

# Environmental and Social Report 2013

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2013 Environmental and Social Report  
(Previous issue: June 2012)  
Issued June 2013  
(Next issue: scheduled for June 2014)  
Shin-Etsu Chemical Co., Ltd.  
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welcomed at our website:  
**URL:** <http://www.shinetsu.co.jp/en/company/csr.html#environment>



**Corporate Mission Statement**

The Group strictly complies with all laws and regulations, conducts fair business practices and contributes to people's daily lives as well as to the advancement of industry and society by providing key materials and technologies.

**Basic CSR Policy**

The Shin-Etsu Group:

- 1 Will do our best to increase the Group's corporate value through sustained growth and make multifaceted contributions to society.
- 2 Will carry out all of our company activities by making safety always our utmost priority.
- 3 Will constantly pursue energy-saving, resources-saving and the reduction of the environmental impact, and seek to help create a sustainable future world in which we all live in harmony with the Earth.
- 4 Will endeavor to contribute to the prevention of global warming and the conservation of biodiversity by means of our cutting-edge technologies and products.
- 5 Will strive to respect human dignity, assure equality in employment opportunities and support the self-fulfillment of our employees.
- 6 Will appropriately disclose information in a timely manner.
- 7 Will carry out trustworthy corporate activities that are based on the integrity of the Group's ethical values.

**Global Compact Ten Principles**

The Shin-Etsu Group joined the United Nations Global Compact (UNGC) in November 2010. The Group upholds the ten principles advanced by the UNGC in the four areas of human rights, labor, environment and anti-corruption.

- |   |   |
|---|---|
| <p>The Global Compact asks that businesses should:</p> <p>Principle 1: Support and respect the protection of internationally proclaimed human rights</p> <p>Principle 2: Make sure they are not complicit in human rights abuses</p> <p>Principle 3: Uphold the freedom of association and the effective recognition of the right to collective bargaining</p> <p>Principle 4: Uphold the elimination of all forms of forced and compulsory labour</p> <p>Principle 5: Uphold the effective abolition of child labour</p> | <p>Principle 6: Uphold the elimination of discrimination in respect of employment and occupation</p> <p>Principle 7: Support a precautionary approach to environmental challenges</p> <p>Principle 8: Undertake initiatives to promote greater environmental responsibility</p> <p>Principle 9: Encourage the development and diffusion of environmentally friendly technologies</p> <p>Principle 10: Work against corruption in all its forms, including extortion and bribery</p> |
|---|---|



\* CSR (Corporate Social Responsibility)  
The idea that enterprises, rather than concentrating solely on profit, need to value their relationships with a wide range of stakeholders in the conduct of their business.

**Editorial Policy**

The *Environmental and Social Report* provides information on environmental, safety and quality control programs and CSR initiatives carried out by the Shin-Etsu Group. The Report also describes Responsible Care programs<sup>1</sup> at the Shin-Etsu Group. The Report has been compiled in accordance with the *Environmental Accounting Guidelines 2005* and *Environmental Reporting Guidelines FY2012* released by the Ministry of the Environment, Japan, and the *GRI Sustainability Reporting Guidelines*.

**Period Covered by the Report (indicated where otherwise)**

Japan: April 1, 2012 to March 31, 2013  
Overseas: January 1, 2012 to December 31, 2012

**Organizations Covered by the Report**

The report covers the 143 companies of the Shin-Etsu Group. The range of entities from which data were collected is in principle as stated below. Where otherwise, this is indicated in a separate note.

**(1) Environmental Activity Report**

The report includes data from the 123 companies of the Shin-Etsu Group (an increase of 6). Compared to the coverage of the 2012 report, there is thus an expansion in scope and a difference in content.

- 63 domestic manufacturing bases
- 110 domestic non-manufacturing bases (decrease of 3)
- 47 overseas manufacturing bases (increase of 5)
- 57 overseas non-manufacturing bases (increase of 4)

**(2) Environmental Accounting**

Shin-Etsu Chemical Co., Ltd.

**(3) Management Structures, Relations with Society**

Shin-Etsu Group, except for the Shin-Etsu Polymer Group<sup>2</sup>

1 Responsible Care program  
A campaign encouraging enterprises that handle chemical substances to voluntarily ensure protection of the environment, safety and health in all processes, from the development of chemical substances through manufacture, distribution and utilization to final consumption, disposal or recycling, to publish the results of their activity, and to engage in dialog and communication with society.

2 For a report on the Shin-Etsu Polymer Group, see "Shin-Etsu Polymer Sustainability Report 2013" (to be published at end of September 2013).

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## Meeting the expectations of people around the world by contributing to society through our key materials and technologies

The Shin-Etsu Group has production bases all over the world. From these bases we are supplying a variety of key materials and products that contribute to the advancement of industry and society as well. We are seriously working on issues that are closely related to society, such as the safety and the environment by dedicating ourselves to carry out our business activities. In all of our business activities, we believe that it is our important corporate responsibility to contribute to the lives of people around the world who are supporting our businesses in various ways.

### Always placing our utmost priority on safety

“Safety first” is one of our core management objectives. We make sure that all of our board members and employees have a strong sense of consciousness about safety. To ensure safety in all of our manufacturing processes, we strictly adhere to operational procedures. We ceaselessly review our operation procedures and also work to continually find ways to improve them. In addition, we work to eliminate latent risks through means such as implementing the most appropriate facility design and making continuous improvements on them, improving production technologies, and reviewing and improving operation manuals as well as making sure that they are scrupulously observed. Furthermore, we are gathering and openly disclosing any concerns that our employees have felt in their daily work concerning possibly dangerous situations – what we refer to as “close-call incidents” – and endeavor to share this information.

### Working to protect the environment

In all phases of our business activities, including our manufacturing processes, production technologies and products, we are constantly endeavoring to reduce the environmental impact and save on the use of resources and promote energy saving.

- **Promoting environmental conservation and reducing the environmental impact**

We are working on the development and improvement of the Group’s manufacturing technologies through the Group’s horizontal technology committee, which is conducting studies from the point-of-view of environmental performance. Furthermore, with regard to greenhouse gases, in addition to the emissions emitted by the Shin-Etsu Group in its business activities, we began to estimate the emission amounts from the raw materials production that our Group uses to the disposal of the final products.

- **Products and technologies that help protect the global environment**

The Shin-Etsu Group’s main products, including PVC, semiconductor silicon, rare earth magnets, silicones and LED packaging materials, are contributing to energy saving in a wide diversity of fields. In addition, we are focusing on the research and development of products that will be essential for the widespread use of such renewable energy sources as solar and wind power.

### Practicing fair and highly transparent management

We have established strict internal control and audit systems. We have adopted a basic internal control policy that strictly meets the requirements of the Reporting System on Internal Control Over Financial Reporting – which is stipulated in the Japanese Financial Instruments and Exchange Act. We are also disclosing appropriate information. In addition, we are receiving advice and supervision of management from an objective, independent standpoint by appointing people as outside directors and outside audit & supervisory board member who are among the foremost figures in their respective fields and who possess deep insight and a wealth of business experience and knowledge. Furthermore, with regard to our auditing system, we have made the

Auditing Department an independent organization and have put in place a fair, objective auditing system.

### Strengthening our business continuity foundation

The Shin-Etsu Group has many products that have a dominant share in the world market. For this reason, we consider the stable supply of our products as our most important social mission, and for quite some time we have been implementing our strategy of globally dispersing our production bases so as to assure reliable supplies of our products to our customers. In this context, we have continually strengthened our preparations for such contingencies as natural disasters.

### Participating in the U. N. Global Compact

The Shin-Etsu Group signed the Responsible Care Global Charter of the International Council of Chemical Association (ICCA) in 2006, the global chemical industry’s environmental, health and safety initiative aimed at driving the continuous improvement of performance in these areas, and has been actively supporting and implementing these Responsible Care activities. In 2010, the Group became a participant in the United Nations Global Compact (UNGC) and has been voluntarily supporting and practicing in its business operations and strategies the UNGC’s 10 universally accepted principles with regard to the four areas including human rights, labour, environment and anti-corruption. These principles are in line with the Shin-Etsu Group’s mission and basic CSR (corporate social responsibility) policies. Going forward, we will continue to promote business activities that are in total conformity with these principles and will work to further strengthen trust between Shin-Etsu and people throughout the world.

### Focusing on making social contributions throughout the world

The Shin-Etsu Group carries out many different kinds of social contribution activities around the world and has nurtured trust relationships with local societies. One example is the staff members of Shintech Inc. in the U.S participate in non-profit charitable organizations. In the future as well, we will sincerely and proactively tackle the issues that society is seeking to deal with, and we will make strong efforts to solidly carry out our responsibilities as a good corporate citizen.

We sincerely would like to ask for your understanding and further support of the Shin-Etsu Group’s comprehensive endeavors to fulfill its responsibilities as a good corporate global citizen.

June 2013



**Chihiro Kanagawa, Ph. D.**  
Chairman

**Shunzo Mori**  
President

## Overview of the Shin-Etsu Group

We aim to become an enterprise group that is trusted by society. To this end, we strive to achieve world-leading standards of technology, quality and cost-competitiveness and engage actively in CSR initiatives

As of March 31, 2013, the Shin-Etsu Group comprises Shin-Etsu Chemical and 142 Group companies, which share responsibility for sales, manufacturing and other operations and cooperate to develop their respective business activities.

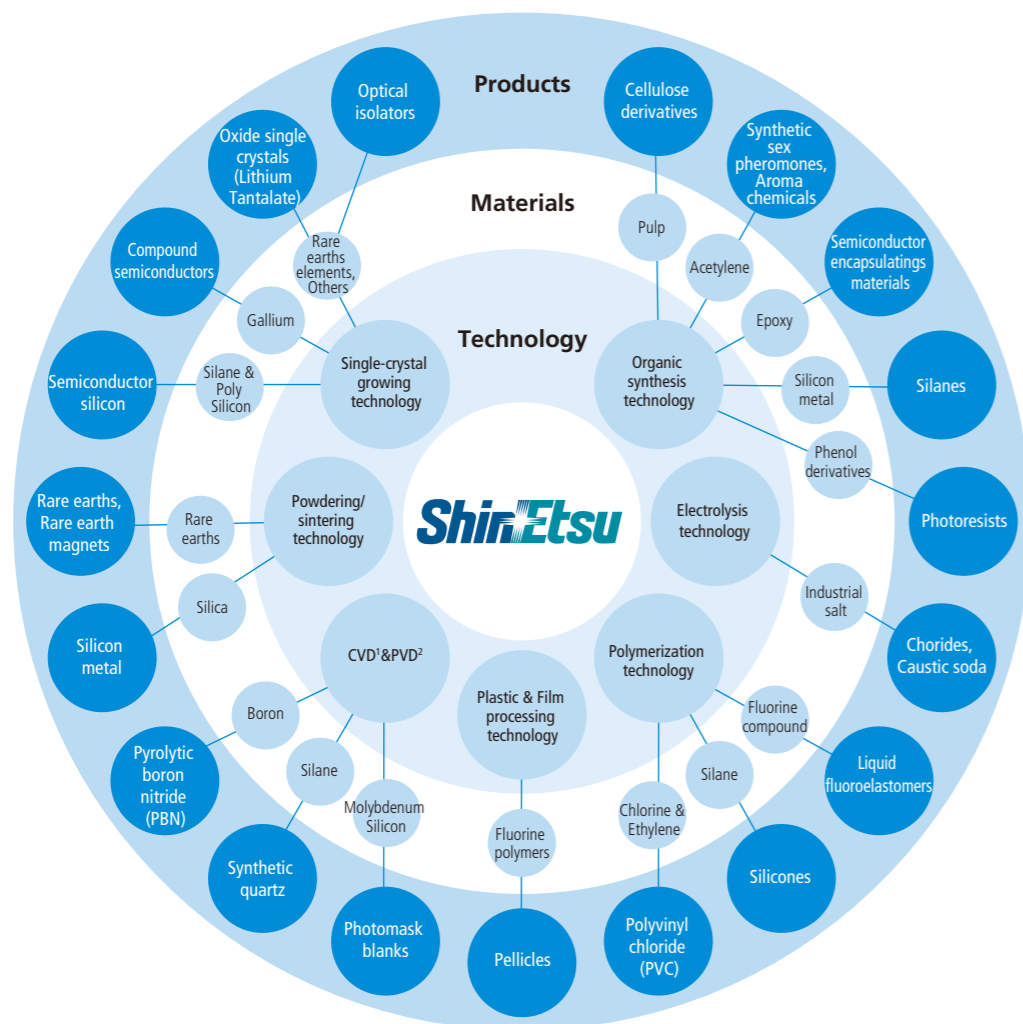
These business activities are divided into six fields: PVC/Chlor-Alkali Business; Silicones Business; Specialty Chemicals Business; Semiconductor Silicon Business; Electronics and Functional Materials Business; and

Diversified Business. In each of these fields, we have products with strong market share, with the world's top share in polyvinyl chloride (PVC), semiconductor silicones, photomask substrates for LCDs, and the top domestic share for silicones.

