



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

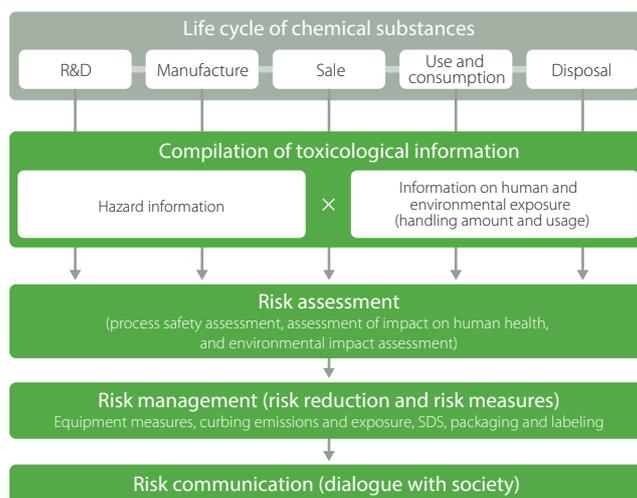
Sumitomo Chemical supports the Ministry of the Environment's Eco-First program, having pledged to systematically conduct appropriate risk assessments for its products manufactured or sold in annual amounts of one tonne or more by fiscal 2020 in line with the voluntary initiatives (GPS/JIPS) adopted by 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.

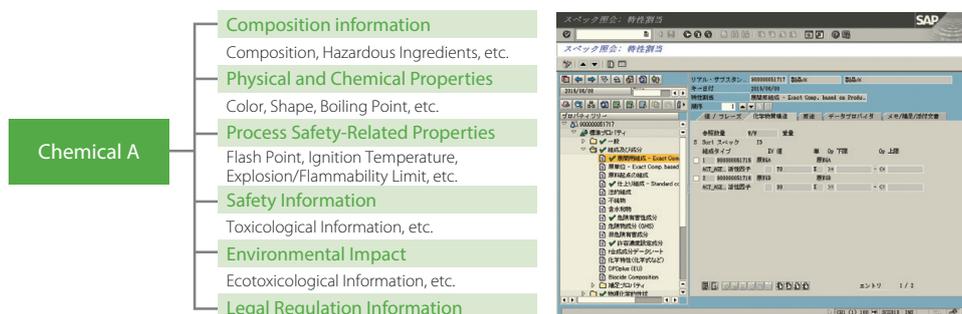
*5 Sumitomo Chemical Comprehensive Environmental, Health & Safety Management System (SuCCESS)

*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 (SuCESS).

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.