A Truly Global Chemical Company

1. A company that operates with competitive strength in global markets
2. A company that continues to grow, on the strength of accumulated technologies, with a focus on high added value and profitability
3. A company that operates in accordance with global standards, places importance on shareholder value, and gives employees a sense of purpose

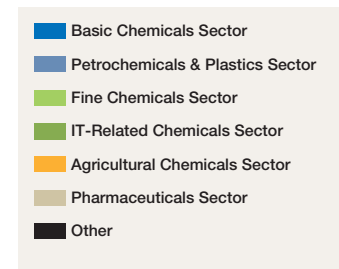
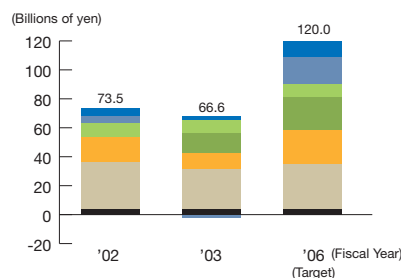
#### Performance Targets

The new Three-Year Corporate Business Plan sets targets of net sales of ¥1.33 trillion, operating income of ¥120 billion, and net income of ¥65 billion on a consolidated basis in fiscal 2006—the final year of the plan. The Company also aims to achieve a shareholders' equity ratio of 35% and return on equity of 12% and bring the debt-to-equity ratio down to less than 1.0.

#### Consolidated Net Sales by Sector



#### Consolidated Operating Income by Sector



#### Business Strategies by Business Area

- IT-Related Chemicals:** As the liquid crystal market is projected to expand, we will leverage the Company's strengths in this field through close cooperative relationships with users in South Korea and Taiwan, technological development capabilities, and technological synergies.
- Life Sciences:** Reinforce our market-leading domestic business in agricultural chemicals and our top global business in household insecticides. Fortify the pharmaceutical business foundation by increasing our team of medical representatives to 900 and bolster marketing strength. In R&D, the Company will focus its efforts on specific areas of research and make operations more efficient with the aim of improving the degree of success in the creation of new products and speeding up the new product development process.
- Fine Chemicals:** Promote a shift to high-value-added operations based on our sophisticated organic synthesis and fine chemical synthesis technologies.
- Petrochemicals & Plastics:** Speed up the shift from general-use products to high-value-added products while reorganizing the production framework and improving production technologies to thoroughly streamline costs.
- Basic Chemicals:** Capitalize on expected growth in optics applications for methyl-methacrylate (MMA) resins by bolstering the cost-competitiveness of MMA resins and developing high-quality, high-performance products for optics applications.

The Sumitomo Chemical Group is expanding its operations throughout the world with the aim of becoming a truly global chemical company. The Company has worked to strengthen its global competitiveness through the rapid development of overseas businesses. The role that our overseas bases play in operations is growing at a brisk clip as we build production and sales bases around the world and steadily enhance the content of these operations.

International Expansion

■ Doubling Color Filter Production Capacity in South Korea

We completed the construction of one of the world's largest LCD color filter plants for South Korea based Dongwoo STI Co., Ltd. (a member of the Sumitomo Chemical Group), at the Pyungtaek Works of Dongwoo Fine-Chem Co., Ltd., and commenced mass production in March 2003. Also, in May 2003, we began the construction of a second plant of the same scale at a site next to the first plant at the Pyungtaek Works, which started commercial production in March 2004. The new plants boast a combined annual production capacity of 1.44 million color filters (equivalent to about 18 million 17-inch screens) for state-of-the-art fifth-generation liquid crystal panels.

■ First Polarizing Film Plant in Taiwan Completed

In March 2004, Sumika Technology Co., Ltd., a Sumitomo Chemical affiliate, completed the construction of an integrated polarizing film plant at Tainan Science Park. Sumika Technology is currently building a second production line within the park and its completion, which is slated for December 2004, will bring the annual total production capacity to 8 million m<sup>2</sup> per year.