Shin-Etsu products are a familiar part of our everyday lives. Indeed, the Shin-Etsu Group plays an essential role in the modern advanced information society.

## Technology, Materials, Products Chart

Outstanding materials come from outstanding technology. The Shin-Etsu Group evolve into a variety of sophisticated technologies developed in the process of creating products that meet ever advancing and diversifying needs.

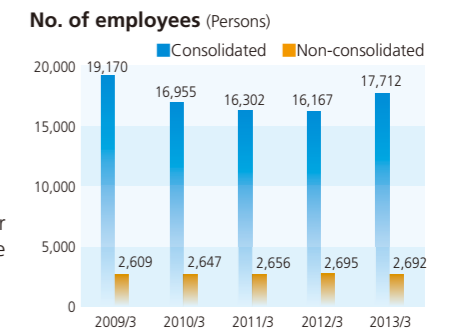


1 Chemical Vapor Deposition (CVD)  
A process for forming thin films on a substrate, involving gas energized by thermal, optical, or electromagnetic radiation to cause excitation or decomposition, and involving steps such as attraction, reaction, and dissociation.  
2 Physical Vapor Deposition (PVD)  
A method for forming thin films of material on a substrate, using originally solid substances vaporized by thermal or plasma energy.

## Corporate Overview

### Overview of Operations

**Trading name** Shin-Etsu Chemical Co., Ltd.  
**Location** 6-1, Ohtemachi 2-chome, Chiyoda-ku, Tokyo 100-0004, Japan  
**Established** September 16, 1926  
**Capital** 119,419 million yen  
**Representative** Shunzo Mori, President  
**Number of employees** 17,712 (consolidated) 2,692 (non-consolidated)  
**Business activities** Production and sales of polyvinyl chloride, semiconductor silicones, silicones, rare earth magnets, synthetic quartz, cellulose derivatives and other products



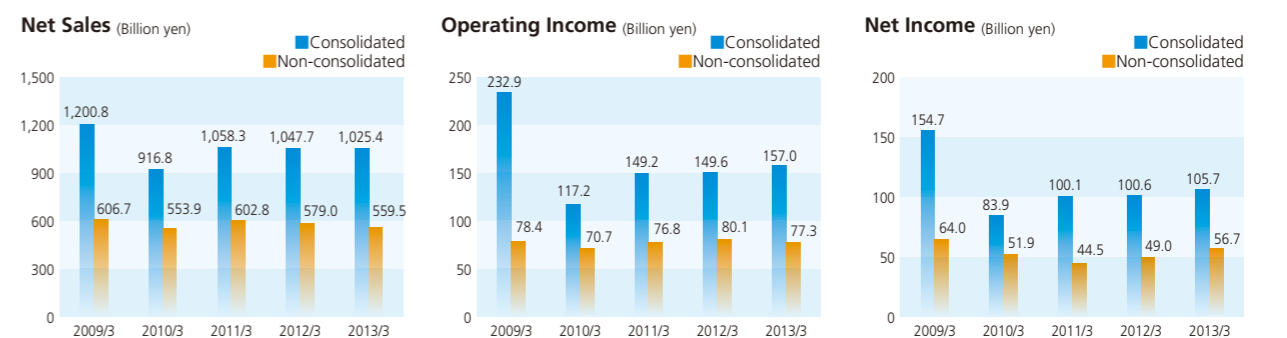
### Principal Shin-Etsu Group Companies

- Japanese Domestic Group**  
Shin-Etsu Chemical Co., Ltd., Shin-Etsu Handotai Co., Ltd., Shin-Etsu Polymer Co., Ltd., Shin-Etsu Engineering Co., Ltd., Nagano Electronics Industrial Co., Ltd., Naoetsu Electronics Co., Ltd., Shin-Etsu Astech Co., Ltd., and others
- Overseas Group**  
Shintech Inc., Shin-Etsu Handotai America Inc., S.E.H. Malaysia SDN. BHD., Shin-Etsu PVC B.V., SE Tylose GmbH & Co. KG, Shin-Etsu Handotai Europe Ltd., Shin-Etsu Handotai Taiwan Co., Ltd., and others

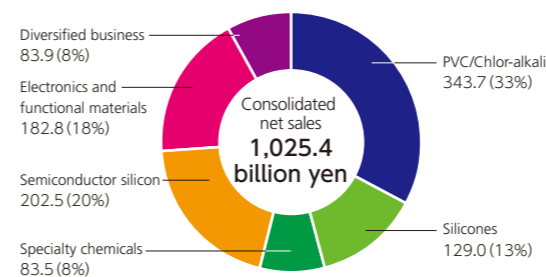
Rating: Aa3 long-term debt rating received from Moody's Investors Services

Full details of Shin-Etsu Group companies:  
<http://www.shinetsu.co.jp/en/company/profile.html>

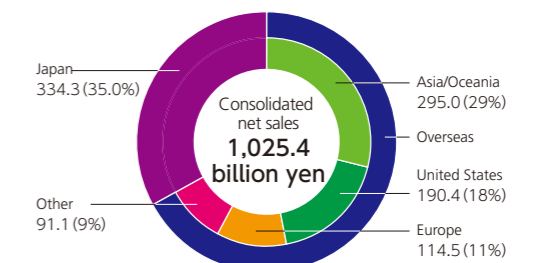
## Financial Highlights



### Net Sales by Segment (Fiscal year ended March 2013)



### Net Sales by Region (Fiscal year ended March 2013)



Financial and IR information  
<http://www.shinetsu.co.jp/en/ir/>



# Shin-Etsu Group Products in Our Daily Life

The products of the Shin-Etsu Group are used in many walks of daily life, enabling a pleasant and fulfilling lifestyle. The products also contribute to the saving of energy and resources and the reduction of environmental impact, thereby putting the mission of "contributing to people's daily lives, as well as to the advance of industry and society by providing key materials and technologies" into practice.

## Shin-Etsu Group products also help in disaster restoration efforts

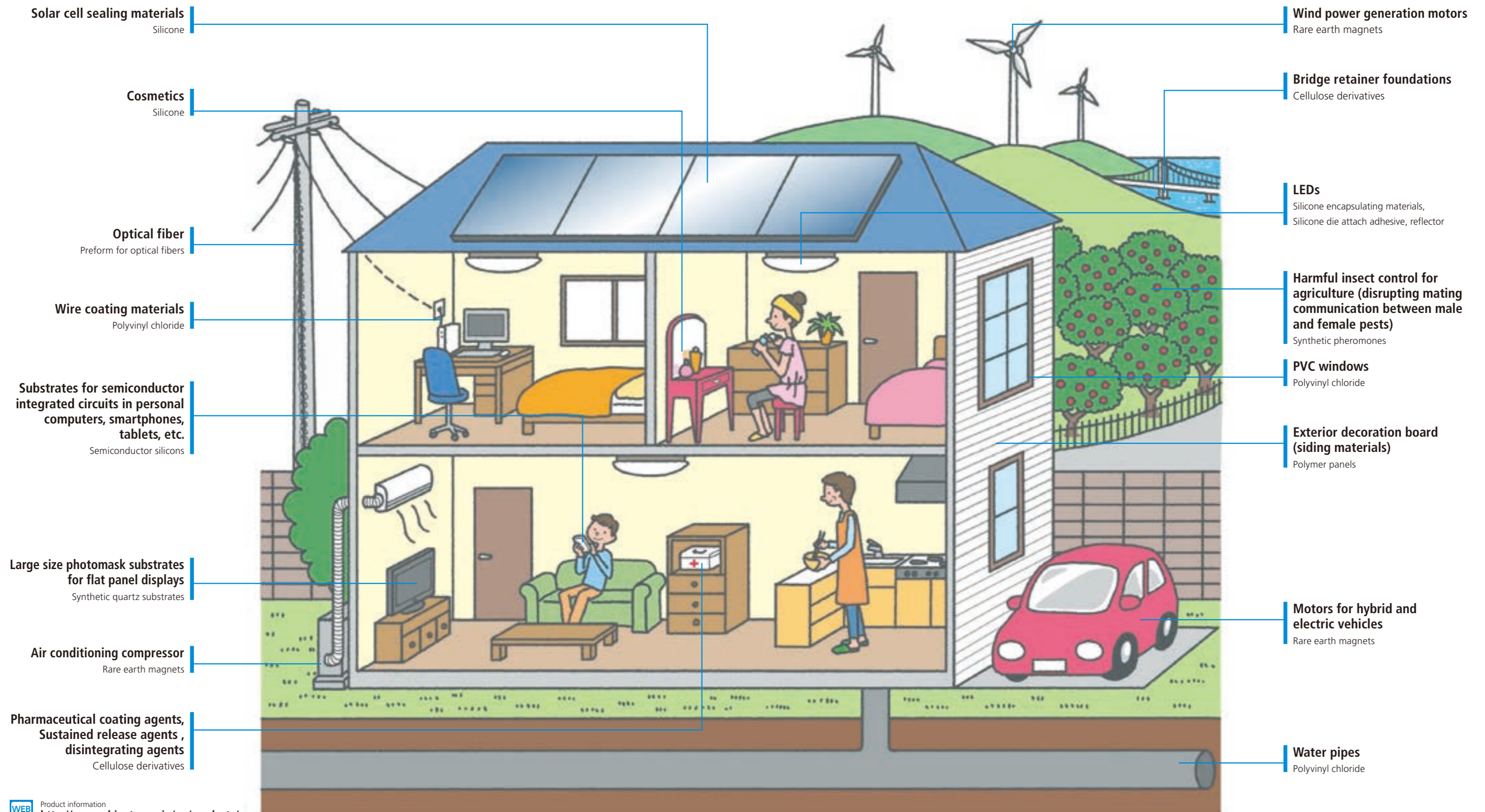
The products of the Shin-Etsu Group are used in reconstruction efforts for the Great East Japan Earthquake. For example, Polymer Panels from Shin-Etsu Polymer were chosen as exterior decoration board for restoration housing in Hachinohe City, Aomori Prefecture. Tatsuno Chemical Industries' "Marcalian" waterproof sheet for civil engineering applications is being used in cleanup operations of radioactive materials released due to the Fukushima Dai-ichi nuclear power station accident.



Polymer panels



Marcalian



Product information  
<http://www.shinetsu.co.jp/en/products/>



# The Shin-Etsu Group Expanding All Over the Globe

The first overseas subsidiary of the Shin-Etsu Group was founded in 1967 in Portugal. Since then, the Group has greatly expanded its scope of operations. Fiscal 2012 again saw business startups in various locations. At each subsidiary, we are reliably ensuring respect for human rights and are creating new and ongoing employment opportunities for local citizens, thereby contributing to the local economy.

## 1 SHIN-ETSU (CHANGTING) TECHNOLOGY CO., LTD. (Longyan, Fujian Province, China)

A plant with a yearly production capacity for 3,000 tons of magnet alloys used for the production of rare earth magnets went into operation in March 2013.



