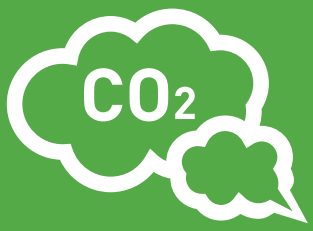
Responsible Care Activities

Responsible Care (RC) activities refer to the voluntary initiatives undertaken by business operators in the chemical industry, with the goals of ensuring safety, the environment, and health throughout the lifecycle of chemical products, from development through to the manufacture, sales, use, and disposal after final consumption, maintaining and improving the quality of those products. These activities also strive to gain the further trust of society through continuous dialogue.

Based on the core principle of "Making safety our first priority" the Sumitomo Chemical Group engages in RC activities from a variety of perspectives.

Contributing to the SDGs through Responsible Care Activities

Improvement of Carbon Intensity Index (p. 20)



Domestic: 2.2%
Overseas: 5.5%

Water Usage (pp. 23, 25)

Domestic: 975 million tonnes
Overseas: 7 million tonnes

Lost-Workday Incident Rate (p. 31)

Sumitomo Chemical Group
0.14

CONTENTS

Responsible Care Activity Goals and Results

Goal achieved or steadily progressing: ○; Goal not achieved: △

Items	Fiscal 2016 Goals	Fiscal 2016 Results	Evaluation	Fiscal 2017 Goals	Page
Responsible Care (RC) Audits	● Expand RC audit scope	● Studied outside technical data falsification cases and enhanced auditing methods to expand the scope of RC audits	○	● Expand RC audit scope	pp. 13-17
	● Investigate accidents from the viewpoint of a third party	● Tested holding hearings at Group companies	○	● Investigate accidents from the viewpoint of a third party	
	● Promote RC Global Management	● Staff at Group companies in Japan and overseas participated in internal audits, which helped train RC staff	○	● Promote RC Global Management	
Environmental Protection	**Promotion of Environmental Management**				pp. 18-26
	● Sumitomo Chemical and Group companies in Japan and overseas: No severe environmental accidents	● Sumitomo Chemical and Group companies in Japan and overseas: No severe environmental accidents	○	● Sumitomo Chemical and Group companies in Japan and overseas: No severe environmental accidents	
	● Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations	● Grasped environmental regulatory trends in a timely manner and responded	○	● Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations	
	● Promote labor saving in and streamlining of environmental protection management	● Completed the standardization and systematization of environmental management	○	● Promote labor saving in and streamlining of environmental protection management	
	Addressing Global Climate Change				
	● Improve unit CO_2 emissions from energy use • Sumitomo Chemical: Improve unit CO_2 emissions from energy use 15% by 2020 compared to 2005 levels	● Improved unit CO_2 emissions from energy use • Sumitomo Chemical: Reduced by 16.1% relative to fiscal 2005	○	● Improve unit CO_2 emissions from energy use • Sumitomo Chemical: Improve unit CO_2 emissions from energy use 15% by 2020 compared to 2005 levels	
	• Sumitomo Chemical and Group companies in Japan: Improve unit CO_2 emissions from energy use over 1% per year on average	• Sumitomo Chemical and Group companies in Japan: Reduced by 2.2% relative to fiscal 2015	○	• Sumitomo Chemical and Group companies in Japan: Improve unit CO_2 emissions from energy use over 1% per year on average	
	• Group companies overseas: Improve unit CO_2 emissions from energy use over 1% per year on average	• Group companies overseas: Reduced by 5.5% relative to fiscal 2015	○	• Group companies overseas: Improve unit CO_2 emissions from energy use over 1% per year on average	
	● Improve unit energy consumption • Sumitomo Chemical: Improve unit energy consumption 15% by 2020 compared to 2005 levels	● Improved unit energy consumption • Sumitomo Chemical: Improved by 18.3% relative to fiscal 2005	○	● Improve unit energy consumption • Sumitomo Chemical: Improve unit energy consumption 15% by 2020 compared to 2005 levels	
	• Sumitomo Chemical and Group companies in Japan: Improve unit energy consumption over 1% per year on average	• Sumitomo Chemical and Group companies in Japan: Improved by 1.6% relative to fiscal 2015	○	• Sumitomo Chemical and Group companies in Japan: Improve unit energy consumption over 1% per year on average	
	• Group companies overseas: Improve unit energy consumption over 1% per year on average	• Group companies overseas: Improved by 5.5% relative to fiscal 2015	○	• Group companies overseas: Improve unit energy consumption over 1% per year on average	
	● Improve unit energy consumption in the logistics division • Sumitomo Chemical*1: Aim to improve by an annual average of 1% or more relative to the fiscal 2006 standard, and improve unit energy consumption	● Improved unit energy consumption in the logistics division • Sumitomo Chemical: Improved by an annual average of 0.2% relative to the fiscal 2006 standard	△	● Improve unit energy consumption in the logistics division • Sumitomo Chemical: Aim to improve by an annual average of 1% or more relative to the fiscal 2006 standard, and improve unit energy consumption	
	Waste Reduction Initiatives				
	● Reduce the amount of industrial waste sent to landfills • Sumitomo Chemical: Maintain 80% reduction in waste volume compared to fiscal 2000 levels	● Reduced the amount of industrial waste sent to landfills • Sumitomo Chemical: Reduced by 94.3% relative to the fiscal 2000 levels	○	● Reduce the amount of industrial waste sent to landfills • Sumitomo Chemical: Maintain 80% reduction in waste volume compared to fiscal 2000 levels	
	• Sumitomo Chemical and Group companies in Japan: Maintain waste volume at below fiscal 2015 levels	• Sumitomo Chemical and Group companies in Japan: Reduced by 8.7% relative to the fiscal 2015 levels	○	• Sumitomo Chemical and Group companies in Japan: Maintain waste volume at below fiscal 2015 levels to fiscal 2020	
	● Properly treat PCB waste • (High concentrations of PCB*2) Work toward appropriate storage and recovery of waste containing high concentrations of PCBs and complete PCB waste treatment at an early stage	● Properly treated PCB waste • (High concentrations of PCB) Largely completed the treatment of waste containing high concentrations of PCBs (excluding certain factories and equipment); continued to promote the storage and recovery of untreated waste	○	● Properly treat PCB waste • (High concentrations of PCB) Work toward appropriate storage and recovery of waste containing high concentrations of PCBs and complete PCB waste treatment at an early stage	
	• (Minute amounts of PCB*3) Work toward appropriate storage and recovery of waste containing minute amounts of PCBs and complete PCB waste treatment by March 2025	• (Minute amounts of PCB) Implemented the treatment of waste containing minute amounts of PCBs at certain factories; continued to promote the storage and recovery of untreated waste	○	• (Minute amounts of PCB) Work toward appropriate storage and recovery of waste containing minute amounts of PCBs and complete PCB waste treatment by March 2025	

Note: Further details are provided in the supplementary data (pp. 35–53).

*1 Within the scope of specified shippers according to the definition stipulated under the Act on the Rational Use of Energy

*2 High concentrations of PCB: Polychlorinated biphenyl (PCB) intentionally used as insulation oil in such items as electric appliances

*3 Minute amounts of PCB: PCB unintentionally mixed in as insulation oil in such items as electric appliances (over 0.5mg/kg)