■ Alliance with Belgium-Based Genome Research Venture in Insecticide Field

Sumitomo Chemical entered into a collaborative research agreement with Devgen NV, a genomic research venture based in Ghent, Belgium, for the exploration and efficient screening of novel insecticide targets. Devgen boasts world-leading technologies in bioinformatics, which involves the computer processing of vast amounts of information on genes and proteins. Sumitomo Chemical plans to apply Devgen's genomics expertise to its agricultural chemicals business to expedite the discovery and screening of promising insecticidal compounds to accelerate product launches.

■ Subsidiary Established in China for Production of Agrochemical Intermediates

Sumitomo Chemical formed the joint venture Dalian Sumika Chemphy Chemical Co., Ltd., with Dalian Chemphy Chemical Co., Ltd., in China's Dalian Economic Development Zone for the manufacture of agrochemical intermediates. Dalian Sumika Chemphy Chemical plans to complete the construction of production facilities during 2004 and begin producing agrochemical intermediates by the end of the year.



### ■ Reinforcement of Asian Petrochemical Operations

Sumitomo Chemical's petrochemical operations in Southeast Asia have focused on the construction and management of the first and largest industrial complex in the region, the Singapore Petrochemical Complex. However, in a move to bolster its petrochemical operations in this area, Sumitomo Chemical is conducting a joint feasibility study with Shell Chemicals for the construction of a new ethylene plant in Singapore. This study will examine the feasibility of establishing an ethylene plant with an annual production capacity of one million tons on Bukom Island, where Shell's oil refinery is located. In conjunction with the ethylene plant study, Sumitomo Chemical will look into the establishment of production facilities for polyolefins and other derivatives.

### ■ Establishment of TPE Manufacturing Facility in North America

Sumitomo Chemical America, Inc. (SCAI), a Sumitomo Chemical Group company, plans to establish a manufacturing facility for thermoplastic olefin elastomer *Sumitomo TPE* in the second half of 2004 in the State of Georgia. The plant will have an annual production capacity of 5,000 tons.

SCAI currently manufactures airbag cover resins and interior sheet resins on commission in the State of Texas. Once the new facilities have been completed, SCAI will also produce automobile

body seal materials, and thus will manufacture the entire lineup of *Sumitomo TPE* products.

### ■ Memorandum of Understanding with Saudi Aramco for Feasibility Study

In May 2004, Sumitomo Chemical signed a comprehensive Memorandum of Understanding with the Saudi Arabian Oil Company (Saudi Aramco) related to the planned development of an integrated refining and petrochemical complex in Rabigh, Saudi Arabia (Rabigh Project). The next step will be to conduct a joint feasibility study and work out the details of the plan.

### ■ Marked Expansion of MMA Business

Sumitomo Chemical has positioned its methyl methacrylate (MMA) monomer and polymer operations as a strategic business within its basic chemicals sector and in 2003 decided to expand its production capacity for these materials in Singapore. We plan to establish a new MMA monomer production facility with an annual production capacity of 80,000 tons and boost the annual production capacity of the existing MMA polymer plant by 15,000 tons, raising its total annual production capacity to 50,000 tons. The MMA polymer plant and the MMA monomer plant are slated to start commercial operations in 2004 and 2005, respectively.



# Independent Assessment

To increase the transparency of its activities, Sumitomo Chemical undergoes independent evaluations and is working to make improvements based on the results of these assessments.

## Independent Auditor's Comments

This year, the name of Sumitomo Chemical's report changed from *Environment, Health & Safety Report* to *CSR Report* and the report itself includes information not only on Responsible Care activities—a staple of previous reports—but also on the Company's outlook and efforts to enhance economic value, corporate governance throughout the Group, and the Company's relations with a wide range of stakeholders, including employees, customers, and local and overseas communities.

Sumitomo Chemical's new Three-Year Corporate Business Plan calls for CSR promotion, and, under this plan, the Company is moving forward with measures in the following three areas: legal compliance, Responsible Care, and social contribution. The Company's strategies, frameworks, and achievements in these areas have already earned it a commendation from the SMRI and we also saw some of the effects of these initiatives in the course of our review.

However, we would like to see the Company enhance information disclosure, particularly with regard to policies and frameworks for social contribution activities in the areas of perpetuation and development of corporate culture, employment practices, and maintaining accord with local communities.