## 2 SHIN-ETSU (JIANGSU) OPTICAL PREFORM CO., LTD. (Jiangyin, Jiangsu Province, China)

A plant with a yearly preform production capacity for the equivalent of 8 million kilometers of optical fiber went into full operation during fiscal 2012.



## 3 SHIN-ETSU SILICONE (NANTONG) CO., LTD. (Nantong, Jiangsu Province, China)

In fiscal 2012, a plant with a yearly production capacity for 25,000 tons of silicone rubber was put into operation.



## 4 SHIN-ETSU MAGNETIC MATERIALS VIETNAM CO., LTD. (Hai Phong Province, Vietnam)

In March 2013, a rare earth separation and refinement plant was completed.



## Main overseas group companies and major overseas locations of new startups or expansions in fiscal 2012



### 9 SHIN-ETSU HANDOTAI EUROPE, LTD. (S.E.H. EUROPE) (U.K.)

Production and Sales of Semiconductor Silicon

### 10 SHIN-ETSU PVC B.V. (The Netherlands)

Production and Sales of Vinyl Chloride Monomer and PVC

### 11 SE TYLOSE GMBH & CO. KG (Germany)

Production and Sales of Cellulose Derivatives

### 12 S.E.H. MALAYSIA SDN. BHD. (Malaysia)

Production and Sales of Semiconductor Silicon

### 13 SHIN-ETSU (MALAYSIA) SDN. BHD. (Malaysia)

Production and Sales of Rare Earth Magnets

### 14 SHIN-ETSU ELECTRONICS (MALAYSIA) SDN. BHD. (Malaysia)

Production and Sales of Epoxy Molding Compounds

### 15 SHIN-ETSU POLYMER (MALAYSIA) SDN. BHD. (Malaysia)

Production and Sales of Silicone Rubber Molded Products, Embossed Carrier Tapes and Input Devices

### 16 SUZHOU SHIN-ETSU POLYMER CO., LTD. (China)

Production and Sales of Input Devices and Display-related Devices

### 17 SHIN-ETSU HANDOTAI TAIWAN CO., LTD. (S.E.H. TAIWAN) (Taiwan)

Production and Sales of Semiconductor Silicon

### 18 SHIN-ETSU SILICONE TAIWAN CO., LTD. (Taiwan)

Production and Sales of Silicone Products

### 19 SHIN-ETSU HANDOTAI AMERICA, INC. (U.S.A.)

Production and Sales of Semiconductor Silicon

## 5 SHIN-ETSU ELECTRONICS MATERIALS VIETNAM CO., LTD. (Hung Yen Province, Vietnam)

In June 2013, a plant for producing high-brightness LED packaging materials was completed.



## 6 SHINTECH INCORPORATED (Louisiana & Texas, U.S.A.)

In fiscal 2011, a plant for integrated production of polyvinyl chloride starting from raw material was completed in Louisiana. Like the Texas plant, the facility has continued to operate at full capacity since fiscal 2012.



## 7 SHIN-ETSU DO BRASIL REPRESENTACAO DE PRODUTOS QUIMICOS LTDA (Sao Paulo, Brazil)

Sales of silicone products and cellulose derivatives began in fiscal 2012.



## 8 SIMCOA OPERATIONS PTY. LTD. (Western Australia, Australia)

In fiscal 2012, yearly production capacity for silicon metal was upped from 32,000 tons to 48,000 tons.



# Shin-Etsu Chemical implements various activities to fulfill its corporate social responsibility (CSR)

## CSR Promotion Structure

The mission of the Shin-Etsu Group is “strictly to comply with all laws and regulations, to conduct fair business practices and to contribute to people’s daily lives as well as to the advance of society and industry by providing key materials and technologies”. We believe we have a social responsibility to contribute to our many stakeholders, including all of our shareholders and investors, customers, business partners, local communities and employees, by realizing this vision.

To achieve this, we formulated our Basic CSR Policy as a detailed policy and this forms the basis for internal regulations and various activities which are taking place. In order to promote the Basic CSR Policy in an effective and appropriate manner at a company-wide level in all aspects of corporate activity, we have set up a CSR Promotion Committee comprising managers from the relevant divisions and departments, and have appointed an officer responsible for CSR.

Diagram of the Shin-Etsu Group’s various relationships



Outline of the Corporate Mission Statement, Basic CSR Policy, and our activities



# Corporate governance is one of our most important management tasks

Shin-Etsu Chemical aims to continually enhance corporate value and thereby meet the expectations of shareholders. To this end, the Company has instituted an efficient structural framework and systems designed to enable a more prompt response to changes in the business environment. Moreover, Shin-Etsu Chemical accurately discloses information to shareholders and investors as a means of enhancing management transparency and strengthening audit systems.

of Directors sets out the fundamental policies of the Company and deliberates and makes decisions regarding key aspects of Company operations in accordance with the Companies Act, the Shin-Etsu articles of incorporation, etc. Meanwhile, the Managing Directors' Meeting makes deliberations and decisions regarding a variety of other operational issues.

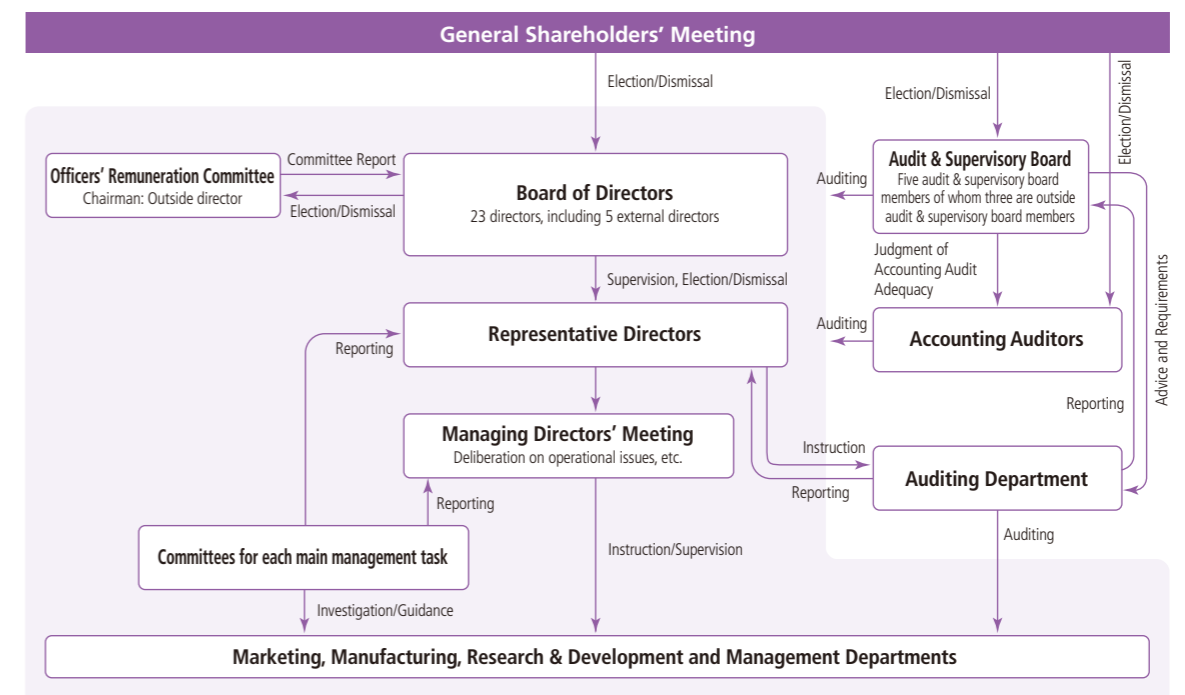
The Audit & Supervisory Board consists of five members, of whom three are Outside Audit & Supervisory Board Member with a high degree of independence. As well as attending the Board of Directors meetings, Managing Directors' Meetings, and other important internal meetings, the Audit & Supervisory Board Members inspect important documents and carry out other tasks in order to audit the execution of operations by the directors. The Audit & Supervisory Board Members also hold monthly meetings with the Auditing Department where they receive progress reports on activities, internal auditing results, and other matters. They also provide advice on topics including these activities and the selection of key auditing topics, and request investigations when necessary.

## Board of Directors, Managing Directors' Meeting and Audit & Supervisory Board

Shin-Etsu Chemical has adopted a Audit & Supervisory Board Member system. The Board of Directors consists of 23 members, of whom five are outside directors with extensive management experience and a high level of expertise.

Two organizations discuss and decide on the execution of operations: the Board of Directors and the Managing Directors' Meeting, which are held on a monthly basis as a general rule. The Board

Corporate Governance System at Shin-Etsu Chemical



As of June 27, 2013

**Outside Directors and Outside Audit & Supervisory Board Members**

In order to bring about enhanced advisory and supervisory functions based on an independent perspective, Shin-Etsu Chemical engages the outside directors and Outside Audit & Supervisory Board Members listed below.

Since their appointment, the outside directors have not only provided adequate supervision from an independent perspective, but have also provided advice across the full range of management operations based on their broad perspectives. The Outside Audit & Supervisory Board Members bring to the audits high levels of specialist knowledge and broad experience, which contributes to maintain our company's legal compliance system.

Outside directors and Outside Audit & Supervisory Board Members have a high degree of independence and are not former employees of our parent company, subsidiaries, major shareholders or major business partners.

**Support system**

Support services for the outside directors and Outside Audit & Supervisory Board Members are provided by staff from the relevant divisions.

When a meeting of the Board of Directors or other important internal meeting is to be held, outside directors are informed in advance of the agenda and provided with an explanation of the content as necessary, in response to which they express opinions as appropriate.

Outside directors and Outside Audit & Supervisory Board Members who have been unable to attend a meeting of the Board of Directors receive a report on the proceedings, for instance in the form of a copy of the minutes.

**Directors' Remuneration**

The Officers' Remuneration Committee, chaired by outside director Frank Peter Popoff with three other directors as committee members, meets regularly twice a year and otherwise as necessary to review and assess directors' remuneration and make recommendations to the Board of Directors in accordance with the Regulations of the Officers' Remuneration Committee.

**Internal Control System and Operational Audit**

Shin-Etsu Chemical has formulated a Basic Policy on Internal Controls to help put in place "structures to ensure that the execution of duties by the directors is fully compliant with relevant legislation and the articles of incorporation and that other duties are performed appropriately", as stipulated in Article 362, Paragraph 4, Item 6 of the Companies Act.

The establishment, implementation and maintenance of an internal control system is recognized as an important management responsibility at Shin-Etsu Chemical. Accordingly, the internal control system is structured and implemented in accordance with the above policy and subjected to constant review to make the system more appropriate and efficient.

Internal operation audits and assessment of internal controls over financial reporting are handled by the Auditing Department. The results of these audits and assessments are reported to board members including outside directors and Audit & Supervisory Board Members to strengthen

coordination between internal audit departments and outside directors and Audit & Supervisory Board.

In addition, with respect to the Internal Control Report System for Financial Reporting applicable since the fiscal year ended March 2009 under the Financial Instruments and Exchange Act, the Company fully recognizes the importance of maintaining the reliability and transparency of the Company's financial reporting. The Company's Internal Control Promotion Team takes a leading role in implementing the internal control system.

**Management of Group Companies**

In the spirit of respect for the autonomy of Group companies, the Shin-Etsu Group works for their growth and development so as to promote mutual benefit in the interest of the business prosperity of the Group as a whole.

Group companies are managed on the basis of the Shin-Etsu Chemical Group Company Operational Regulations. Companies with strong ties to Shin-Etsu Chemical in terms of capital, personnel, or materials undertake prior consultation and submit reports to the parent company with respect to important items such as capital increase or decrease, merger, liquidation, amendment of articles of incorporation, proposal of financial statements and budgets, planning of new businesses or facilities, and business performance and business results.

Furthermore, by holding meetings which are attended by the presidents of our main Group companies three times each year, we actively promote sharing and exchange of information among Group companies.