Responsible Care Activity Goals and Results

Goal achieved or steadily progressing: ○; Goal not achieved: △

Items	Fiscal 2016 Goals	Fiscal 2016 Results	Evaluation	Fiscal 2017 Goals	Page
Environmental Protection	**Protecting the Atmosphere, Water, and Soil**				pp. 18-26
	● Protection of air and water pollution • Sumitomo Chemical: Meet voluntary management criteria*4	● Protection of air and water pollution • Causes of incidents where pollution exceeded voluntary limits have been investigated and countermeasures implemented	○	● Protection of air and water pollution • Sumitomo Chemical: Meet voluntary management criteria	
	● Effective use of water resources • Sumitomo Chemical: Promote effective and efficient use of water resources • Group companies overseas: Improve unit water consumption by at least 1% on average per year	● Effective use of water resources • Sumitomo Chemical: Unit water usage fell by 13.8% relative to fiscal 2015 • Group companies overseas: Unit water usage improved by 2.1% relative to fiscal 2015	○ ○	● Effective use of water resources • Sumitomo Chemical: Promote effective and efficient use of water resources • Group companies overseas: Improve unit water consumption by at least 1% on average per year	
	● Response to PRTR • Sumitomo Chemical: Maintain 60% lower total emissions of air and water pollutants by 60% relative to fiscal 2008 • Sumitomo Chemical and Group companies in Japan: Maintain total emissions of air and water pollutants at below fiscal 2015 levels to fiscal 2020	● Response to PRTR • Sumitomo Chemical: Reduced emissions by 87.2% relative to fiscal 2008 • Sumitomo Chemical and Group companies in Japan: Reduced emissions by 6.1% relative to fiscal 2015	○ ○	● Response to PRTR • Sumitomo Chemical: Maintain 60% lower total emissions of air and water pollutants relative to fiscal 2008 • Sumitomo Chemical and Group companies in Japan: Maintain total emissions of air and water pollutants at below fiscal 2015 levels to fiscal 2020	
	● Reduce VOC emissions • Sumitomo Chemical: Maintain VOC emissions reductions at 30% relative to fiscal 2000	● Reduced VOC emissions • Sumitomo Chemical: Reduced emissions by 50% relative to fiscal 2000	○	● Reduce VOC emissions • Sumitomo Chemical: Maintain VOC emissions reductions at 30% relative to fiscal 2000	
	● Prevention of soil and groundwater pollution • Sumitomo Chemical and Group companies in Japan: Keep hazardous materials strictly within Company premises*5	● Prevention of soil and groundwater pollution • Sumitomo Chemical and Group companies in Japan: Kept hazardous materials strictly within Company premises	○	● Prevention of soil and groundwater pollution • Sumitomo Chemical and Group companies in Japan: Keep hazardous materials strictly within Company premises	
	● Prevention of ozone layer depletion • Sumitomo Chemical and Group companies in Japan: Eliminate the use of refrigeration units that use CFCs as coolants by fiscal 2025 • Sumitomo Chemical and Group companies in Japan: Eliminate the use of refrigeration units that use HCFCs as coolants by fiscal 2045	● Prevention of ozone layer depletion • Sumitomo Chemical and Group companies in Japan: Systematically replaced refrigeration units that use CFCs and HCFCs as coolants	○	● Prevention of ozone layer depletion • Sumitomo Chemical and Group companies in Japan: Eliminate the use of refrigeration units that use CFCs as coolants by fiscal 2025 • Sumitomo Chemical and Group companies in Japan: Eliminate the use of refrigeration units that use HCFCs as coolants by fiscal 2045	
	● Conservation of Biodiversity • Sumitomo Chemical: Ensure compliance with "Sumitomo Chemical's Commitment to the Conservation of Biodiversity"	● Conservation of Biodiversity • Sumitomo Chemical: Ensured compliance with "Sumitomo Chemical's Commitment to the Conservation of Biodiversity" and promoted detailed initiatives	○	● Conservation of Biodiversity • Sumitomo Chemical: Ensure compliance with "Sumitomo Chemical's Commitment to the Conservation of Biodiversity"	
Product Responsibility/ Product Stewardship	● Continue to act precisely in accordance with domestic and overseas laws and regulations	● Acted precisely in accordance with relevant laws and regulations	○	● Continue to act precisely in accordance with domestic and overseas laws and regulations	pp. 27-29
	● Continue to promote risk-based chemicals management and information disclosure	● Systematically put in place risk assessment methods	○	● Continue to promote risk-based chemical management and information disclosure	
	● Continue to promote utilization of the comprehensive chemical management system (SuCCESS) and develop concrete plans for expansion to Group companies	● Introduced SuCCESS at nine Group companies	○	● Continue to promote utilization of the comprehensive chemical management system (SuCCESS) and develop concrete plans for expansion to Group companies	
	● Promotion of product safety risk assessments focused on high-risk products*6	● Performed 88 risk assessments, including for high-risk products	○	● Promotion of product safety risk assessments focused on high-risk products	
	● Logistics quality-related incidents: No Rank A or Rank B incidents, two or fewer Rank C Incidents	● Logistics quality-related incidents: No incidents (Rank A, B, C)	○	● Logistics quality-related incidents: No Rank A or Rank B incidents, two or fewer Rank C Incidents	
Occupational Safety and Health/ Industrial Safety and Disaster Prevention	● Lost-workday injuries among Sumitomo Chemical employees: 0	● Lost-workday injuries among Sumitomo Chemical employees: 2	△	● Lost-workday injuries among Sumitomo Chemical employees: 0	pp. 30-34
	● Frequency rate of lost-workday injuries*9 for the Group*7: less than 0.1	● Frequency rate of lost-workday injuries for the Group: 0.14	△	● Lost-workday injuries for partner companies*8 : 0	
	● Severe accidents*10 for the Group: 0	● Severe accidents for the Group: 1	△	● Frequency rate of lost-workday injuries for the Group: less than 0.1	
	● Severe industrial accidents*11 for the Group: 0	● Severe industrial accidents for the Group: 0	○	● Severe accidents for the Group: 0	
	● Workplace injuries in logistics: 0	● Workplace injuries in logistics: 2	△	● Severe industrial accidents for the Group: 0 ● Workplace injuries in logistics: 0	

*4 Voluntary management targets that are stricter than the criteria of relevant laws and regulations, including agreements reached with local authorities.
*5 Keep hazardous materials strictly within Company premises: Controlled on the premises.
*6 High-risk products: Products likely to have relatively high risks in terms of the nature of the chemical substances in the product and their application.
*7 For the purposes of occupational safety and health/industrial safety and disaster prevention, the Group is defined as Sumitomo Chemical (including its partner companies and others) and consolidated subsidiaries in Japan and overseas.
*8 A partner company injury is defined as one suffered within a Sumitomo Chemical worksite by an employee of a company affiliated with a logistics or construction subcontractor.
*9 The Responsible Care Department determines if accidents that occur at overseas consolidated subsidiaries are considered to be lost-workday injuries or non lost-workday injuries based on how the accidents are handled in Japan.
*10 Severe accidents are defined as those that result in a fatality or those that result in medium to severe lost-workday injuries, including blindness and loss of a limb.
*11 Severe industrial accidents are defined as industrial accidents resulting in any of the below conditions.
• The local residents suffer injuries requiring at least regular hospital visits or treatment.
• Employees at the facility suffer injuries that at least require a lost workday.
• The damage to the facilities totals more than ¥10 million.

Responsible Care Management

Basic Stance

Responsible Care (RC) activities refer to the voluntary initiatives undertaken by business operators in the chemical industry, with the goals of ensuring safety, the environment, and health throughout the lifecycle of chemical products, from development through to the manufacture, sales, use, and disposal after final consumption, maintaining and improving the quality of those products. These activities also strive to gain the further trust of society through continuous dialogue.

The Sumitomo Chemical Group has positioned Responsible Care activities as one of its most important management pillars. Based on the core principle of "Making safety our first priority," the Group has set goals for each of the following fields: occupational safety and health; industrial safety and disaster prevention; environmental protection and climate change; product responsibility and product stewardship; Responsible Care audits; and logistics. The entire Group is working in unison to achieve the goals it has set.

Corporate Policy on Safety, the Environment and Product Quality

Sumitomo Chemical has set forth safety, the environment, and product quality as top priorities for all phases of its business activities in its Corporate Policy on Safety, the Environment and Product Quality. This policy has been communicated to all employees of Sumitomo Chemical and its Group companies to ensure that each and every employee is fully aware of it.

In conformity with the Sumitomo Spirit, the Company fulfills its responsibility to develop, manufacture, and supply a variety of products that satisfy the fundamental necessities of human life and contribute to the growth of society. Under the concept of "Making safety our first priority," which is fundamental to all the Company's operations, Sumitomo Chemical has based the management of its activities on the principles of (i) maintaining zero-accident and zero-injury operations, (ii) ensuring customer satisfaction, and (iii) promoting mutual prosperity with society.

Paying due respect to these principles, our Company is determined to conduct all activities, including production, R&D, marketing & sales, and logistics, in accordance with the following policy related to safety, the environment, and product quality.

1. Maintain zero-accident and zero-injury operations and the safety of neighboring communities and our employees.
2. Ascertain the safety of raw materials, intermediates, and products and prevent our employees, distributors, customers, and consumers from being exposed to any possible hazard.
3. Supply high-quality products and services that satisfy customers' needs and ensure safety in their use.
4. Assess and reduce our environmental impact at all operational stages, from product development to disposal, and undertake all practical environmental protection measures.

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

Revised: November 1, 2005 (Established: April 1, 1994)

Policy on Responsible Care Activities

Sumitomo Chemical has summarized its key Responsible Care initiatives in its Policy on Responsible Care Activities, which is incorporated into the specific activity targets and plans formulated annually by each Sumitomo Chemical workplace and Group company.

In accordance with the Sumitomo Chemical Charter for Business Conduct and the Corporate Policy on Safety, the Environment and Product Quality, the Sumitomo Chemical Group as a whole will strive to promote Responsible Care Activities, thereby earning the trust of society, promoting business activities, and contributing to the sustainable development of society.

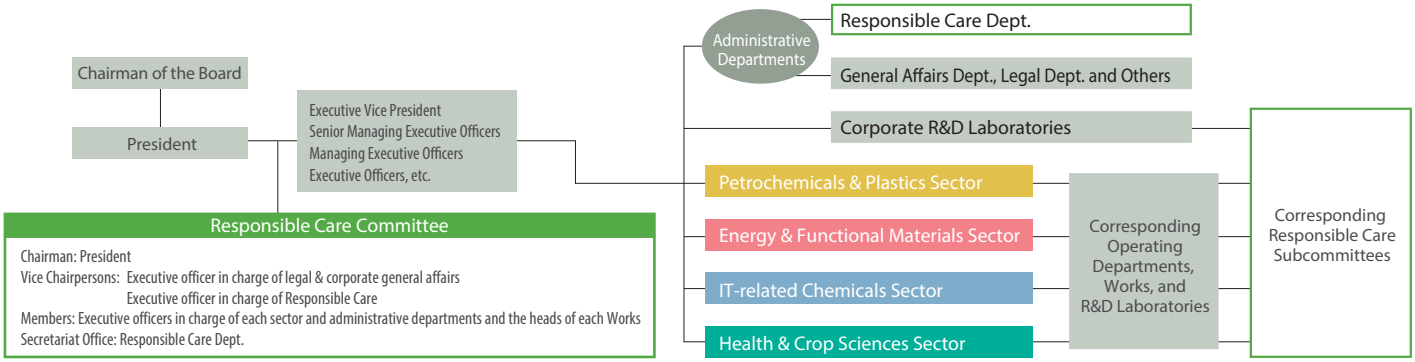
1. We will achieve zero-accident, zero-disaster targets to ensure safe and stable operations.
2. We will conduct risk management throughout the life cycle of our products, from the stages of development to manufacturing, logistics, use, and disposal and strive to ensure the safety of our employees, those involved in logistics, customers, and general consumers as well as the local community while also preserving the environment.
3. We will strive to develop safe and environmentally friendly products and manufacturing processes.
4. We will promote energy and resource conservation and waste reduction, thereby easing the environmental burden.
5. We will comply with all domestic and international laws, regulations and ordinances related to safety, the environment, and product quality, and further enhance our related voluntary initiatives.
6. We will implement the requisite education and training related to safety, the environment, and product quality.
7. We will disclose information on Responsible Care Activities and engage in dialogue with society to ensure we meet society's expectations, respond to its interests, and remain accountable to the same.
8. We will continuously improve Responsible Care Activities based on Responsible Care auditing and third party verification.
9. We will support the Responsible Care Activities of Group companies, contractors and other business partners and help them carry out initiatives to enhance the same both at home and abroad.