During this review, we learned that a data aggregation system had been newly introduced which environmental impact data for the Company's facilities could be seen in real time at the head office with, and which automatically calculate totals for the entire Company based on these data.

We sincerely hope that the Company will continue to promote further dialogue with society through the disclosure of highly reliable information.

Yukinobu Matsuo, Manager,  
AZSA Sustainability Co., Ltd.



Independent auditors at work

### The Independent Review Process

Company and auditors formulate a review plan



Company presents auditors with a manuscript of particulars to be reviewed



Auditors conduct the review



Independent auditors convene



Modifications to be made are determined based on the auditors' advice



Company submits a final report to auditors



Company receives independent review report





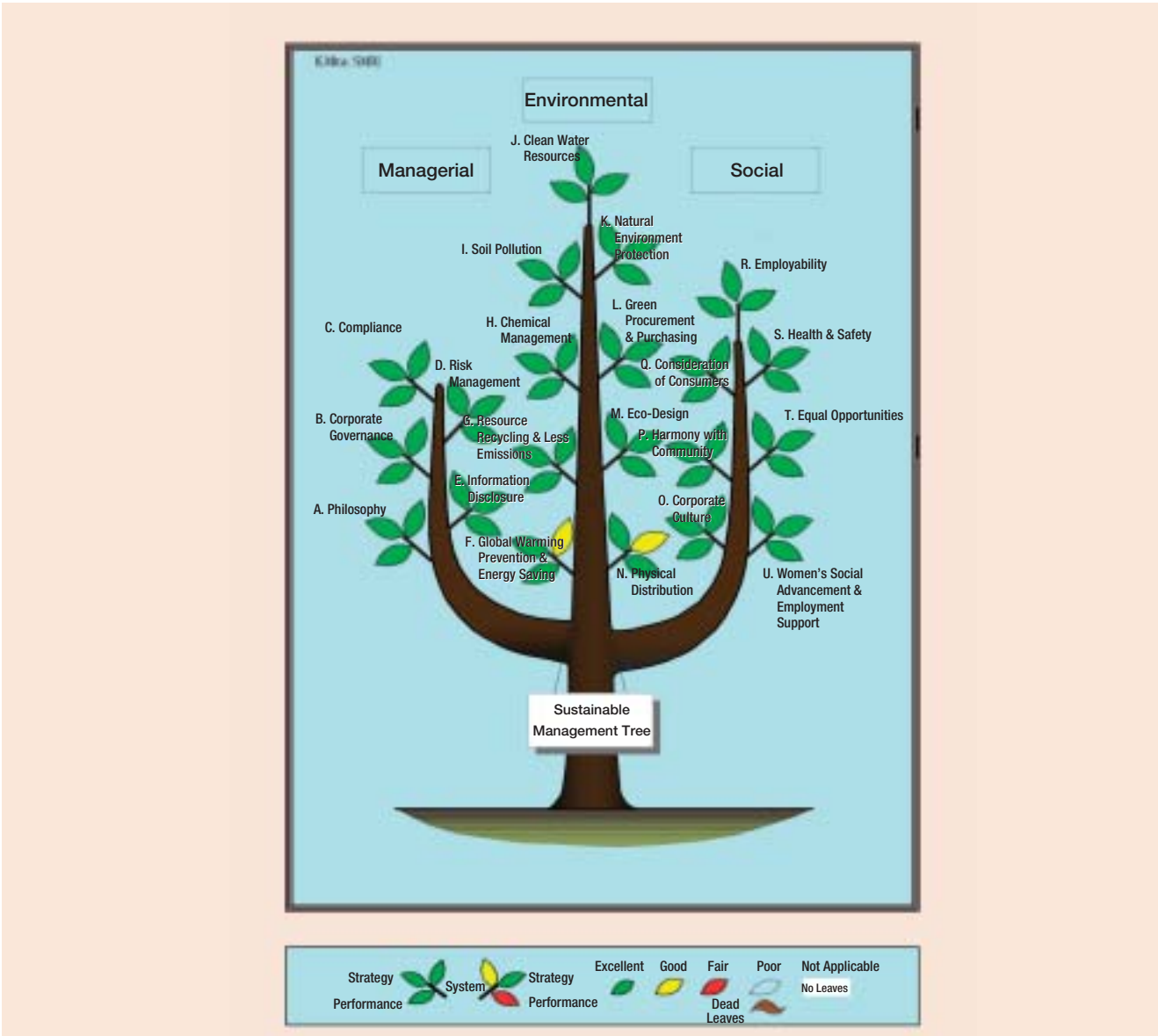
## Sustainable Management Rating

### ■ Sustainable Management Rating

Sumitomo Chemical has received a Sustainable Management Rating from the Sustainable Management Rating Institute (SMRI). The rating process is carried out under the auspices of the Ministry of Education, Science and Technology, the Ministry of the Environment, and the Ministry of Economy, Trade and Industry. Each year, 150 companies of the approximately 3,000 listed in the *Japan Company Handbook* that excel in the areas of management, environmental awareness, and corporate ethics are chosen on the basis of their environmental reports and press coverage throughout the year.

On February 26, 2004, the results for fiscal 2003 were announced and, of the 75 companies that received the highest ratings, 67 companies that agreed to have their names made public were selected as “Green Top Runners.”

Sumitomo Chemical was one of the best “Green Top Runners,” with outstanding marks in the 63 areas evaluated, including top marks in all management and social areas. Sumitomo Chemical’s results are illustrated in the chart below. The Company was rated “excellent” in 61 categories and “good” in 2 categories and received no marks of “fair” or “poor.”



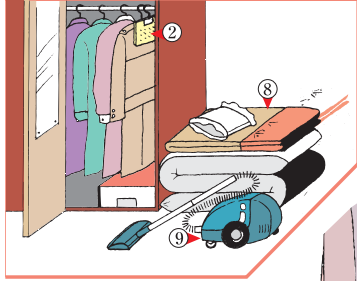
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1. Pyrethroid (household insecticide)