**List of outside directors and Outside Audit & Supervisory Board Members**

Position	Name	Significant other positions held
Outside directors	Frank Peter Popoff	Former CEO, The Dow Chemical Company (US)
	Masashi Kaneko	Former Director and Chairman of the Executive Board, former Nikko Cordial Corporation Director and Chairman of the Board, Ikyu Corporation
	Tsuyoshi Miyazaki	Former Representative Director and President, Mitsubishi Logistics Corporation Former Representative Director and Chairman, the above Advisor, the above
	Toshihiko Fukui	Former Governor, Bank of Japan Outside Director, Kikkoman Corporation President, The Canon Institute for Global Studies
	Hiroshi Komiyama	Former President, The University of Tokyo Chairman, Mitsubishi Research Institute, Inc. Outside Director, JX Holdings, Inc.
Outside Audit & Supervisory Board Members	Taku Fukui	Lawyer Managing Partner, Kashiwagi Sogo Law Offices
	Yoshihito Kosaka	Certified Public Accountant, Certified Public Tax Accountant Partner, Grant Thornton Taiyo ASG Representative Partner, HIYU Certified Tax Accountants' Corporation
	Kiyoshi Nagano	Former Representative Director, Chairman and President, former JASDAQ Securities Exchange, Inc. Outside Director, SBI Holdings, Inc. Outside Audit & Supervisory Board Member, LEC, INC.

As of June 27, 2013

**Implementing internal controls and operational audits**

**Tomohisa Fujita**, Auditing Department, Shin-Etsu Chemical

Shin-Etsu Chemical always makes efforts for continual improvements and follow-up to reliably execute and create results for the Assessment and Report on Internal Control Over Financial Reporting ("J-SOX") based on the Financial Instruments and Exchange Act. In addition, in fiscal 2012 we performed new internal audits on separate themes such as human rights, labor, and the environment.

Starting in fiscal 2013, we are also performing audits at small-scale subsidiaries in the Shin-Etsu Group, including non-consolidated subsidiaries. In this way we are working to minimize business and fraud risks.



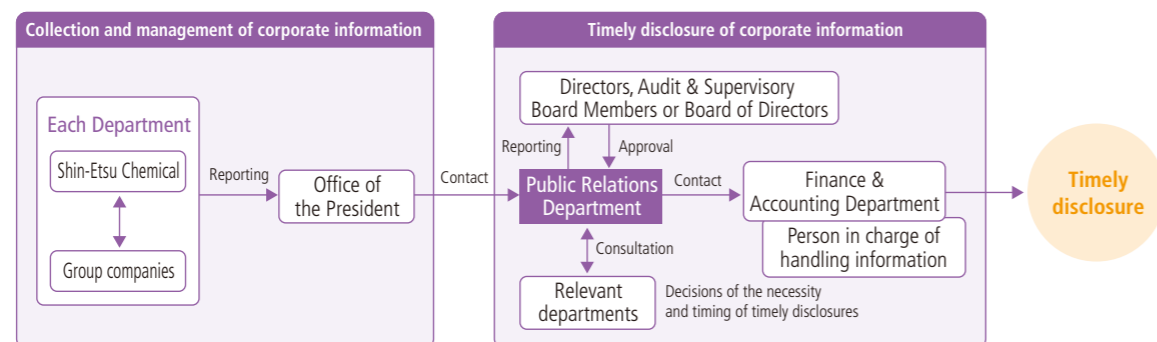


**Internal System for Timely Disclosure of Corporate Information**

In accordance with the regulations regarding information disclosure set by the stock exchange and the Financial Instruments and Exchange Act, Shin-Etsu Chemical has formulated internal regulations regarding collection, management, and timely

disclosure of corporate information. These regulations include the Regulations on Timely Disclosure of Corporate Information and the Rules on Regulation of Insider Trading, which are communicated to all Shin-Etsu Chemical departments and Group companies to promote smooth operations.

**State of the internal system for timely disclosure**



**The Company and employees work together to ensure thorough compliance with laws and regulations**

The Shin-Etsu Group regards compliance with laws and regulations as an obligation of corporate activities. Compliance is incorporated into the Corporate Mission Statement and the periodical management objectives as a means of working to ensure compliance.

**Ensuring Full Compliance Awareness**

In the event of promulgation of or amendments to legislation pertaining to corporate activities, the Legal Department serves in a central role to issue internal bulletins and hold information sessions. In addition, to raise awareness of compliance with laws and regulations in other companies, internal bulletins are issued to draw attention to violations of laws or regulations that occur at other companies.

**Compliance Pledge**

Directors, Audit & Supervisory Board Members and employees make a Compliance Pledge to the Company which represents their commitment as individuals to practice compliance in their daily work. For the eventuality of inappropriate action occurring, disciplinary measures are available.

**Compliance Consultation Office**

To support each Shin-Etsu Group employee in ensuring that their work activities comply at all times with relevant laws and regulations as well as internal rules, we have set up a Compliance Consultation Office, which is available whenever required to provide consultation or accept notifications.

In accordance with the Compliance Consultation and Notification Regulations, the Compliance Consultation Office maintains strict confidentiality to ensure that no employee consulting the office suffers disadvantage. The office then carries out investigations in response to the information received and takes corrective action where necessary. No employee suffers any form of disadvantage on the grounds of having made a consultation or notification.

**Initiatives Aimed at Preventing Corruption**

The Shin-Etsu Group has created the Guideline on Fair Corporate Activities, and works to create widespread awareness of it. In this way, the Group prohibits actions that could be regarded as the unfair transfer of profit from or to parties such as civil servants and business partners. Moreover, by having directors, Audit & Supervisory Board Members, and employees make a Compliance Pledge, we assuredly prevent unfair benefits or unfair demands in respect to our customers and business partners.

In addition, regular internal audits for corruption, embezzlement, and bribery are carried out, and the status of compliance with ethical standards is one item included in personnel evaluations.

**Cutting Ties with Anti-social Forces**

The Shin-Etsu Group declares in its Basic Policy on Internal Controls that the Group shall adopt a consistently resolute attitude towards anti-social forces and shall take measures necessary to cut itself off from any and all associations with anti-social forces. In accordance with this policy, we will endeavor to develop internal systems under the leadership of the department in charge of managing these issues. Working closely with external organizations addressing these issues, we will strongly push forward initiatives aimed at eradicating anti-social forces.

**Export Control**

From the viewpoint of maintaining world peace and security, Shin-Etsu Chemical complies with the Foreign Exchange and Foreign Trade Act and other export-related legislation. To that end, the Internal Control Program on Security Export Control has been established to classify categories of goods and implement screening procedures for customers and transactions. The Company also conducts internal audits and provides training and guidance for officers and employees as well as instruction to Group companies.

## The Shin-Etsu Group recognizes the importance of information assets and uses the information with appropriate management

### Initiatives for Information Asset Management

The Information Asset Management Regulations have been formulated under the Basic Policy on Information Asset Management established to maintain the confidentiality<sup>1</sup>, integrity<sup>2</sup>, and availability<sup>3</sup> of information possessed by the Shin-Etsu Group. It contains provisions on protecting, utilizing, managing, and applying the information assets of the Group.

Details concerning issues such as the handling, management, retention periods, and deletion of all information regarding customers and business partners are set out in subordinate regulations: the Information Asset Management Standards and the Trade Secrets Management Standards. In order to prevent unintentional leaks of technologies due to business development into regions with weak protections for intellectual property rights, we have formulated the Standards for Preventing Technology Leaks.

The Information Asset Management Department and the Auditing Department work together to regularly conduct checks and follow-up surveys of the status of compliance with the Information Asset Management Regulations along with other regulations.

1 Confidentiality  
Information is to be protected from unauthorized users.  
2 Integrity  
Information is to be protected from falsification, deletion, destruction and loss.  
3 Availability  
Ensure authorized users have access to information when needed.

### Protection of Personal Information

In order to properly protect personal information in accordance with the Act on the Protection of Personal Information, we have established our Privacy Policy, which is available on our website.

Moreover, the Group is making exhaustive efforts in the appropriate handling and protection of the personal information of customers, business partners, and other contacts through measures such as conducting education on laws and regulations and holding lectures regarding personal information protection during stratified training sessions.

### Initiatives Concerning Intellectual Property

In order to accomplish strategic business management centered on intellectual property, the Shin-Etsu Group has established the Basic Regulations for Intellectual Property, which set out regulations regarding acquisition, management, and application of intellectual property. In addition to protecting the Group's intellectual property from violation by third parties, these regulations also require respect for the rights regarding all intellectual property of third parties.

Moreover, information in forms such as an annual report is disclosed to allow all persons involved with the Group to have a precise collection of the status of the Group's intellectual property assets.

## We make preparations against the various risks that surround the Company

### Risk Management Regulations

Shin-Etsu Chemical has established the Risk Management Regulations, precisely defined the potential risks to the Company and the Group, created management systems related to preventing those risks and other matters, and set out how to respond to risks after they occur.

### Risk Management Committee

According to the Risk Management Regulations, the Risk Management Committee has been created and is chaired by a managing director. It constructs risk management structures, establishes regulations, and works to identify and prevent potential risks arising in connection with the operations of the Company.

The Risk Management Committee also promotes broad-based activities in risk management areas such as business continuity planning, education, and information provision. The Committee reports directly to the Board of Directors, the Audit & Supervisory Board, and the Managing Directors' Meeting on major issues.

### Business Continuity Plans

The Shin-Etsu Group considers the supply of high-quality materials based on superior technologies to be an important contribution to society, and regards ensuring continuity of supply as a major corporate responsibility. Many of the Group's products have high market share not only in Japan but also globally, and our products are often used for highly

specialized applications in cutting-edge industries. An interruption of the supply of these products would therefore have a major social impact.

The Company-wide Business Continuity Management Regulations have been established so the Company can fulfill its responsibility to supply important products even in the event of a large-scale earthquake, explosion, fire, or other serious disaster. The Company establishes a business continuity plan and sets out matters such as operations management. Moreover, division-specific and plant-specific business continuity plans have been formulated that take these matters into consideration.

### Systems in the Event of an Emergency

In the event of an emergency, a Company-Wide Headquarters for Countermeasures headed by the Company president will be set up immediately in line with the Regulations of Disaster Countermeasures Headquarters. Below this will be set up Head Office Supervisory Departments attached to the Company-Wide Headquarters for Countermeasures, Division Headquarters for Countermeasures headed by the relevant divisional general manager, and the Headquarters for Countermeasures of the relevant plant headed by the relevant plant manager.

Under this system, each countermeasure headquarters and organization is responsible for implementing emergency action procedures in accordance with predefined operational criteria and for taking measures to ensure continuity of operations.

### Business continuity plans for information systems

Ryoichi Okura and Shigeo Okano,  
Office of the President, Shin-Etsu Chemical

In 2012, with the concerns of earthquake resistance and limited power source, the Shin-Etsu Group's data servers were relocated to the current Data Center, meeting the requirements of the company business continuity perspective.

The new Data Center is built on a firm ground, with seismic isolation structure and large-scale power generators. The risk of information leakage is also minimized with vein authentication security features, allowing only those registered to enter the structure.

Through these efforts, the security of the Group's information system has been further enhanced, providing more reliability to the total system.





# We Are Engaged in Various Activities in Accordance with Responsible Care Codes

The Shin-Etsu Group incorporates environmental considerations into all aspects of corporate activity, with the aim of helping to prevent global warming and working towards the establishment of a sustainable society.

We are striving to reduce greenhouse gases and other environmental impacts associated with production processes by setting out ambitious targets and working towards clean production processes through structured and continuous programs.

As a key materials manufacturer, our staff in the three areas of research, manufacture and sales are working

in unison and are highly committed to the development and expansion of products and technologies designed to reduce environmental impact. We see this as a means of contributing to the conservation of the global environment. We recognize that responding appropriately to all environmental regulations and standards in our product development and manufacture is paramount. The officer responsible for environmental control and safety has overall company responsibility for this area and is dedicated to earning our customers' trust.