Revised: July 15, 2013 (Established: January 1995)

Organization of Responsible Care Activities

Sumitomo Chemical's RC activities are classified into the fields of occupational safety and health, industrial safety and disaster prevention, environmental protection and climate change, product responsibility and product stewardship, Responsible Care audits, and logistics. As the highest body for deliberating and approving RC activities, the Responsible Care Committee is chaired by the president and comprises executive officers supervising the administrative departments and the four business sectors of the Company, and the General Manager of each Works. The Committee puts in place annual policies on activities, medium-term plans, and specific measures as they relate to Responsible Care. The Committee also analyzes and assesses the results of Responsible Care activities.

Organization of Responsible Care Activities



Implementing Sumitomo Chemical's Medium-Term Plan for Responsible Care Activities

	Medium-Term Plan (for fiscal 2016 to 2018)
Occupational Safety and Health	Improve the Group's culture of safety by strictly following safety requirements
Industrial Safety and Disaster Prevention	Bolster safety assurance capabilities by improving process risk assessment and promoting safety measures
Environmental Protection	Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations
Addressing Climate Change	Work to improve unit CO_2 emissions and energy consumption Establish an internal certification system for products that help address climate change and promote the development and adoption of said products
Product Responsibility and Product Stewardship	Further promote voluntary product quality control by actively using the comprehensive chemical management system (SuCCESS) and encourage the use of product safety risk assessments, including at Group companies
RC Audits	Reduce risks by expanding the scope of RC audits
Logistics	Reduce the number of logistics safety and quality-related incidents

Note: More details on the key activities for each field can be found on the following sections.

Promoting Responsible Care Activities as a Unified Group

Sumitomo Chemical shares policies and targets regarding RC across the entire Group. We promote activities as a unified group and aim to achieve outstanding performances in each area. To this end, in 2010 we therefore formulated the Group Responsible Care Standards, wherein specific requirements are set out. We abide by these standards and revise them when appropriate. In addition, we created the Responsible Care Management Manual to ensure a deeper understanding of the standards at Group companies. Since 2015, we have stationed Responsible Care specialists at regional headquarters around the world, including in Europe, the United States, and China. This has enabled us to develop RC activities rooted in each area. The Group is working to ensure, maintain, and improve safety, environmental protections, and quality assurance. Through these efforts, the Sumitomo Chemical Group is promoting activities to ensure that it continually enjoys the trust and understanding of society with regard to its business activities.

Furthermore, we established the Sumitomo Chemical Group's Safety Ground Rules in 2016 as a measure to further secure safety at all Group locations. We have since been working to promote awareness of the rules among all Group employees while further raising the

level of Group-wide safety activities and eliminating work-related accidents. Also, we are continually developing the human resources that are responsible for safety across the Group through training and practice at each production site as well as global meetings attended by the Responsible Care managers of Group companies in Japan and overseas.

In addition, to support the RC activities of Group companies, within the Responsible Care Department we formed a global management team that promotes a wide range of initiatives. The team holds regular face-to-face meetings. When an accident or disaster occurs at a Group company, the team promptly shares case studies with the rest of the Group and publishes a newsletter that covers information to prevent from occurring of similar disasters as well as articles on RC activity-related topics. The team also promotes various kinds of RC activities through RC awards for excellent RC activities of Group companies.

Industry Efforts around the Globe

Given the collective aim of creating a sustainable society, it has become more important for chemical companies to collaborate internationally in light of mounting global challenges, including preserving biodiversity, creating a recycling society, and addressing the problem of climate change, as represented by the 2° C goal agreed upon by the world in the Paris Agreement. Sumitomo Chemical actively works together with the International Council of Chemical Associations (ICCA)*1 and the World Business Council for Sustainable Development (WBCSD)*2 to tackle these issues head on and provide effective advice to the world.

Sumitomo Chemical participates in the activities of the ICCA and is active in a number of Global Working Groups, including one on energy and climate change and one on chemical policy and health. We work together to create reports compiling study results, conduct surveys, and promote the greater acceptance of product quality control methods. Specifically, we helped gather the opinions of ICCA members regarding climate change policies and reported the results at an event at COP21, which was held in Paris in December 2015.

In addition, we participate in the Chemical Policy and Health taskforce and help conduct surveys of systems around the world for relaying information on the chemical substances products contain and promote product stewardship in participating countries, especially those in Asia.

Moreover, we are collaborating to consider building a system that aims to promote sustainability through participation in the Chemical Sector Group's Discussion in the WBCSD.

*1 ICCA: This organization was established to harmonize the strategies of chemical industry associations and councils around the world through dialogue and cooperation. As the principal representative of the chemical industry, ICCA presents opinions to international organizations about key topics shared by its members and various activities of the chemical industry.

*2 WBCSD: This organization was established to advocate for business sector views on sustainable development. The group weighs in at international conferences, such as the World Economic Forum, the B20 Summit, and the Conference of the Parties of the UNFCCC.

Progress in Fulfilling Eco-First Commitments

Sumitomo Chemical has participated in the Eco-First Program of Japan's Ministry of the Environment since November 2008. As a leading company in the chemical industry, Sumitomo Chemical is committed to fulfilling its Eco-First commitments to the Japanese Minister of the Environment while ensuring legal compliance and enhancing RC activities.

Results ● Very favorable / ○ Generally favorable

Management of Chemical Substances and the Promotion of Risk Communication

Reviewing safety information on chemicals and conducting risk assessments

- Completed hazard assessments for all substances included in the initial plan, performed risk assessments for 403 products, and publicly released 22 safety summaries (http://icca.cefic.org/)

LRI*1 Initiatives

●

- Promoted research by actively participating in the LRI program implemented by the Japan Chemical Industry Association as a member of the steering committee, planning and management task force, and research promotion panel*2

Enhancing information disclosure and risk communication

- Published the *Sumitomo Chemical Report* (an integrated report), the Sustainability Data Book, the Report on the Environment and Safety (at all plants), local PR newsletters, etc., made information publicly available on the official website, made school visits, accepted student interns, and engaged in dialogue with local residents

Realizing Safe and Secure Water Treatment by Developing and Applying Management Technology that Helps Reduce Environmental Impact

Considering Appropriate Water Treatment Methods and Standardizing Methods for Assessing Various Process Waste Water Expelled from Works

- In light of current operating conditions, we considered the necessary standardization and optimization of each Works' methods for assessing and treating effluent from new manufacturing processes

●

Using Microbiota Analysis, Microbial Immobilization and Other Proprietary Technology to Increase the Sophistication of Activated Sludge Treatment

- Regarding the treatment of process waste water in some facilities, we have switched from the previous incineration method to a system employing a microbial immobilization treatment that allows activated sludge treatment and began operations on an industrial scale. In addition, we use the latest genetic analysis methods to assess the biota comprising the activated sludge, which is processed at each Works independently.

Helping Create a Sustainable Society

Starting Sumika Sustainable Solutions

- We launched initiatives to internally designate products and technologies that contribute to global warming countermeasures and environmental impact reduction. A total of 34 products and technologies have been designated, with combined sales of ¥293.4 billion in fiscal 2016 (consolidated). They are projected to contribute to a collective 53 million tonne CO_2 equivalent reduction in greenhouse gases throughout their life cycles in fiscal 2020.*3

●

Improving Energy Efficiency

- As a result of working to improve energy efficiency, the Company-wide unit energy consumption in fiscal 2016 improved 2.7% year on year, and unit CO_2 emissions from energy improved around 16% compared with fiscal 2005.

Holding Dialogues with Internal and External Stakeholders

- Explained to internal and external stakeholders the importance of the Company helping to create a sustainable society and the Company's related measures, thereby deepening mutual understanding through dialogue.

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*1 Long-range Research Initiative. Long-term support for research into the effects of chemical substances on human health and the environment

*2 Commissioned expert research into the development of new risk methods, assessments, and related activities; held a meeting to report on the results of the research

*3 This value represents the amount contributed to the reduction of greenhouse gases over the life cycles of certified products expected to be sold in fiscal 2020, based on the guidelines of the Japan Chemical Industry Association and the ICCA.

Note: Sumitomo Chemical updated its Eco-First commitments in April 2016 and implemented measures to fulfill the revised version since fiscal 2016. (For the full text of the Eco-First commitments, see p.37)

The Role of Responsible Care (RC) Audits

The RC audit is a management system to verify that the RC activities such as ensuring safety and the environment, and maintaining and improving the quality of chemical products are properly implemented. It also promotes process enhancement if areas for improvements are found in those activities.

To promote the Sumitomo Chemical Group's RC global management, RC audit activities fulfill the functions of improving management and building, maintaining, and improving the internal control system through the following four-step approaches.

Step 1: Sharing Sumitomo's Business Principles and Philosophy

Step 2: Promoting an understanding of and sharing in the Corporate Policy on Safety, the Environment and Product Quality; Policy on Responsible Care Activities; RC management systems; and Group Responsible Care Standards

Step 3: Establishing and developing RC management systems at each Group company

Step 4: Carrying out modifications to the direction and adjusting levels of RC activities by undergoing RC audits

Through face-to-face communication through each of the aforementioned steps, we have successfully provided assistance so that the RC management system is set in place by taking the scale, type of business, and attributes of each Group company into consideration.

Relationships with Group companies that have been nurtured through these RC audits are utilized in various initiatives including individual support and the lively exchange of opinions aimed at resolving a wide range of issues at the Group companies.

Responsible Care Auditing Framework

Sumitomo Chemical has an independent RC audit team. The RC auditors, who have a wealth of knowledge, experience, and technical expertise, take the lead in directly visiting internal Works as well as Group companies and conducting audits. In addition, RC audits of internal Works and research labs are conducted from a management perspective by Sumitomo Chemical's executive officers in charge of RC.