2. Pyrethroid (insect repellent for clothing)
3. Activated alumina (deodorizer)
4. Duolite (water purifier)
5. High-purity alumina (sapphire glass for watch)
6. Polystyrene (toy)
7. Resin coating for paper (calendar)
8. Acrylonitrile (blanket)
9. Polypropylene (washing machine)
10. Acrylonitrile butadiene styrene (ABS) resin (cabinet)
11. Thermoplastic elastomer *Sumitomo TPE* (hose)
12. Propylene oxide (heat insulation material)
13. Polarizing film *Sumikalan*, color filter (liquid crystal panel), methyl methacrylate *Sumipex* (liquid crystal backlight diffusion panel)
14. Polyether sulphon (PES) *Sumikaexcel* (heat-resistant paint)
15. Polyethylene, ethylene vinyl acetate (EVA), polypropylene (wrapping film)
16. Aluminum (can)
17. Polymer additive *Sumilizer GS* (shrink film for plastic bottle labels)
18. Binder for eco-wallpaper *Sumikaflex* (wallpaper)
19. Chemicals and fertilizers for home gardening
20. Flea and tick products for pets

**Sumitomo Chemical Products Make Everyday Living Easier**

Our products are created with quality, safety, health, and the environment in mind. This is our way of promoting satisfaction and peace of mind throughout society.

Sumitomo Chemical products are used in a wide variety of everyday situations. These products are also developed from a Responsible Care perspective—taking quality, safety, health, and environmental issues into account in all phases of the product life cycle. As a chemical manufacturer, we aim to deepen the confidence of society by giving serious consideration to all aspects of our operations—from the development of chemical substances, to production, distribution, use, and final disposal—and by communicating with society.



**Responsible Care**

**Responsible Care**

Sumitomo Chemical Company, Limited, as a Responsible Care Company, voluntarily implements policies that give consideration to safety, health, and the environment, from chemical product development through disposal. The Responsible Care mark may only be used by those companies that are members of the Japan Responsible Care Council.



This report has been printed in Japan on 100% recycled paper using environment-friendly soybean-oil ink.

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