## Fiscal 2012 Targets, Implementation Status, Evaluation, and Fiscal 2013 Targets

Item	Major Fiscal 2012 Target	Fiscal 2012 Implementation Status	Evaluation	Major Fiscal 2013 Target
Process Safety and Prevention Plan	1) Zero serious accidents	- Target achieved	◎	- Zero serious accidents
	2) Risk assessment of facilities and processes, and implementation of preventive measures	- Risk assessment of key facilities, and implementation of preventive measures	○	- Continued risk assessment of key facilities, and implementation of preventive measures - Technology transfer
	3) Improvement of facilities and maintenance management	- Periodical inspection and maintenance of deteriorative facilities implemented	○	- Determine causes of facility failure and prevent re-occurrence - Periodical inspection and maintenance of deteriorative facilities
	4) Reliable emergency response	- Review of fire fighting, prevention plan, and emergency network, and regular implementation of emergency drills	○	- Clarification of step-by-step emergency measures and judgement criteria - Implementation of emergency drills, and proper training and knowledge transfer of safety management technology - Improvement and promotion of Business Continuity Plan
Occupational Safety	1) Zero incidents requiring an absence a day or more	- Target achieved for Shin-Etsu Chemical only	○	- Zero incidents requiring an absence a day or more
	2) Rate of incidents not accompanied by an absence a day or more: 0.5 or less	- Target achieved for Shin-Etsu Chemical only	○	- Rate of incidents not accompanied by an absence a day or more: 0.5 or less
	3) Promote "zero incidents" drive	- Promoted hazard prediction activities - Intensified promotion of close-call incidents reporting and improvement suggestions - Application of past incidents examples to prevent similar incidents	○	- Promote communication for ensuring that rules are followed - Implement hazard prediction training, pointing-and-calling safety procedures, and 5S activities - Promote close-call incidents reporting and improvement suggestions - Application of past incidents examples
	4) Review and reorganize operation manuals and ensure strict compliance	- Operation manuals created or revised - Verified that operators strictly follow operation manuals	○	- Promote creation or revision of operation manuals - Verify that operation manuals are strictly followed
	5) Work risk assessment and preventive measures	- Work risk identification and safety measures implemented	○	- Identify risks and implement preventive measures, eradicate risk level III and higher - Improve technology for risk identification and preventive measures
	6) Training and drill promotion	- Organized safety training programs and seminars - Promoted acquisition of credentials	○	- Promotion of work safety training and drills - Incentive system for acquisition of credentials

### Environmental data management is a Group-wide priority

**Hiroyuki Iwata**, Environmental Control and Safety Department, Shin-Etsu Chemical

Starting in fiscal 2011, the range of environmental data that is collected was expanded to cover all companies of the Shin-Etsu Group. We followed this up in fiscal 2012 by introducing an environmental data collection system designed to improve accuracy and efficiency. The system has been implemented at Shin-Etsu Chemical and group companies in Japan. We also made a start on collecting Scope 3 greenhouse gas emission data (see page 28 of this report).

In fiscal 2013, we are going to expand the scope of the environmental data collection system to include overseas group companies. We will also be improving the accuracy of Scope 3 emissions calculation.



Item	Major Fiscal 2012 Target	Fiscal 2012 Implementation Status	Evaluation	Major Fiscal 2013 Target
Environmental conservation	1) Zero environmental accidents	- Target achieved	◎	- Zero environmental accidents
	2) Thorough environmental management	- Comprehensive maintenance and management of facilities and strict compliance with emission regulations	◎	- Continue comprehensive maintenance and management of facilities and strict compliance with emission regulations
	3) Promotion of energy savings	- Installed energy-saving, high-efficiency facilities and equipment, implemented exhaust heat recovery	△	- Achieve 1% average yearly reduction in intensity units <sup>1</sup>
	4) Reducing greenhouse gas emissions	- Reduced greenhouse gas emissions intensity to 63.2% of 1990 level	○	- Reduce greenhouse gas emissions intensity to 50% of 1990 level by 2015
	5) Reduce waste	- Landfill waste 2.14% of all waste generated - Reduced PRTR controlled <sup>2</sup> substances emissions by 28 tons	×	- Waste: reach zero emissions (landfill waste 1% or less of all waste generated)
	6) Reduced emissions of substances causing water pollution or air pollution	- Reduced NOx and SOx emissions, increased soot emissions - Reduced COD and SS discharge, increased BOD discharge	○	- Set targets for reducing waste water, BOD, and VOC discharges
	7) Reduction in water withdrawals	- Production volume increased, but water withdrawals remained unchanged	○	- Set reduction targets - Increase recycling ratio
Chemical substance management	1) New chemical substance management	- Assessed permitted manufacturing quantities and actual production control - Strictly implemented reporting of harmful substance information at time of acquisition	◎	- Continue assessment of permitted manufacturing quantities and actual production control - Continue reporting of harmful substance information at time of acquisition
	2) Appropriate compliance with legal and other requirements for chemical substance control	- Strict compliance with the Chemical Substances Control Law <sup>3</sup> , Industrial Safety and Health Law, PRTR Law <sup>4</sup> , Poisonous and Deleterious Substances Control Act, and other legal regulations including overseas regulations, and follow-up on amendments.	◎	- Continue strict compliance with Chemical Substances Control Law, Industrial Safety and Health Law, PRTR Law, Poisonous and Deleterious Substances Control Act, and other legal regulations, and follow-up on amendments - Strict compliance with overseas regulations and monitoring of new or revised laws
	3) Information disclosure on harmfulness of chemical substances	- Provided information to subcontractors and contractors	○	- Continue to provide information to subcontractors and contractors
Occupational health	1) Create and maintain comfortable workplace environment	- Comply with Specialization rule <sup>5</sup> of Industrial Safety and Health Law against added registration of chemical substances (cobalt, indium, ethylbenzene added)	◎	- Continue improvements in working environment
	2) Promote physical and mental health well-being	- Lifestyle improvement guidance based on health checkup results, promoted health improvement programs - Implemented mental health training	○	- Continue lifestyle improvement guidance based on health checkup results, add examination items to special health checkups (cobalt, indium, ethylbenzene) - Continue promotion of physical health improvement programs - Continue mental health well-being program

<sup>1</sup> Intensity unit

A measure calculated from the production volume of a reference product.

<sup>2</sup> PRTR (Pollutant Release and Transfer Register) Control

A system to collect and publicize information on potentially harmful substances, including where and in what quantity such substances were released into the environment (air, water, soil, etc.), and where and in what quantity they have been moved to as waste.

<sup>3</sup> Chemical Substances Control Law

Short for "Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc." A law intended to prevent environmental pollution by chemical substances that can be harmful to human health or to ecosystems.

<sup>4</sup> PRTR Law

Short for "Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof." A law intended to promote improved self-directed control of chemical substances by business operators, in order to prevent the risk of damage to the environment.

<sup>5</sup> Specialization rule

Short for "Ordinance on Prevention of Hazards due to Specified Chemical Substances". An ordinance intended to protect workers from health hazards by chemical substances.

\* Responsible Care Codes: codes setting basic conditions for the implementation of Responsible Care in six areas: environmental preservation, process safety and prevention plan, occupational safety and health, chemical and product safety, distribution safety, and social dialog (with the public). Alongside conditions in these areas, a Management System Code to operate all the above is required.

# We contribute to reducing the environmental impact of whole society by develop advanced technologies

## Resources/Energy

**Energy Consumption**  
(crude oil equivalent)  
**2,429 million liters**  
(145 million liter increase from previous fiscal year)

**Water Usage**  
**200 million m<sup>3</sup>**  
(unchanged from previous fiscal year)

## Raw materials

- Methanol
- Pulp
- Industrial salt
- Silicon metal
- Ethylene
- Vinyl chloride monomer
- Poly silicon
- Acetic acid
- Others

### INPUT

## Shin-Etsu Group

By promoting the reduction of environmental impact at all stages from product design through raw material procurement to the establishment of an efficient manufacturing system, we are limiting increases in the amount of energy, water and raw materials needed to match the rising volume of products manufactured.



**Development**  
We are promoting product design and development that emphasize the importance of reducing environmental impact.

**Procurement**  
We endeavor to procure raw materials while minimizing impact on the environment.

**Production**  
Improved manufacturing systems are being established with less environmental impact due to the promotion of energy saving, recycling and the reuse of resources.

**Shipment**  
We endeavor to ship products by means that have the lowest impact on the environment.

### OUTPUT

## Exhaust

**Emission**  
**GHG: 4,476,000 CO<sub>2</sub>-ton**  
(198,000 CO<sub>2</sub>-ton increase from previous fiscal year)

**Soot: 32 tons**  
(1 ton increase from previous fiscal year)

**NOx: 1,284 tons**  
(20 ton decrease from previous fiscal year)

**SOx: 172 tons**  
(67 ton decrease from previous fiscal year)

**Discharges of water**  
**Total Discharges of water: 187 million m<sup>3</sup>**  
(2 million m<sup>3</sup> decrease from previous fiscal year)

**COD: 4,762 tons**  
(278 ton decrease from previous fiscal year)

**BOD: 572 tons**  
(142 ton increase from previous fiscal year)

**SS: 734 tons**  
(108 ton decrease from previous fiscal year)

## Waste

**Amount of Waste Generated: 90,000 tons**  
(16,000 ton decrease from previous fiscal year)

**Amount of Waste Recycled: 59,000 tons**  
(14,000 ton decrease from previous fiscal year)

**Waste Recycling Ratio: 65.0%**  
(3.3% decrease from previous fiscal year)

**Amount of Waste for Landfill: 1,900 tons**  
(200 ton decrease from previous fiscal year)

**Final Disposal Ratio: 2.1%**  
(0.1% increase from previous fiscal year)

## PRTR Control

**Amount released: 181 tons**  
(24 ton increase from previous fiscal year)

**Amount transferred: 813 tons**  
(37 ton increase from previous fiscal year)

## To Society

**Products**  
- PVC  
- Silicones  
- Semiconductor silicon

- Cellulose derivatives  
- Rare earth magnets  
- Synthetic quartz photomask substrates

- Optical fiber preforms  
- POVAL  
- Hot-melt adhesives

- Silicon carbide  
- Others

\* In order to clearly define the reduction efforts, the average value from 2000-2010 of the conversion factor for CO<sub>2</sub> from electricity supply is used.  
\* As the industrial waste standards and PRTR Control vary from country to country, the figures shown represent the aggregated data from the Shin-Etsu Group's Japanese domestic operations only.  
\* Waste recycling ratio indicates amount recycled as a proportion of total waste generated.  
\* Final disposal ratio indicates amount of waste for landfill as a proportion of total waste generated.

# The Shin-Etsu Chemical discloses data about costs required for environmental conservation in compliance with guidelines

## Environmental Accounting

In fiscal 2012, Shin-Etsu Chemical applied the Environmental Accounting Guidelines 2005 prepared by the Ministry of the Environment, Japan, to calculate the investments and expenditures involved in reduction of the environmental impact of air pollution, water pollution, environmental release of chemical substances, etc.; energy-saving measures to conserve the global environment; and waste reduction and recycling to improve reuse of resources.