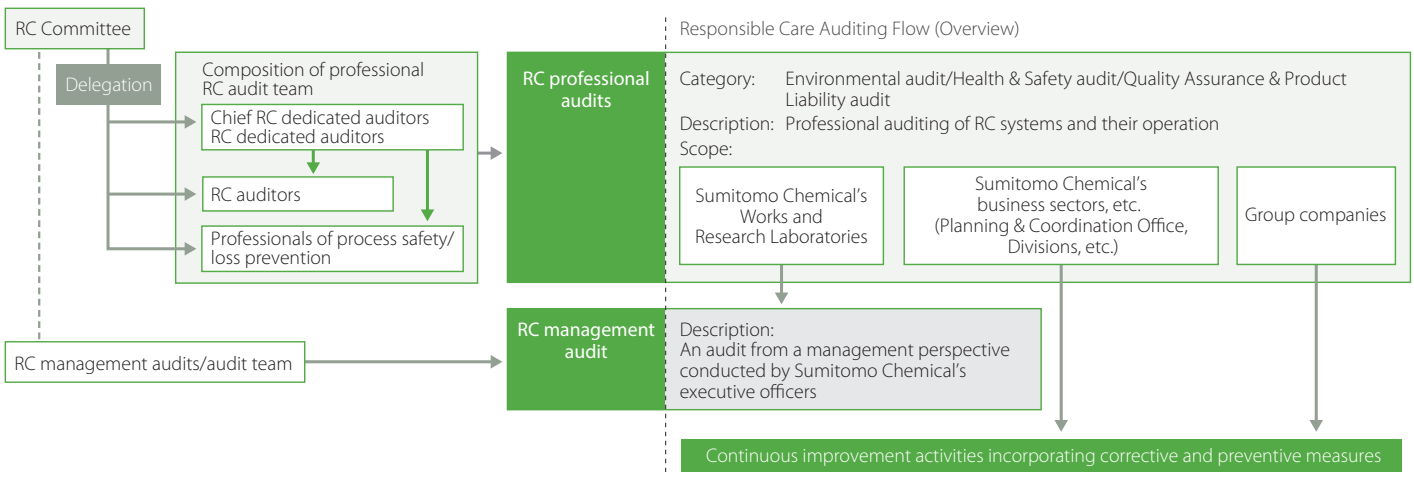
Features of Sumitomo Chemical's RC audits:

- Support is provided in the form of advice and proposals to ensure improvement at Group companies.
- Throughout RC audits, human resource development programs are incorporated to train Manufacturing Section Heads of Sumitomo Chemical and RC staff of Group companies.
- Local consultants are engaged to ensure the thoroughgoing and comprehensive check of compliance at overseas Group companies.

The scope and cycle

In principle, RC audits are conducted every one or two years at Sumitomo Chemical's Works and business sectors, and every three years at Group companies.

Responsible Care Auditing Framework



Looking Ahead

We will play a central role in global RC management and aim to contribute to business creation and effective management.

Environmental Protection

Basic Stance

Everyone in the Sumitomo Chemical Group works together to realize environmental management, which helps the Company and society develop in a sustainable manner with due considerations to the environment. Our aim has always been to realize environmental management through our business operations. Thus, we constantly think about how to use the power of chemistry to help resolve global issues, including those related to energy and the environment.

Under the medium-term plan for climate change and environmental protection, which commenced in fiscal 2016, we are working to strengthen key initiatives concerning our production activities with the aim of further enhancing environmental management.

Priority Initiatives of the Medium-Term Plan for Addressing Climate Change and Protecting the Environment (Fiscal 2016–Fiscal 2018)

(1) Addressing Climate Change

- Achieve the world's highest energy efficiency standards
- Develop processes and products that help build a low-carbon society
- Effectively implement the management of energy, CO_2, and fluorocarbons
- Respond to government policies on energy and global warming in Japan and overseas

(2) Protecting the Environment

- Properly respond to more stringent laws and regulations and proactively address trends in new environmental regulations
- Promote voluntary activities related to environmental protection
- Provide individual support to Group companies for responding to environmental regulations
- Provide guidance and support to formulate consolidated Group targets and to achieve said targets

Overview of Activities (Key Initiatives and Major Results in Fiscal 2016)

Promote an optimum mix of appropriate legal and regulatory compliance measures and voluntary activities

We respond to revisions of laws and regulations in a systematic and timely manner. We revise environmental risks in various fields and take measures to reduce risks while weighing the costs and benefits.

Standardize environmental protection management methods and reduce environmental treatment expenses

Sumitomo Chemical completed the introduction of a data management system that uses a cloud system in order to ensure the accurate and prompt collection of a wide range of performance data related to energy and the environment for each Works of the Company and all Group companies in Japan. Going forward, we will roll the system out to Group companies overseas. Meanwhile, we are continuing to carry out the trial evaluation of a waste management system designed to strengthen compliance and increase efficiency by providing the visualization of waste management data from major plants. The entire Group regularly works to efficiently reduce its environmental processing costs for gas emissions, water emissions, and waste materials.

Strive to achieve the new common energy and environmental protection targets

In fiscal 2016, we recalculated the base value of net sales for each Sumitomo Chemical Group company and selected major consolidated subsidiaries possessing manufacturing plants for inclusion in the scope of calculation. We used fiscal 2015 (in Japan: fiscal-year basis; overseas: calendar-year basis) as the base fiscal year. There are five targets: 1. Improve unit energy consumption; 2. Improve unit CO_2 emissions from energy use; 3. Maintain overall emission levels into the air and water; 4. Maintain industrial waste landfill levels; 5. Improve unit water consumption. Group companies in Japan work together on items 1 through 4 as common goals. Group companies overseas work together on items 1, 2, and 5 as common goals. Going forward, we will assemble the results of every fiscal year then follow up on the results of each company and continue striving to improve the performance of the entire Group.

Environmental Protection

Launching Sumika Sustainable Solutions

Sumitomo Chemical has been developing processes that have low impact on the environment and products with improved performance in terms of environmental friendliness, safety, and quality. Beginning in November 2016, however, we completely overhauled the content of measures implemented under the banner of Sumika Sustainable Solutions. We designate products and technologies based on nine requirements, including global warming countermeasures and environmental impact reduction, in order to manifest our active contributions to the creation of a sustainable society through our businesses. Through designation, we have ensured that our products and technologies are aligned with the SDGs.

A total of 34 products and technologies have been designated thus far, and these items drew ¥293.4 billion in net sales in fiscal 2016. Those products are expected to contribute to a reduction of greenhouse gases*1 totaling around 53 million tonnes over the course of their life cycles.

*1 This value represents the amount contributed to the reduction of greenhouse gases over the life cycles of certified products expected to be sold in fiscal 2020, based on the guidelines of the Japan Chemical Industry Association and the ICCA.

Addressing Global Climate Change

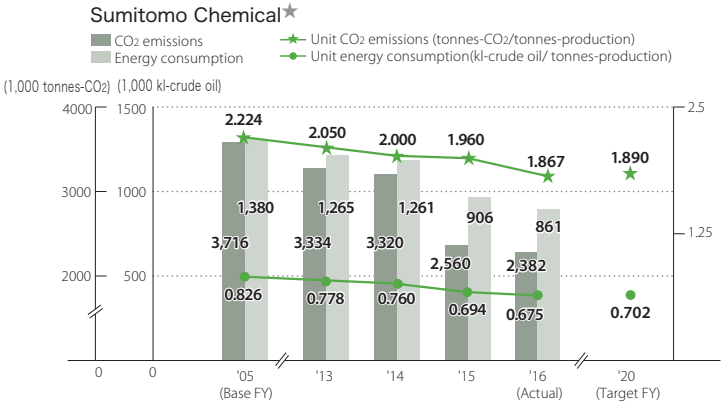
In November 2016, the Paris Agreement entered into force, obliging over 190 nations and organizations to reduce greenhouse gas emissions and strive to keep the rise in the average global temperature below 2° C compared to preindustrial levels. It is very important to both realize a sustainable society through economic development and deal with climate change, including extreme weather events that severely impact our lives on a global scale, by mitigating the effects of such change and adapting to new realities.

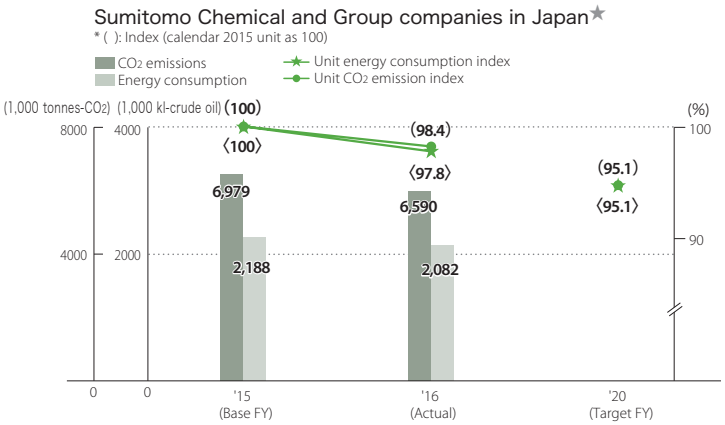
To reduce greenhouse gas emissions at our domestic Works, we are replacing old equipment, rationalizing production processes, installing energy-saving equipment, introducing LED lighting, and improving activities so that employees can save more energy. We have also begun working with experts mainly to cut the energy usage of equipment that is highly specialized and difficult to upgrade, such as the equipment in clean rooms.

The energy managers of each Works share the status and other useful information pertaining to these activities at periodical meetings and are working to reduce greenhouse gas emissions across the Company.

Thanks in part to these efforts we reduced energy consumption 45 thousand kl (crude oil basis), and CO_2 emissions from energy sources 178 thousand tonnes year on year in fiscal 2016.

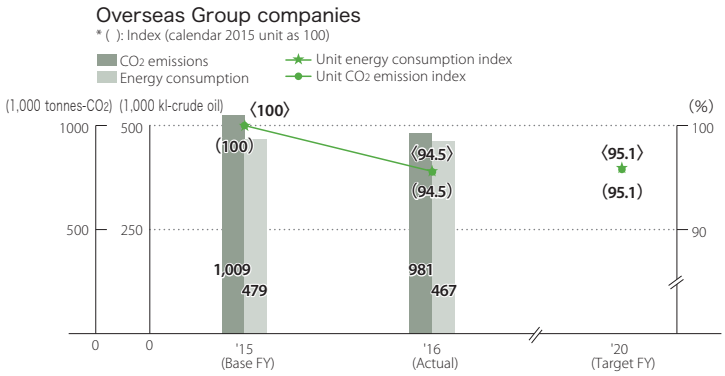
Trends in Energy Consumption, Unit Energy Consumption, CO_2 Emissions from Energy Use, and Unit CO_2 Emissions





Note: CO_2 emissions and energy consumption for fiscal 2015 and 2016 include the CO_2 emissions and energy consumption related to the production of electricity and steam that Sumitomo Joint Electric Power Co., Ltd. sold to Sumitomo Chemical, Group companies in Japan and companies outside the Group.

★: Assured by an independent assurance provider



Data by Scope

Sumitomo Chemical's emissions by scope in fiscal 2016 are shown below. For scope 3 data, indirect greenhouse gas emissions from business activities throughout the supply chain are calculated separately by category and then added together.

Status of CO_2 Emissions by Scope (Sumitomo Chemical)

Category classification	Emissions (1,000 t-CO_2/year)
Scope 1 (direct emissions) ★	1,294
Scope 2 (indirect emissions from energy use) ★	1,183
Scope 3 (other indirect emissions, upstream and downstream)	3,641

Note: Scope 1 includes CO_2 and N_2O (CO_2 equivalent) emissions from non-energy sources

Status of Scope 3 GHG Emissions (Sumitomo Chemical)

Category	Emissions (t-CO_2/year)
1. Purchased goods and services★	1,480,000
2. Capital goods	107,000
3. Fuel- and energy-related activities not included in Scope 1 and 2★	207,000
4. Upstream transportation and distribution★	55,500
5. Waste generated in operations★	19,400
6. Business travel	3,680
7. Employee commuting	7,140
8. Upstream leased assets	660
11. Use of sold products★	34,200
Other (downstream)	1,726,000

Note: From fiscal 2016, the scope of calculation for category 1 (purchased goods and services) changed from around 80% of purchased raw materials to around 90%. Calculated using the previous manner, emissions would total 1,210,000 t-CO_2.
Other (downstream) is the total of Category 9 (downstream transportation and delivery), Category 12 (waste disposal of sold products), and Category 15 (investment).

The BioCarbon Fund

Sumitomo Chemical finances afforestation projects in developing countries and poverty-stricken countries through the World Bank's BioCarbon Fund.*1 These projects are geared to contribute to the restoration of abandoned land, the conservation of water resources, biodiversity conservation, and the reduction of greenhouse gases.

Since participating for the first time in 2005, Sumitomo Chemical has been involved in multiple afforestation projects, which have led to a combined total of 175,000 tonnes in reductions in CO_2 emissions.

*1 BioCarbon Fund: This fund was established by the World Bank to finance projects to plant trees and preserve forests with the objective of acquiring CO_2 credits (emissions rights issued based on the volume of CO_2 reduced or absorbed as a result of projects designed to reduce greenhouse gases).

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Participation in COP22

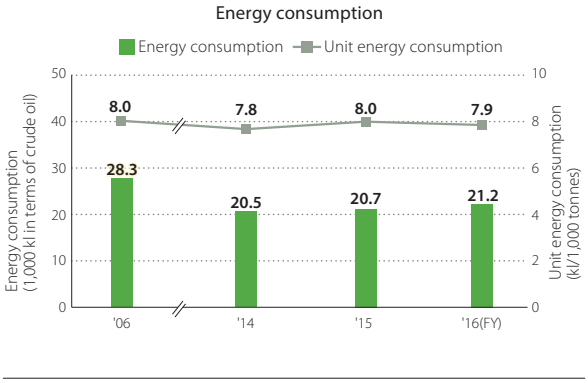
Understanding that climate change must be addressed, people are paying more attention to the development of products and technologies that can facilitate adaption to the changes. The Company's malaria prevention mosquito net Olyset™ Net was introduced as a tool for helping prevent a rise in malarial infections due to climate change at COP22, which was held in Morocco in November 2016, and Japan's Ministry of the Environment's Climate Change Adaption Platform, and other venues.
(http://www.adaptation-platform.nies.go.jp/lets/sumitomokagaku.html (Japanese only))

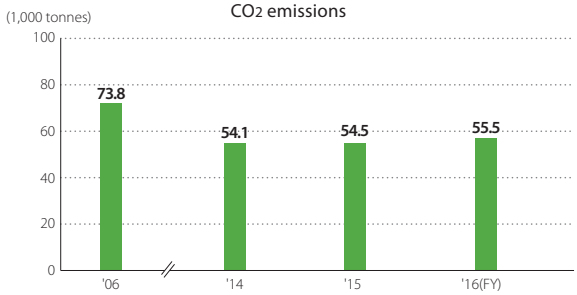
A speaker at COP22's Japan Pavilion during a session entitled, "Adapting to Climate Change: Can the Private Sector Lead the Way?"

Logistics Initiatives

Sumitomo Chemical continues to promote modal shift, or transportation by more efficient and environmentally friendly modes, such as rail and ship instead of trucks. In fiscal 2016, unit energy consumption fell by 1.0% compared with fiscal 2015. We continue to aim to improve unit energy consumption by 1% or more.

Reduction of Environmental Impact in Logistics Operations (Sumitomo Chemical) ★





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Environmental Performance

Sumitomo Chemical collates and totals environmental data for the Company and Group companies in Japan, including data on energy and resource consumption, production quantities, and environmental impact (e.g., release of pollutants into the air and water).

Primary Environmental Performance (Fiscal 2016)

Figures in black: Sumitomo Chemical and Group companies in Japan
Figures in green: Sumitomo Chemical

INPUT Energy and Resources

Water★

	(Millions of tonnes)	
Industrial water	66.1	60.6
Drinking water, etc.	0.8	0.4
Seawater	888.4	165.1
Groundwater	16.7	14.3
Other water	2.7	2.7
Total	974.7	243.1

Energy★

Calculated as kl of crude oil

	(Thousands of kl)	
Fuel, heat, and electricity*1	1,081*2	861

Exhaustible resources

	(Thousands of tonnes)	
Hydrocarbon compounds	1,779	1,525
Metals (excluding rare metals)*3	116	111
Rare metals*4	0.17	0.05

PCB/CFCs under Secure Storage

No. of electrical devices containing high concentrations of PCBs*5	61 units	26 units
PCB volume*5	1.0 kl	0.1 kl
No. of refrigeration units using specified CFCs as a coolant	45 units	13 units
No. of refrigeration units using HCFCs as a coolant	235 units	133 units

OUTPUT Product Manufacturing and Environmental Impact

Products★

	(Thousands of tonnes)	
(Calculated on the basis of ethylene production)*6	1,517	1,276

Water Pollutant Emissions★

		(Tonnes)	
COD	Coastal waters/waterways	977	900
	Sewer systems	185	85
Phosphorus	Coastal waters/waterways	34	31
	Sewer systems	5	4
Nitrogen	Coastal waters/waterways	1,478	1,381
	Sewer systems	36	28
Substances subject to the PRTR Act*7		52	51

Waste Materials★

	(Thousands of tonnes)	
Waste generated*8	255	48
Landfill*8	21	1.4
(Breakdown)		
On-site landfill	0	0
External landfill	21*8	1.4

Atmospheric Emissions★

	(Thousands of tonnes of CO_2)	
Greenhouse gases (seven gases)*1		
Emissions from energy use (CO_2)	2,979*2	2,382
CO_2 emissions from other than energy use	61	50
N_2O	125	45
HFC PFC*9 Methane Sulfur hexafluoride NF_3	–	–

	(Tonnes)	
Others		
NOx	4,736	1,806
SOx	4,920	1,121
Soot and dust	166	41
Substances subject to the PRTR Act*7	454	262

*1 Up to fiscal 2011, the energy (kl in terms of crude oil) and greenhouse gases (all seven gases) indices were calculated using the computation method applied since the Company began collating environmental performance data (the types of energy targeted for calculation, greenhouse gas emission sources, and CO_2 emission coefficient differ partially from the Greenhouse Gas Emissions Accounting, Reporting, and Disclosure System based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures). In fiscal 2012, calculations were realigned to agree with the computation methods of the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

*2 In accordance with note 1, and in line with the change in computation method in fiscal 2012, figures for the amount of energy consumed and the amount of CO_2 emissions from energy use by Sumitomo Joint Electric Power Co., Ltd., a company that engages in power business activities, include the amount of energy consumed internally and the associated CO_2 emissions, but do not include the amount of energy consumed and the associated CO_2 emissions from the production of power and steam sold to external parties. If the amount of energy consumed and the associated CO_2 emissions from the production of power and steam sold to external parties by Sumitomo Joint Electric Power Co., Ltd. are included, the energy (kl in terms of crude oil) and CO_2 emissions from energy use indices for Sumitomo Chemical and Group companies in Japan would be 1,750 thousand kl and 5,323 thousand tonnes-CO_2 respectively.

*3 Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

*4 Calculations include the following seven rare metals: nickel, chromium, tungsten, cobalt, molybdenum, manganese, and vanadium. The supply structure for each of these rare metals is extremely fragile. These rare metals are subject to national stockpiling.

*5 Fluorescent lamps and mercury lamp ballast as well as contaminated substances (wastepaper, etc.), including PCB waste, are not included in unit and volume data.

*6 Certain assumptions were made in calculations due to the difficulty of obtaining weight-based figures for some products. In addition, the amount of power and steam calculated on the basis of ethylene production sold to parties outside the Sumitomo Chemical Group by Sumitomo Joint Electric Power Co., Ltd., a company that engages in power business activities, has been excluded. The figure for products of Sumitomo Chemical and Group companies in Japan (calculated on the basis of ethylene production) come to 2,121 thousand tonnes when the aforementioned is included.

*7 Calculated based on the amount released into water/the air of each substance subject to the Order for Enforcement of the PRTR Act (promulgated on November 21, 2008).

*8 The amount of coal ash generated at Sumitomo Joint Electric Power, which is included in "Waste emissions" and "Landfill" (Sumitomo Chemical and Group companies in Japan) is calculated on a dry weight basis.

*9 Outside the scope of reporting under the Act on Promotion of Global Warming Countermeasures

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Environmental Protection

Protecting the Atmosphere, Water, and Soil

Sumitomo Chemical and Group companies in Japan work to identify major environmental risks in each field in line with the latest laws and regulations, including the Air Pollution Control Act, Water Pollution Control Act, and Soil Contamination Countermeasures Act. We take measures to systematically reduce risks related to highly important and urgent matters.