- Major investments
- Installation of an energy-recovering facility
  - Promotion of energy savings resulting from improvements in production processes
  - Strengthening of energy loss prevention
  - Build-up and renewal of wastewater treatment equipment
  - Installation of equipment to recycle raw materials, and equipment to treat and recover waste
  - Improvement of industrial waste disposal facility
  - Environmental improvement, etc., of plants and surrounding areas

## Environmental Conservation Costs in Fiscal 2012

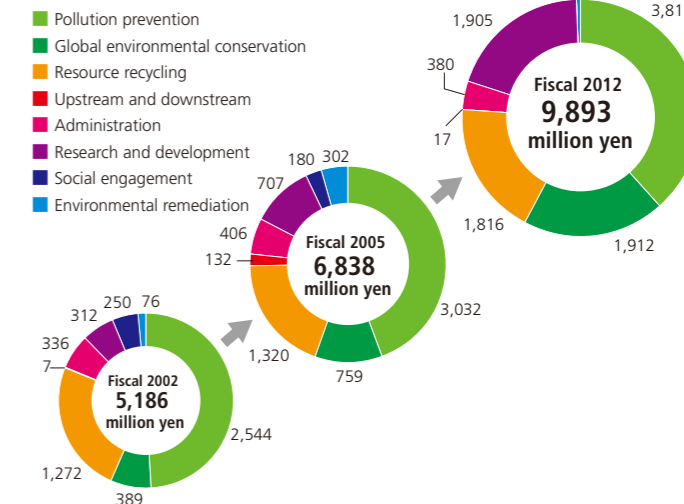
(Millions of Yen)

Category	Details	Investment	Expenditure
Plant area costs:		1,829	7,538
(1) Pollution prevention costs	Prevention measures for air, water, noise and other types of pollution	538	3,811
(2) Global environmental conservation costs	Energy saving and global warming mitigation measures	739	1,912
(3) Resource recycling costs	Waste reduction, recycling and other measures	552	1,816
Upstream and downstream costs	Green purchasing and container and packaging measures	16	17
Administration costs	Environmental management, environmental impact monitoring and environmental education measures	0	380
Research and development costs	Research and development of environmentally conscious products and processes	5	1,905
Social engagement costs	Donations and contributions to environmental saving	0	25
Environmental remediation costs	Assessment, handling and other costs related to environmental pollution	0	29
<b>Total</b>		<b>1,850</b>	<b>9,893</b>

## Economic Benefits of Environmental Accounting in Fiscal 2012

Details of benefits	Economic benefit (Millions of Yen)
Energy savings	379
Improved production efficiency	1,594
Production process	1,475
Secondary materials costs	119
Reduction in waste treatment costs	204
Profit from sale of valuable resources	164
<b>Total</b>	<b>2,341</b>

## Cost of Environmental Conservation (millions of yen)





# The Shin-Etsu Group is addressing all issues that are relevant to realizing energy saving and mitigating global warming, including reducing environmental impact, protecting the environment and recycling resources

## Countering Climate Change

### Mid-term target, fiscal 2012 target, results and evaluation, fiscal 2013 target

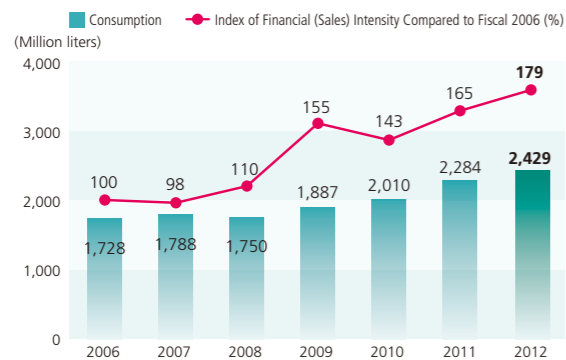
- Mid-term target:** For Shin-Etsu Chemical alone, reduce greenhouse gas emissions intensity to 50% of 1990 level by 2015
- Fiscal 2012 target:** Reduce energy consumption intensity by 1% compared to fiscal 2011
- Fiscal 2012 results:** Shin-Etsu Chemical: reduction to 59.6% of 1990 level (1.0% reduction from fiscal 2011), Shin-Etsu Group: reduction to 63.2% of 1990 level (2.9% reduction from fiscal 2011)
- Fiscal 2012 evaluation:** Intense energy-saving efforts resulted in extremely good results for Shin-Etsu Chemical. Some overseas group companies had lower reduction ratios because their product mix changed drastically.
- Fiscal 2013 target:** Achieve 1% average yearly reduction in energy consumption intensity

The large-scale Shintech plant completed in fiscal 2011 went into full operation from fiscal 2012, resulting in a 6.3% increase in energy consumption. Greenhouse gas emissions accordingly also increased by 4.6%.

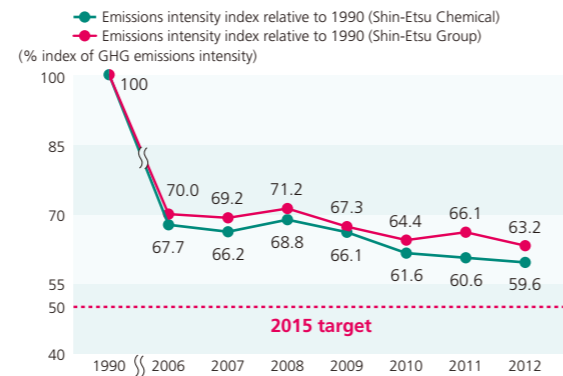
However, as Shintech continued full-scale production and full-scale marketing, energy-saving and the development of technology for improving production efficiency at other group companies resulted in a 2.9% decrease in the emissions intensity index as calculated by conversion into the production of reference products.

In fiscal 2012, all companies of the Shin-Etsu Group, both in Japan and overseas have started to estimate Scope 3 emissions data.

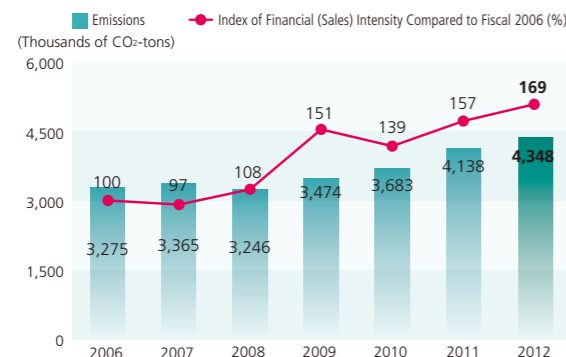
### Energy Consumption (crude oil equivalent)



### Greenhouse gas emissions intensity relative to fiscal 1990 levels



### CO<sub>2</sub> Emissions (energy related)



### Detailed Chart of Energy Consumption by Energy Type

Unit: peta joule

	2006	2007	2008	2009	2010	2011	2012
SCOPE 1	Natural Gas	11.6	12.9	15.5	18.3	20.3	24.2
	Heavy Oil A + Heavy Oil C	3.5	2.6	1.1	0.6	0.6	0.5
	LPG + LNG	2.4	2.2	1.4	1.9	1.5	1.6
	Other	1.3	1.1	0.9	0.9	0.9	0.7
SCOPE 2	Purchased Electric Power	41.6	43.3	42.3	45.2	48.3	55.6
	Purchased Steam	6.5	6.9	6.3	6.0	6.1	5.8
<b>Total</b>	<b>66.8</b>	<b>69.1</b>	<b>67.6</b>	<b>72.9</b>	<b>77.7</b>	<b>88.3</b>	<b>93.9</b>

### Initiatives for Reducing the Environmental Impact of Shin-Etsu Chemical Gunma

The Shin-Etsu Chemical Gunma Complex is a major producer of silicone products, and various measures to save energy and reduce the impact on the environment are being implemented here.

First, a boiler turbine for electric power generation was installed in the 1990s, and a co-generation system<sup>1</sup> for effectively re-using the steam downstream from the turbine was put in place to increase energy efficiency.

In 2008, the facility switched its fuel base from heavy oil to natural gas which imposes much less of a impact on the environment, and a co-generation system using highly energy-efficient gas turbines for power generation<sup>2</sup> was installed. This resulted in a large reduction in carbon-dioxide, sulfur oxides (SOx) and other harmful emissions. In particular, emissions of the greenhouse gas carbon-dioxide decreased by as much as 34% compared to fiscal 2007.

In the wake of Great East Japan Earthquake of March 2011 and the resulting nuclear power station damage, businesses all over Japan were required to significantly curb their use of electrical energy. The Gunma Complex was able to increase the capacity of its power generation gas turbines and improve the generation rate of electricity and steam, and a smart grid system within the Complex was also installed to manage peak loads. As a result, production could be maintained at the required level while meeting the power-saving demands.

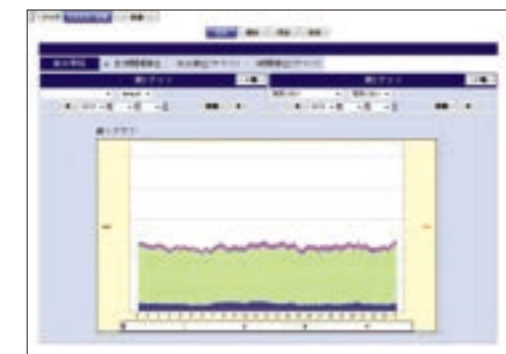
In future, the use of co-generation systems is to be expanded, with the aim of raising the self-sufficiency rate for electric power from the current 62 to 100 percent. The day when the plant will need to buy no power at all from electric power companies is already on the horizon.

Using the Gunma Complex as a model, the Shin-Etsu Group plans to implement similar measures throughout the Group, in order to further save energy and lighten the environmental impact of our activities.

- <sup>1</sup> Co-generation  
A system for re-using the waste heat produced during electric power generation to provide thermal energy for air-conditioning, hot water supply and other purposes.
- <sup>2</sup> Power generation gas turbines  
A machine using high-temperature gas from burning fuel etc. to drive a turbine for generating electricity.



Power generation gas turbine



Screen shot of remote monitoring system for power demand

## Waste Reduction

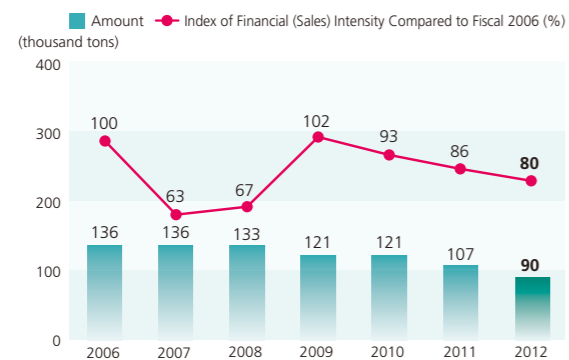
### Fiscal 2012 target, results and evaluation, fiscal 2013 target

**Fiscal 2012 target:** Achieve zero waste emissions (landfill waste 1% or less of all waste generated)  
**Fiscal 2012 results:** Shin-Etsu Chemical achieved a landfill waste ratio of 2.23% (0.32% increase from fiscal 2011), and Shin-Etsu Group companies in Japan achieved 2.14% (0.13% increase from fiscal 2011).  
**Fiscal 2012 evaluation:** The fact that the amount of overall waste volume and of final disposal waste of group companies in Japan decreased significantly is a positive development. However, the landfill waste ratio showed an increase relative to fiscal 2011.  
**Fiscal 2013 target:** Achieve zero waste emissions (landfill waste 1% or less of all waste generated)

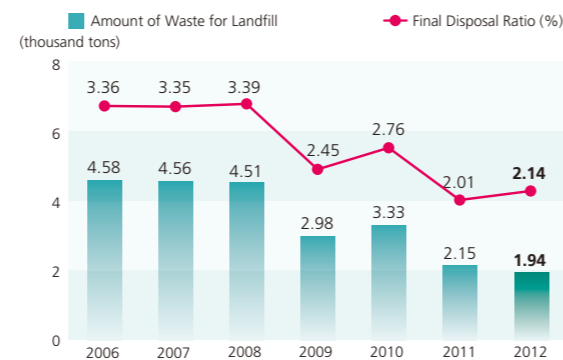
In fiscal 2012, compared with last year, the amount of waste generated by group companies in Japan decreased by 15.9%, and the amount of final disposal waste by 9.8%. Since most of the waste is processed by outside contractors, we also periodically check their sites to ensure proper handling of waste.

We will continue and expand our exploration of ways to re-use and recycle waste, with the aim of achieving the goal of zero waste emissions.