Protecting the Atmosphere

● Reining in PM2.5* Emissions

We conduct detailed surveys of boilers, gas turbines, heating furnaces, dry furnaces, cracking furnaces, waste incinerators, and other such equipment, testing for emissions of VOCs and other gaseous atmospheric pollutants, soot, SOx, NOx, and hydrogen chloride, which are also the source of secondary particles and PM2.5. We strive to further reduce emissions for each source.

* Particulate matter of up to 2.5 μm in diameter

● Enhancing Fluorocarbon Management

We are executing a plan with a definitive deadline to completely phase out refrigeration equipment that uses CFCs and HCFCs as refrigerants. With regard to refrigeration equipment that uses HFCs as well, we have begun considering systematically switching over to equipment that uses HFCs with a low global warming potential or to non-CFC equipment.

We aim to dutifully adhere to this plan, which, in line with the Act for Rationalized Use and Proper Management of Fluorocarbons, includes devising ways of minimizing leaks when industrial refrigeration and air conditioning equipment is in use as well as taking thorough, swift action once problems related to equipment installation are uncovered.

● Emissions of Mercury into the Atmosphere from Waste Incinerators

We measured concentrations of mercury (both gas and particles) emitted into the atmosphere by our waste incinerators, which we own as assets, and completed a study of the impact of these emissions. The results have confirmed that mercury is being effectively removed by emission gas removal equipment, including bag filters and scrapers installed at incinerators, and that the concentration of mercury released into the atmosphere from any of our incinerators does not exceed the emission guidelines set under the Air Pollution Control Act.

Protecting Aquatic Environments

● Regulations for Reducing Total Water Emissions

We are continually working to reduce the impact of water emissions from our plants on Tokyo Bay and other closed coastal waters where regulations are in place for reducing the total water emissions of COD, nitrogen, and phosphorus. To help achieve the goals of the eighth basic policy on reducing total water emissions, which has a target fiscal year of 2020 and covers all prefectures in Japan, we will continue to work to treat water emitted by our Works.

● Promoting Safer and More Reliable Water Treatment

We have developed water treatment management technology that helps reduce our impact on the environment and are employing this technology to realize safe and reliable water treatment at all our plants.

Protecting the Soil Environment

Based on soil management conditions at Sumitomo Chemical business sites, we have established targets to prevent harmful substances (oil, heavy metals) from spreading beyond the boundaries of these sites. To this end, we have continued surveys and evaluations of soil contamination as well as remediation work on Group-owned land. We have also monitored groundwater close to our boundaries on a regular basis to confirm that levels of hazardous materials, including heavy metals and oils, are below those stipulated by environmental standards.

Thorough Waste Management and the Reduction of Landfill Waste ★

Sumitomo Chemical and Group companies in Japan work in unison to make industrial waste treatment more transparent and to properly manage it. We have worked to help achieve the goals of the Japan Business Federation's voluntary environmental action plan, a major industry initiative. Among these goals was to reduce the amount of industrial waste sent to landfills to 70% below the fiscal 2000 level by fiscal 2020. In addition, we set in-house reduction targets and work to reduce the amount of waste generated and promote recycling.

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In fiscal 2016, landfill waste was 1.4 thousand tonnes on a non-consolidated basis and 21 thousand tonnes for Sumitomo Chemical and Group companies in Japan, representing reductions well beyond the targets of the above-mentioned action plans.

We will formulate new targets for fiscal 2017 onwards and continue to properly manage waste and reduce landfill waste.

Processing PCB Waste

As for both high- and low-concentration PCB-containing waste, the entire Group is stepping up its equipment surveys, seeking to identify PCB-containing devices currently in use, including condensers, transformers, and stabilizers. In addition, we are disposing of waste in line with the regulations stipulated in the Act on Special Measures against PCB Wastes.

Promoting the Effective Use of Water

The Sumitomo Chemical Group recognizes that the importance of water as a limited natural resource is a global issue. We strive to reduce the amount of water we use by examining more effective ways to use water by application, while continuing to maintain and improve the quality of water released from our business sites into public water resources such as the ocean and waterways.

Water Usage (Sumitomo Chemical, Overseas Group Companies)

(Millions of tonnes)

	FY2015	FY2016 (Actual)
Sumitomo Chemical★	282	243
Overseas Group companies	6.99	7.09

Note: From the fiscal 2015, the figures are retro actively adjusted as for the Group companies listed in page 2.

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Biodiversity Preservation Initiatives

Taking biodiversity into consideration is one of Sumitomo Chemical's most important pillars as it strives toward building a sustainable society. We actively participate in a private-sector biodiversity partnership while giving considerable thought to what we should be mindful of as a chemical company. We are also expanding individual activities at Group companies.

Example Activities

- Promoting "Sumika Sustainable Solutions"
- Improving energy efficiency, recycling resources, promoting the 3Rs, encouraging CSR procurement
- Undertaking environmental impact assessments at the planning stage for new plant construction and implementing countermeasures
- Implementing environmental protection projects jointly with NGOs
- Complying with internal safety management regulations pertaining to the use of genetically modified organisms
- Undertaking proper management of chemical substances

Sumitomo Chemical's Commitment to the Conservation of Biodiversity

1. We position the conservation of biodiversity as one of our most important management issues and strive to help protect the global environment.
2. We work to continuously reduce environmental impact in our production operations and our development and supply of products and services and in cooperation with third parties in the supply chain and thereby contribute to the conservation of biodiversity.
3. By regularly implementing education programs, we ensure that employees fully recognize and understand the importance of biodiversity and promote our commitment to its conservation.
4. We continuously engage in corporate social responsibility activities that contribute to environmental protection and lead to greater trust and confidence from society.
5. We disclose the results of these efforts and maintain effective communication with the general public.

Looking Ahead

To effectively use the earth's limited resources and shift to a sustainable society, we must fulfill our ever expanding role in the field of environmental conservation.

The Sumitomo Chemical Group aims to further reduce environmental risks through measures intended to address environmental conservation issues. These measures are centered on ongoing strict risk management, adherence to domestic and overseas regulations, careful monitoring of environmental trends, and promoting proactive and effective voluntary activities.

Product Responsibility / Product Stewardship

Basic Stance

Product Stewardship at Sumitomo Chemical

Under its Corporate Policy on Safety, the Environment and Product Quality, Sumitomo Chemical promotes product stewardship*1 and works to provide products and services that satisfy customers and can be used with peace of mind.

To achieve the 2020 target*2 proposed at the World Summit on Sustainable Development (WSSD) in 2002, it is now time for chemical management to be risk-based in regard to laws and regulations as well as company efforts to promote product stewardship on a global basis.

To achieve the 2020 target, Sumitomo Chemical lends its full support to voluntary initiatives to enhance product stewardship, including the Global Product Strategy (GPS)/Japan Initiative of Product Stewardship (JIPS)*3 put forward by chemical industry associations, including the International Council of Chemical Associations (ICCA) and the Japan Chemical Industry Association. As a promoter of these initiatives, we actively participate in capacity-building activities, conduct risk assessments of our products, and perform risk-based management.

*1 Product stewardship: The assessment of risks and protecting people's health and the environment from those risks throughout the product life cycle, which encompasses the entire supply chain from the development of chemical products to manufacture as well as sale, use/consumption, and disposal.

*2 2020 target: Ensure that chemicals are used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment.

*3 GPS/JIPS: Initiatives that call on companies to conduct risk assessments of their products and to engage in appropriate chemical management based on risk in order to minimize risks throughout the supply chain. Under GPS/JIPS, toxicological information on chemical products is disclosed to the general public, including customers.

Ensuring Thorough Compliance

Sumitomo Chemical Group conscientiously adheres to various laws and regulations related to the manufacture, import, export, and sale of goods. We are working to ensure thorough compliance throughout our entire globally expanding group of companies.

Quality Assurance

To supply products and services of stable quality to our customers, the Group maintains its commitment to further improving product quality and is continually enhancing its global quality assurance system, which is tailored to each product.

Overview of Initiatives

Risk Assessment and Management throughout the Entire Product Life Cycle

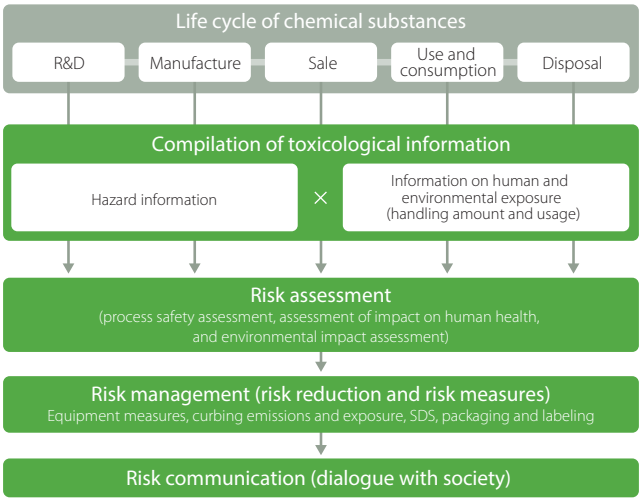
Sumitomo Chemical supports the Ministry of the Environment's Eco-First program, having pledged to systematically conduct appropriate risk assessments for its products manufactured or sold in annual amounts of one tonne or more by fiscal 2020 in line with the voluntary initiatives (GPS/JIPS) adopted by chemical industry associations. The results of the assessment are compiled into a safety summary and made publicly available online, including on ICCA's portal website http://icca.cefic.org/.

In conducting chemical risk assessments, it is necessary to collect information regarding the hazards associated with each product and the levels of human and environmental exposure when products are handled. We have created a collaborative framework centering on the Responsible Care Department and encompassing the frontlines of production and our internal research laboratories, which possess specialized technologies in risk assessment and safety engineering. To estimate exposure levels, the Company draws on projection models and expert insights in Japan and overseas and has developed its own simulation program. We also use the latest technology to efficiently conduct highly precise risk assessments. In line with our internal rules, during the development of new products, we collect data regarding risks and hazards for all handled substances before entering the production stage and survey and respond to all relevant laws and regulations.

As for risk assessments of product safety, it is necessary to assess the risks of chemical substances in products as well as the risks associated with product applications and uses. Taking into consideration not only their use by our direct customers but also the use and disposal of such products by their end-users as well, we conduct risk assessments of applications and uses using failure mode and effects analysis (FMEA) and other methods in addition to the above-mentioned chemical substance risk assessments. The Company rigorously assesses products slated for launch prior to marketing them and reassesses items already being sold. In fiscal 2016, we performed 88 risk assessments, including for high-risk products.*4 In the seven-year period from fiscal 2010 to 2016, we assessed a total of 403 products and checked the implementation status of risk reduction measures. We strive to ensure product safety risks are properly managed throughout the entire Group.

*4 High-risk products: Products likely to have relatively high risks due to the nature of the chemical substances the product contains and the product's application.

Risk-Based Chemical Management throughout the Entire Life Cycle



The Information Sharing System and Ensuring Thorough Compliance

The governments of Europe, the United States, and China hold considerable sway over trends in global laws and regulations. To ensure thorough compliance, we post product stewardship specialists at our regional headquarters in these areas and are constructing a system to swiftly collect information related to regulatory trends. And as for South Korea and Taiwan, both of which have recently seen rapid and major changes in the legislative environment, together with group companies, we are collecting information through local chemical associations around the world.

As a response to the REACH regulation in Europe, which is a world leader in terms of laws and regulations, we are moving forward with appropriate legal registration, managing our supply chain, and transferring data. In addition, our local Group company Sumitomo Chemical Europe is drawing up letters about its registration status in response to its customers' wishes as well as a declaration of conformity, which states the status of compliance and certificate acquisition with regard to various regulations.

In fiscal 2016, there were no reports of violations of regulations or self-imposed restrictions for Sumitomo Chemical products and services at any stage of their life cycles. There were no reports of violations of regulations or self-imposed restrictions regarding information or labeling for products or services.

Effective Use of SuCCESS

In order to appropriately manage and effectively use information on chemicals handled by the Company, such as their composition, toxicological information (risks and hazards), and regulatory requirements, Sumitomo Chemical has developed the comprehensive chemical management system (SuCCESS).*5 This system is used in order to respond to inquiries from customers concerning substances contained in our products and precisely comply with laws and regulations in Japan and around the world. We also use this system to create SDS*6 in around 40 languages to comply with GHS*7 and accurately and efficiently communicate hazard information throughout the supply chain. This system is also being proactively rolled out to Group companies. We had installed the system at nine Group companies in Japan and overseas as of fiscal 2016.

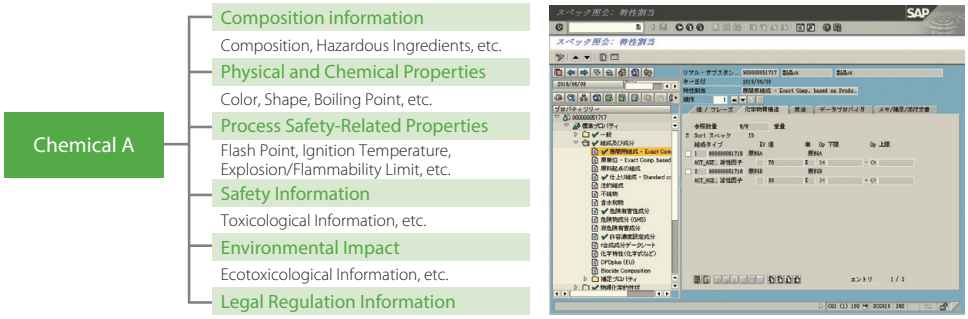
*5 Sumitomo Chemical Comprehensive Environmental, Health & Safety Management System (SuCCESS)

*6 Safety Data Sheets (SDS): SDSs include information on the safe handling of chemical products (properties, handling methods, safety measures, etc.) and should be created in compliance with the Japanese Industrial Standards (JIS) and the standards set by the International Organization for Standardization (ISO).

*7 Globally Harmonized System of Classification and Labeling of Chemicals (GHS): In 2003, the United Nations established these global rules for how to convey information about the classification and degree of hazards for chemical substances.

SuCCESS comprehensive chemical management system

Management of chemical composition, toxicological, regulatory information based on tree-shaped structure



Careful Consideration for Animal Studies

In the process of developing useful chemical substances, a large variety of safety assessments are required. With this in mind, Sumitomo Chemical is actively developing new assessment methods, including structure-activity relationship approaches, and minimizing the use of laboratory animals for safety assessments. However, assessments on humans, animals, and the environment cannot be completed without conducting experiments using laboratory animals. Sumitomo Chemical advocates the humane treatment of laboratory animals and applies the 3Rs of replacement, reduction, and refinement to conduct animal studies appropriately with due consideration for animal welfare.

Providing Stable Quality Products and Services

The Sumitomo Chemical Group is proud to provide its customers with products and services from a variety of fields centered on chemicals. In order to continue to supply its customers stable quality for all our products and services, we have established quality assurance systems based on quality management systems and manufacturing and quality management guidelines, such as ISO 9001*8 and GMP,*9 appropriate for each product and service. In addition to maintaining thorough day-to-day product quality control, we are committed to further improving product quality.

Unfortunately in fiscal 2016, one major quality problem with our products occurred at Sumitomo Chemical and two at consolidated Group companies. Working to determine the causes of each of these problems, we are promoting strict preventive measures.

In order to continue supplying products and services of stable quality worldwide while addressing growing supply chain diversification accompanying its business expansion and the increasingly sophisticated needs of customers, the Group is enhancing its global quality assurance system through measures that include strengthening management of overseas suppliers and contractors. We are also improving quality assurance at all Group companies through developing countermeasures to quality issues by sharing relevant information about incidents occurring within the Group and sharing information on the state of product quality and safety at Group companies.

*8 ISO 9001: The international standards on quality management systems issued by the International Organization for Standardization (ISO).

*9 Good Manufacturing Practice (GMP): Guidelines relating to manufacturing and quality management of pharmaceuticals.

Looking Ahead

In line with its Eco-First commitments, Sumitomo Chemical promotes appropriate risk-based chemical management and is working to achieve its goal of completing risk assessments of all Group products and confirming the effectiveness of related strategies and measures by fiscal 2020.

In response to strong social demand for the proper management of chemicals, the establishment and revision of laws and regulations relating to chemical management are expected to pick up in even more countries and regions in the near future. Closely collaborating with Group companies in Japan and overseas, Sumitomo Chemical consistently undertakes thorough compliance initiatives that involve carefully studying information on the regulatory trends as well as enhancing the functions of its comprehensive chemical management system (SuCCESS).

To improve customer satisfaction, the entire Group will continue to work to sustain its product and service quality improvements and to achieve an optimal product quality assurance system amid changing business conditions.

Occupational Safety and Health / Industrial Safety and Disaster Prevention

Basic Stance on Occupational Safety and Health

Sumitomo Chemical's core principle is "Making safety our first priority." The Company uses the following three guidelines and five fundamental and personal principles in achieving this goal.

(1) Line management is fundamental to Safety and Health.

(2) Each person is responsible for Safety and Health.

(3) Sumitomo Chemical is united with partner companies on Safety and Health.

Five fundamental and personal safety principles that each employee is expected to follow.

- I will give safety and health the top priority in every aspect of business.
- I will identify and resolve safety and health issues at the source.
- I will comply with rules and instructions.
- I will act with safety in mind 24 hours a day, not just during working hours.
- I will cooperate with all involved parties, including partner companies to ensure safety and health.

Initiatives to Prevent Labor Accidents

In fiscal 2016, there were two lost-workday injuries among Sumitomo Chemical employees, up two injuries year on year, and ten Sumitomo Chemical employee injuries that did not result in lost workdays, up one injury year on year. Sumitomo Chemical thoroughly investigates the causes of each accident and works to prevent accidents by taking such measures as ensuring strict adherence to safety rules, providing hazard prediction training, also known as Kiken Yochi Training (KYT), and sharing accident information.

Ensuring Thorough Compliance with the Sumitomo Chemical Group's Basic Safety Rules (Ground Rules)

In light of trends in the causes of accidents, the Group has established the following ground rules and is working to ingrain safe behavior.

1. Think Before You Act!
2. Help each other to be more aware of unsafe actions
3. Do not place hands in or around areas of working machinery / equipment

Improving Hazard Prediction Abilities

We are working to improve employees' hazard prevention ability—their ability to perceive and avoid danger—through, for example, behavior based safety training and workplace discussions using illustrations.

Sharing and Using Accident Data

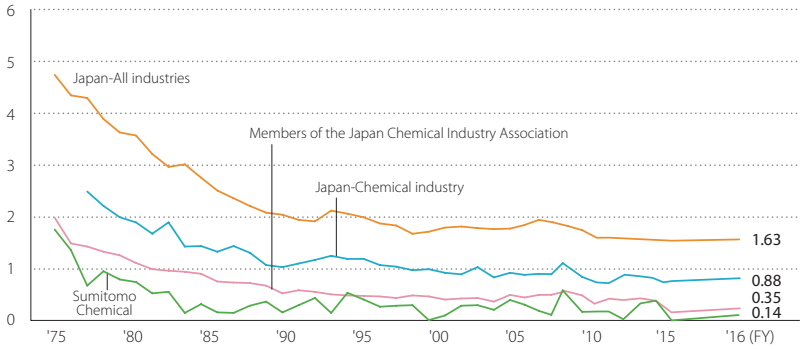
The Group shares information about all accidents mainly for use in safety education and comprehensive on-site investigations. When an accident occurs, we conduct a thorough examination of the causes and organize studies on how to prevent recurrences through on-site inspections with the top management of the affected workplace and safety managers.

Opinion Exchanges

Ever year we organize several domestic and global RC meetings for information sharing and opinion exchanges by region, by business sector, and by purpose.

Occupational Safety and Health / Industrial Safety and Disaster Prevention

Frequency Rate of Lost-Workday Injuries (Sumitomo Chemical)★



Lost-Workday Injuries (Sumitomo Chemical Group *1)

	FY2013	FY2014	FY2015	FY2016
Number of lost-workday injuries	12	10	15	9
Frequency rate of lost-workday injuries	0.19	0.16	0.24	0.14

*1 Employees of Sumitomo Chemical, its partner companies, and its Group companies in Japan and overseas

Note: Data for previous fiscal years has been retroactively adjusted to enhance accuracy.