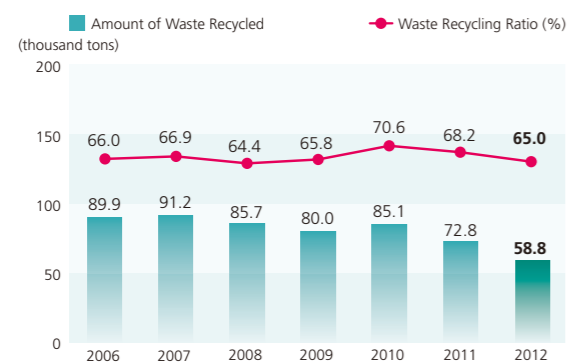
#### Amount of Waste Generated (Group companies in Japan)



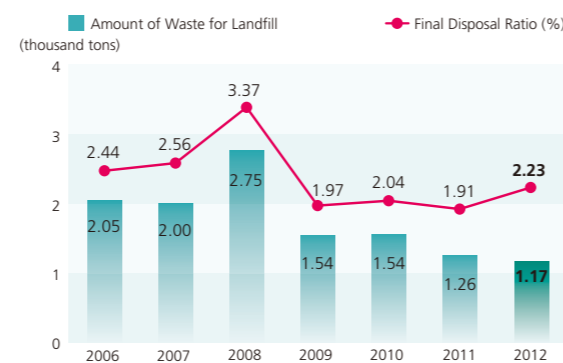
#### Amount of Waste for Landfill (Group companies in Japan)



#### Amount of Waste Recycled (Group companies in Japan)



#### Amount of Waste for Landfill (Shin-Etsu Chemical)



\* Because standards applicable to waste differ by country, only data for group companies in Japan are given.

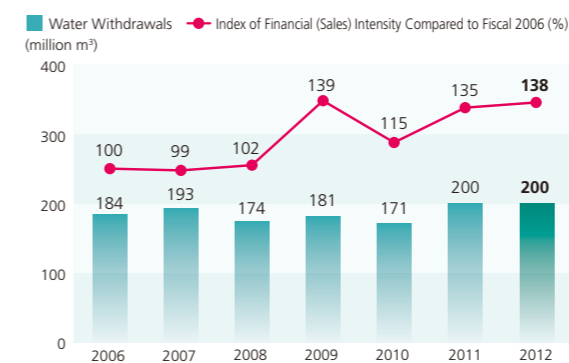
## Protection of Water Resources and Reduction of Water Pollutants

The Shin-Etsu Group is aiming to reduce water withdrawals intensity, and to reduce the discharge of water pollutants. Target values in this area are set by each Group company.

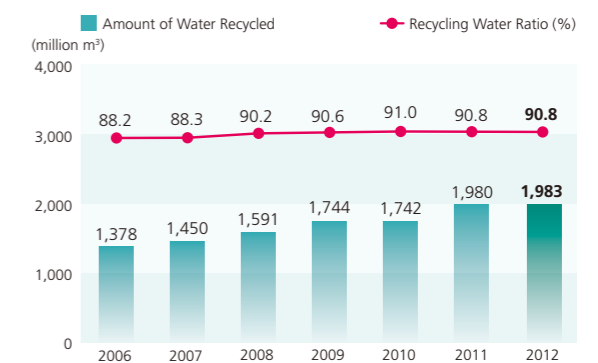
Although production volume increased in fiscal 2012, both water withdrawals and amount of discharge of water remained approximately constant.

Group companies also perform water quality analysis to ensure strict compliance with all legal regulations.

#### Water Withdrawals



#### Amount of Water Recycled



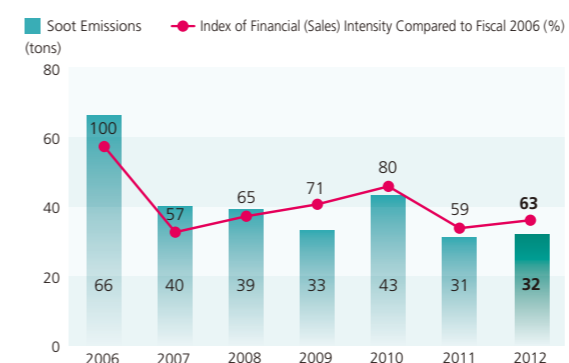
## Prevention of Air Pollution

The Shin-Etsu Group is working to reduce emissions of air pollutants. Target values in this area are set by each group company.

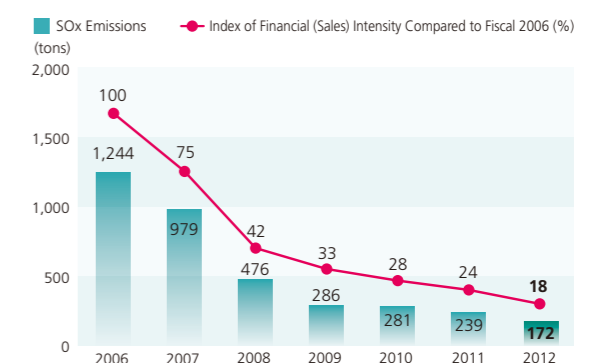
Although production volume increased in fiscal 2012, the amount of sulfur oxide (SOx) emissions decreased, both in actual volume and in intensity.

Group companies also regularly perform gas emissions analysis to ensure strict compliance with all legal regulations.

#### Soot Emissions



#### SOx Emissions

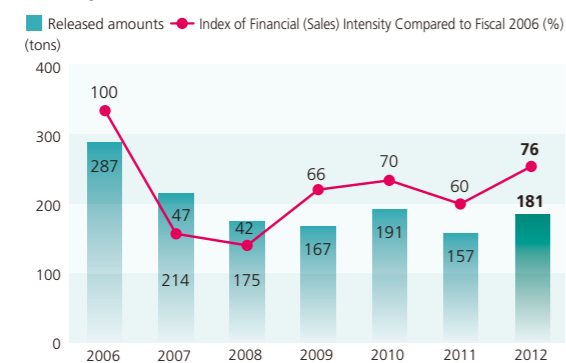




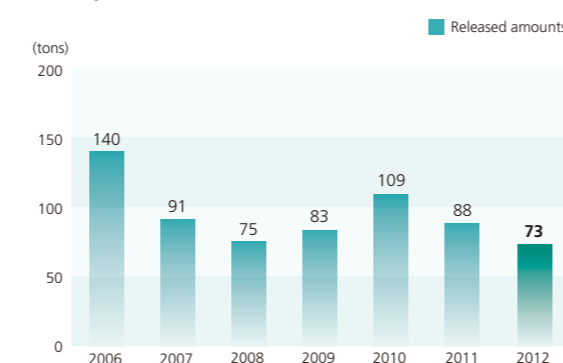
## Control of Chemical Substances

Along with an increase in production, the overall amount released and amount transferred of PRTR system controlled substances increased.

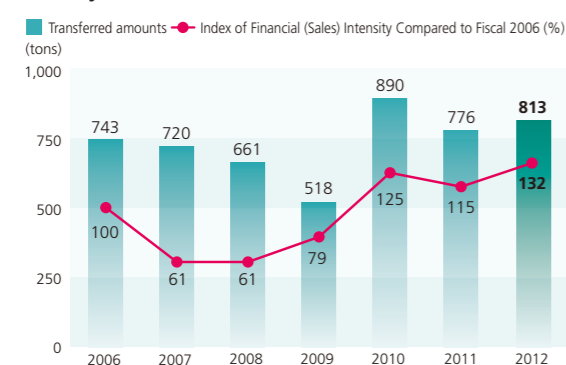
### PRTR System Total Release



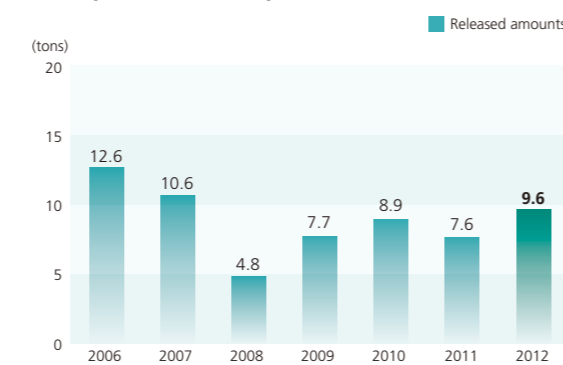
### PRTR System Chloromethane Release



### PRTR System Total Transferred



### PRTR System Chloroethylene Release



\* The adopted PRTR system is of the Japanese system, and the figures shown represent the aggregated data from the Shin-Etsu Group's Japanese domestic operations only.

## Prevention of Soil Pollution

Groundwater and soil monitoring at each plant is being carried out in accordance with the Soil Contamination Countermeasures Act.

## Initiatives for Biodiversity Preservation

The Shin-Etsu Group aims for environmentally considerate product design starting already from the product development stage. At the same time, we are also meeting our responsibility as a chemical company by working actively to ensure strict control of chemical substances, mitigate global warming, reduce energy consumption, reduce the amount of waste generated, prevent water pollution, and make other environmental contributions. We are also engaged in activities such as scenic improvement and tree-planting in areas neighboring our plants. Furthermore, we request that our business partners implement environmental conservation initiatives concerning forest conservation and similar activities.

## Scope 3 Greenhouse Gas Emissions

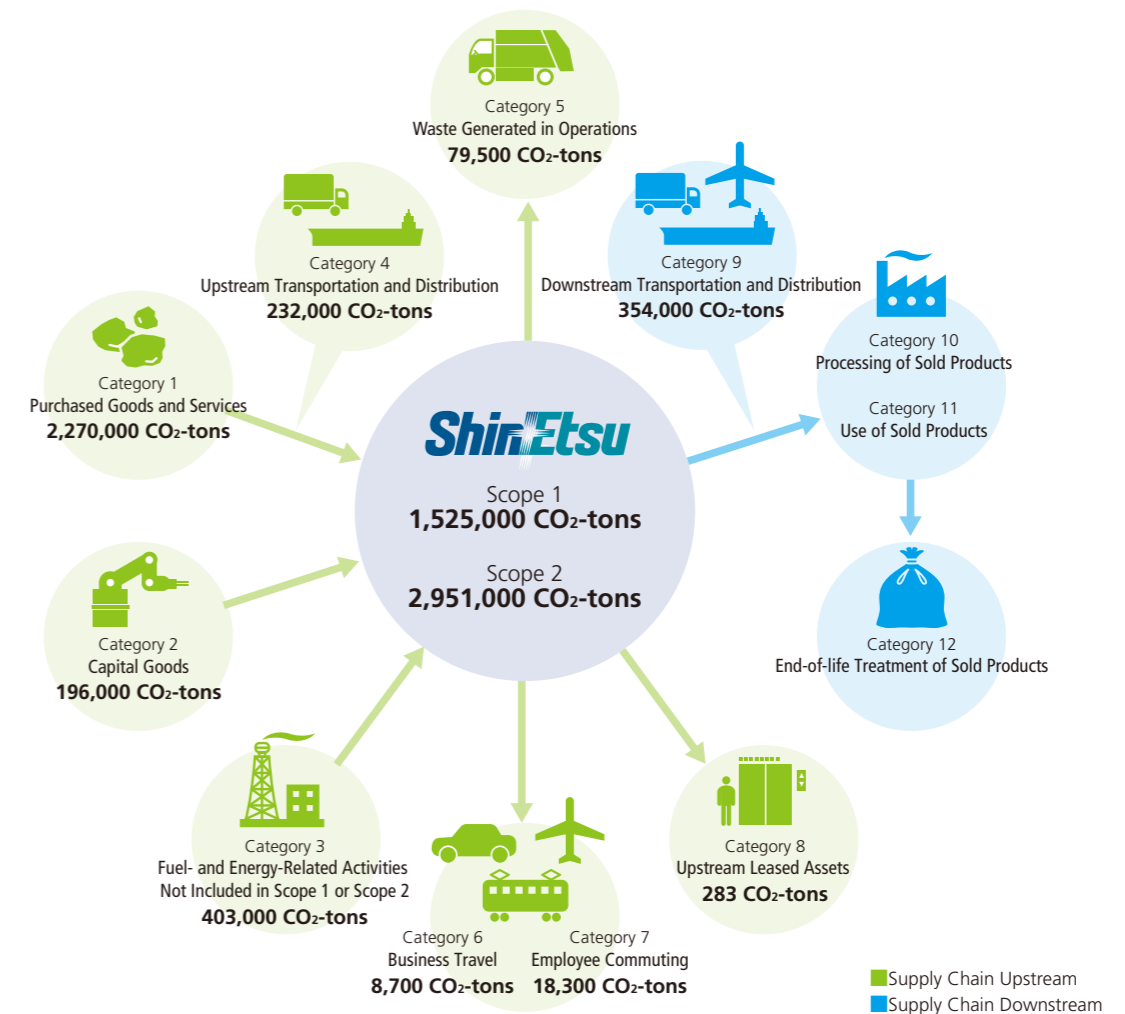
Starting from fiscal 2012, the Shin-Etsu Group is estimating Scope 3 greenhouse gas emissions<sup>1</sup>, as per the "General Guidelines on Supply Chain GHG Emission Accounting" released by the Ministry of the Environment (MOE) and the Ministry of Economy, Trade and Industry (METI). Scope 3 emissions for fiscal 2012 were 3.562 million CO<sub>2</sub>-tons, amounting for 44% in the supply chain<sup>2</sup>.