Awards for Safety

Safety awards are given to workplaces that achieve zero lost-workday injuries. The President's Award for workplace safety is presented to workplaces with both a solid safety track record and good practices for safety and health, which could be an example to other workplaces. The president's award was given to eight workplaces in fiscal 2016.

Safety Promotion through In-house Magazine, Slogan and Poster

In our in-house magazine, we have introduced examples of accidents that tend to happen at work and their preventive measures in a series of articles on enhancing safety since fiscal 2013. We also collect ideas each year for a slogan and a poster for safety and health, and make a poster using the best ideas and display it at each workplace to raise safety awareness.

Looking Ahead

Based on the core principle of "Making safety our first priority" all of the Sumitomo Chemical Group's employees will continue working hard to proactively and effectively carry out safety activities.

★: Assured by an independent assurance provider

Basic Stance on Industrial Safety and Disaster Prevention Management

The foremost mission of industrial safety and disaster prevention management is to prevent unforeseen industrial accidents, including fires, explosions, and the leakage of hazardous substances. At the same time, every effort must be made to minimize damage in the event of a natural disaster such as a major earthquake. Through these means, the Company is committed to securing the safety and peace of mind of employees and local communities. With this in mind, Sumitomo Chemical takes voluntary steps to put in place a safety management structure, undertakes stringent risk assessments of manufacturing plants and R&D projects, and works to continuously strengthen safety measures based on its evaluation of risks.

Fiscal 2016 Industrial Safety and Disaster Prevention Results

The Sumitomo Chemical Group achieved the target of "no severe industrial accidents"*1 in fiscal 2016 just as it did in fiscal 2014 and 2015.

However, there were six industrial accidents, which are minor accidents whose scale does not reach that of a severe industrial accident, in fiscal 2016. We will work to enhance safety management and quickly share the causes of the industrial accidents and the lessons learned across the entire Sumitomo Chemical Group.

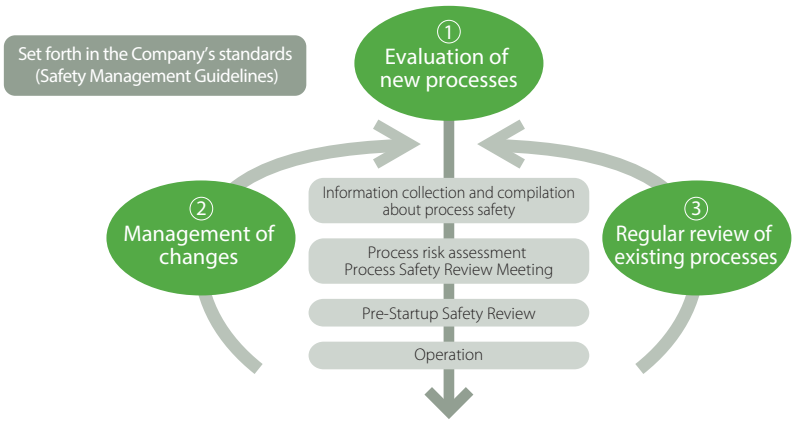
*1 "Severe industrial accidents" refers to any of the following workplace incidents:

- Accidents that cause injuries to local residents requiring outpatient/hospital treatment
- Accidents that result in lost-workday injuries to workers on the site
- Accidents that result in equipment and facility damage exceeding ¥10 million

Process Safety Management

Sumitomo Chemical performs process safety assessments at each stage from new chemical process R&D to plant design, construction, operation, maintenance, and even demolition. The items and procedures essential to safety assessment are specifically outlined in the Safety Management Guidelines that provide the standard for the Company.

Process Hazard Management (three routes)



(1) Evaluation of new processes

The Process Safety Review Meeting (levels 1 to 5) convenes at every step, from R&D through to industrial-scale production. These meetings are held to review that process safety assessment results and whether safety countermeasures are appropriate. This mechanism ensures that processes do not proceed to the next step unless adequate safety has been confirmed.

(2) Management of changes

When certain changes are made to, for example, improve plant facilities or modify operating conditions, the Company conducts all necessary safety assessments before such changes are made to ensure process safety levels are maintained after each change has been completed. As this system is utilized within the Company, it is well-known among Group companies and continues to ensure a process safety throughout the organization.

(3) Regular review of existing processes

Even when there is no change in the process, Sumitomo Chemical conducts regular reviews to catch up with the latest information on industrial safety technologies and to check whether there will be a significant impact from the long-term use of a plant.

Furthermore, Sumitomo Chemical does not just identify potential risks in regular operations, it also shines a light on irregular operations, such as emergency shutdowns of plant operations and subsequent restarts. Since 2012, we have been working to strengthen our capabilities to comprehensively identify process risks.

These efforts are not focused on achieving short-term goals. We incorporate lessons learned through our activities and achievements into the "Safety Management Guidelines" (revised in March 2017) to strengthen our capabilities of process safety assessment.

Earthquake Countermeasures

Sumitomo Chemical drew up a basic plan on earthquake countermeasures in 2004 taking the initiative to improve the earthquake resistance features of equipment and structures that were especially susceptible to the risk of damage.

Furthermore, in accordance with recent directives by government authorities to improve the seismic adequacy of existing facilities, we made a plan to obtain required earthquake-resistant features of critical high-pressure gas equipment and are carrying out reinforcements and reconstruction in line with the plan. Before carrying out this work, we took measures to reduce risk and ensure safety, such as reducing the volume of gas held in equipment in order to decrease its weight and meet the earthquake resistance criteria.

Industrial Safety and Disaster Prevention Education

Sumitomo Chemical has a variety of industrial safety and disaster prevention educational programs that reflect the operational roles of employees throughout the Company. The programs are aimed at bolstering the ability of employees to acquire knowledge and skills in order to ensure process safety.

In addition, we provide education to Group companies in Japan suited to each company's needs.

For example: Risk assessment method (HAZOP: Hazrd and Operability Studies) education.

Examples of Industrial Safety and Disaster Prevention Education

Name	Type	Purpose
In-House Safety Management System Education	e-learning	Fostering a deep understanding of the basic rules of safety management (the "Safety Management Guidelines")
Disaster Prevention Theory	Group Training	Promoting the acquisition of basic knowledge regarding safety and disaster prevention (for fires, explosions, reaction hazards, static electricity, etc.)
Fire and Explosion Training	Group Training and Self Study	Promoting the acquisition of knowledge to prevent accidents and perceive hidden dangers in the workplace through hands-on training related to fires and explosions
Company-wide Safety Education	Group Training	Training that covers the latest topics each fiscal year (The training in fiscal 2016 aimed to promote the acquisition of basic knowledge regarding static electricity safety and to raise awareness of the revised content of the "Safety Management Guidelines.")

Initiatives for Ensuring Safety in Logistics Operations

The Sumitomo Chemical Logistics Partnership Council was formed by Sumitomo Chemical and the logistics subcontractors (84 companies at 114 locations) for the Sumitomo Chemical Group companies in Japan. The Council maintains committees for Works in each area as well as for logistical centers (transport and storage) and marine transport-related operations nationwide. The Council is expanding the Logistics Department's Responsible Care activities. With regard to the transport of hazardous substances in tanker trucks and other vehicles, the Council annually holds a nationwide competition for tanker truck drivers as well as training workshops for instructing drivers on the basics of unloading trucks and on what to do when problems arise. In fiscal 2016, while we were able to achieve zero lost-workday injuries, there were two non lost-workday injuries. We will take various measures to improve the situation toward our goal of absolutely zero accidents.

Workplace Injuries in Logistics (in Japan)

(Number of cases)

	FY2012	FY2013	FY2014	FY2015	FY2016
Lost-workday injury	1	1	1	3	0
Non lost-workday injury	0	0	0	1	2

Note: Accidents caused by logistics subcontractors on the premises of Sumitomo Chemical workplaces and accidents caused by major logistics subcontractors outside the premises of Sumitomo Chemical workplaces.

Industrial Safety Action Plan

Industry organizations came together with the Japan Petrochemical Industry Association and drew up an industrial safety action plan in July 2013 in a bid to step up efforts aimed at promoting industrial safety. Here we introduce the Company's initiatives based on the action plan.

(1) Commitment by top management to industrial safety

- Sumitomo Chemical has identified efforts to ensure full and strict compliance and maintain safe and stable operations as one of the Group's priority management issues under its Corporate Business Plan.
- The president issues a safety week message to all employees and Group companies in Japan and overseas to coincide with National Safety Week, which begins on July 1 each year.
- We have held the President's Awards for workplace safety on a continuous basis since fiscal 2012.

(2) Setting industrial safety targets

- Each year, Sumitomo Chemical sets targets for a variety of key parameters, including the elimination of all accidents resulting in lost workdays as well as all severe industrial accidents. The Company engages in a broad spectrum of activities aimed at achieving these targets.

(3) Drawing up an action plan to secure industrial safety

- Sumitomo Chemical pursues activities aimed at thoroughly identifying industrial safety risks that encompass regular and irregular operations.

(4) Checking and evaluating progress toward achieving targets and implementing measures

- The Responsible Care Committee (see page 14 "Organization for Responsible Care Activities") reviews progress toward the achievement of targets and the implementation of measures. Findings under this review are reflected in the plan for the next fiscal year.

(5) Initiatives aimed at promoting voluntary safety activities

- The Sumitomo Chemical Group established the ground rules related to safety and strives to foster a culture of safety.
- Sumitomo Chemical designates one day each month as a "safety day" in an effort to continuously focus the attention of the entire Group on the importance of industrial safety.
- Academic experts conduct seminars and undertake an evaluation of safety assurance capabilities by the Process Safety Competency of Japan for Safety Engineering.

Looking Ahead

Sumitomo Chemical will enhance measures to improve existing risk assessment methods and provide guidance and support to Group companies regarding risk assessment methods. We will continue working to further raise the level of industrial safety and disaster prevention management and promote greater awareness across the Group of the following matters: "managers of each level check the real situation to see whether instructions and countermeasures are firmly in place," "strengthen workers' thorough checking capability," "when on a team, being aware of each other's unsafe actions," and "building up basic knowledge and experience and honing skills."