By accounting for and disclosing Scope 3 emissions, we are fulfilling our accountability

obligations to other business partners in the supply chain, and to all stakeholders in the Shin-Etsu Group. The assessment of secular change will also allow us to more exactly gauge the progress of efforts to reduce emissions.

1 Scope 3 released amounts  
Amount of emissions upstream and downstream from a company.  
2 Supply chain  
Refers to all stages of a product from raw material production until it reaches the final customer.

### Scope 3 Emissions of the Shin-Etsu Group by Category



# By formulating thoroughgoing safety measures and devoting efforts to daily education and training, we ensure the ability to respond to any situation

## Occupational Health and Safety

The Shin-Etsu Group has formulated a basic policy for environmental safety that reflects our corporate principle of "Safety and Environment First." The basic policy expressing the tenets of the Group as a whole serves as a blueprint for the establishment of safety oriented action plans at each business site, plant, and Group company. By implementing, evaluating, and reviewing these action plans, we are constantly working to further improve occupational safety and health.

## Occupational Safety

In order to proactively eliminate the risk of lost time incidents, we place great emphasis on identifying and removing workplace hazards. Vigorous efforts to this effect are being made at all sites. We regularly collect information on incidents revealing problems, even if such an incident has not resulted in an actual accident or damage. To facilitate this, we have a framework for reporting of close-call incidents and safety concerns. We share this information both on a company-internal basis and with outside parties.

Risk assessment activities aimed at identifying latent risks, eliminating hazardous operations, and other essential approaches to operational safety are combined with hands-on measures such as protection by isolation, interlocks and other ways of minimizing exposure to risks.

The zero-accident program comprising hazard prediction training, pointing-and-calling safety procedures and other measures, along with safety activities such as review and strict compliance with manuals are also being pursued.

As part of the safety and health oriented initiatives, we aim to create a comfortable work environment and promote physical and mental health well-being. In particular at workplaces handling specific chemical substances, organic solvents and similar, regular inspection of local ventilation systems and working environment measurements are conducted with the aim of improving the working environment.

## Process Safety and Prevention Plan

The Shin-Etsu Group gives top priority to preventing serious accidents before they happen. With this aim in mind, we continually engage in various process safety and prevention plan activities, to ensure the functional reliability of facilities and processes.

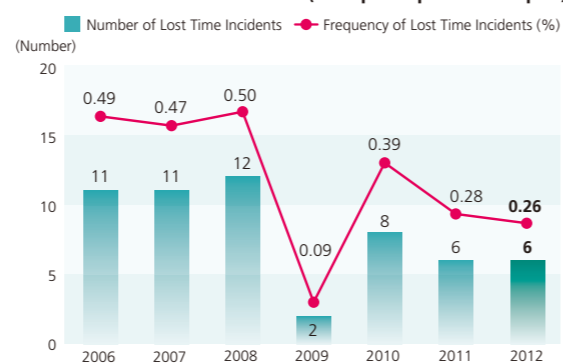
The activities are focused on assessment the safety performance of facilities and processes, and on implementing corrective actions for any found problems. Major facilities and processes are designed from the outset to conform to safety performance evaluation principles based on HAZOP<sup>1</sup>. With regard to facilities and processes with the potential for serious accidents, repeated HAZOP studies are conducted for further improved facility safety.

In 2012, we conducted reviews and documentation of procedures at each plant, covering the safety design of processes at major facilities, operations management for upholding safe and stable operations, and response procedures in the event of fire, explosion, earthquake or other serious accident or disaster. We intend to widely circulate and propagate systematically organized technical documentation, to further strengthen our safety and prevention plan capability.

By further intensifying an ongoing program of inspecting machinery, piping and other equipment showing signs of deterioration or corrosion, we will ensure that mechanical integrity is maintained.

<sup>1</sup> HAZOP (Hazard and Operability Study)  
A method of systematically checking and validating safety measures by comprehensively investigating latent risks and operational irregularities in a plant.

Number of Lost Time Incidents (Group companies in Japan)



## Education and Training

To improve the abilities and competence of individual employees, necessary education and training is carried out systematically at all plants and workplaces. This includes, for example: education in environmental conservation, training in handling of chemical substances, risk assessment enhancement training, and human error prevention training. We also provide the opportunity for hazardous experience training for our own staff, the staff of our subcontractors, and temporary staff. Personal experience of possibly hazardous events through experiments and hands-on training serves to raise the individual hazardous awareness of all operators.

## Environmental Control and Safety Audits

To check that activities directed at environmental conservation, occupational health and safety, and process safety and prevention plan are implemented to best effect, comprehensive environmental safety audits and special audits on selected themes are carried out regularly.

## Accident and Disaster Reporting

The environmental safety audit for fiscal 2012 showed that safety management in research facilities and safety training at subcontractors were also being implemented properly.

An audit on operations management in emergency situations that could lead to serious accidents was also carried out, and possible causes requiring emergency stop of a plant, such as a major earthquake, power failure, or abnormal reaction, were clarified, and preventive measures were defined. It was verified that judgement criteria and procedures for an emergency stop are properly documented.

No serious accidents or disasters occurred during fiscal 2012, but there were six lost time incidents among Group company staff.

A cause analysis was performed in each case. Countermeasures focusing on eliminating hazardous operations and providing safeguards were implemented, along with thorough information dissemination. However, because there are instances where the attention and awareness of the operator are crucial, we aim to increase hazardous awareness and prevent incidents through programs that combine hazard prediction training with pointing-and-calling safety procedures.

### Safety Inspections at Overseas Group Company

In March 2013, a safety inspection was carried out at Shintech Inc., a major member of the Shin-Etsu Group in the U.S. As the largest PVC manufacturer in the world, the company is known to always employ safe practices, responding to the trust placed in to by customers and society.

In view of the large number of accidents at chemical plants recently, both in Japan and overseas, the inspection was aimed at checking if any hidden risks exist at any of the Shintech plants, and to ensure that safe operation will continue to be reliably implemented in the future. The inspection showed that Shintech's safety initiatives fully live up to the trust that is being placed in the company.

We will continue to carry out such safety inspections and audits of Group companies to make certain that a thoroughly safety-conscious approach is being realized throughout the entire Group.





## We have numerous dialogues with shareholders and investors via our IR activities

### Information Disclosure

The Shin-Etsu Group believes the appropriate and timely disclosure of corporate information to shareholders and investors is a way to encourage understanding of the Company, and also leads to reasonable evaluations by the market. We therefore implement fair and transparent disclosure by posting information on the Company's website and announcing it to stock exchanges and news media. We also publish the Annual Report and other reports for shareholders.



Shin-Etsu Report

Annual Report

### Profit-Sharing Policy

The Shin-Etsu Group works to expand business profit and enhance our corporate quality from a long-term viewpoint. We distribute dividends based on our standard of sharing the fruits of these management endeavors to shareholders in a suitable manner. In addition, financial reserves are appropriated for capital investments, research and development, and other types of investment. We proactively use these reserves to strengthen our global competitiveness and for future business developments, with the goal of further improving our corporate value.

Our annual dividends in fiscal 2013 (April 2012 to March 2013) were ¥100 per share.

### Communication

#### General Shareholders' Meeting

Shin-Etsu Chemical holds a General Shareholders' Meeting once per year according to its articles of incorporation. To ensure that shareholders can fully consider the agenda items, we send notices on the convention of these meetings at an early stage. The convention notices, as well as English-language translations, are also posted to the Company's website for the greater convenience of shareholders.

At the General Shareholders' Meetings we report on financial results, vote on agenda items, and respond to various questions from shareholders.

#### Other Types of Communication

We hold quarterly conference calls and meetings on financial results for analysts and institutional investors. In addition, we also accommodate one-on-one meeting requests from domestic and international analysts and institutional investors as occasion calls. The Company's management proactively attend conferences organized by securities companies and take part in Q&A sessions with participants. In these and other ways, we make efforts to create deeper understanding of the Shin-Etsu Group through direct dialogues.

### Inclusion in Indices for Socially Responsible Investment

Due to high evaluations of the Shin-Etsu Group's CSR initiatives, we were included in the MSCI World ESG Index and MSCI World SRI Index in August 2012, which are indices for international socially responsible investment (SRI).

In addition, in January 2013 Morningstar Japan K.K. selected the Shin-Etsu Group for inclusion in its Morningstar Socially Responsible Investment Index, containing 150 listed corporations in Japan that are evaluated as having excellent social qualities.



## The Shin-Etsu Group is entrusted with the safety use of our products from our customers

### Quality Control

#### Quality Control System

Each Shin-Etsu Chemical's division and/or Group company is responsible for the quality of each product to the customers. So that we can supply products and services that generate customer satisfaction, each of our plants has its own quality control policy. At the same time, by implementing the Plan-Do-Check-Act (PDCA) cycle, we work to raise the effectiveness of the quality control system, enhance product quality, and improve service.

Requests and suggestions from customers are reported immediately by the sales departments that are in direct contact with customers to the R&D Department, Quality Assurance Department, Manufacturing Department, and the relevant departments. These information are incorporated into new product research and development and/or also used to improve existing products. In this way, we have created a system to reinforce our relationships of trust with our customers.

Almost all Shin-Etsu Group manufacturing plants, both domestic and overseas, have obtained certification of the quality control systems such as ISO 9001 and ISO/TS 16949.

#### Response to Complaints

Shin-Etsu makes it an absolute rule to make an initial response to all quality complaints from customers within 48 hours of receipt.

In regards to complaints, each division independently responds to the customers' complaints through the investigation and determination of the causes and the preventive action for recurrence. The recall and product liability problem that have a social impact is defined as a critical quality claim and given special priority to be distinguished from other claims. When a serious claim occurs, it is immediately reported to the top management so that a company-wide response can be implemented.

#### Quality Audits and Support

To achieve the zero quality problem, the claim and complaint information from the customers are closely examined. Furthermore, quality audits are carried out periodically for the improvement of quality and customer service. Quality audits evaluate the quality activity of each section from the customers' viewpoint and the viewpoint of quality cost in order to reinforce the weak point of the quality control system. The system for the recurrence prevention of claim complaints is established by focusing on evaluating the past claims and investigating the root cause of the quality issue.

The PDCA cycle is applied to problems pointed out on quality audit for improvement and follow-up. The Six Sigma program<sup>1</sup> is also deployed on company-wide as activity for the improvement in a quality control.

<sup>1</sup> Six Sigma program  
Quality improvement method developed by Motorola in the 1980s. Focused on processes where quality variation appears, it is designed to minimize variation within the processes and thereby reduce the incidence of quality defects. This approach has been adopted across the Shin-Etsu Group.

### Product Safety Promotion

FMEA<sup>1</sup> and other analyses are carried out at every process from product development to product commercialization to identify potential issues for system performance and/or product safety. Quantitative analysis is undertaken to evaluate issues identified in order to improve product design and manufacturing processes.

We provide SDS<sup>2</sup> for each product to customers. Customers are encouraged to take appropriate safety precautions for understanding hazardous and harmful characteristics of the product, undertaking all required legal procedures whenever necessary, installing safety systems and/or pollutant treatment facilities, and wearing protective gear.

As a safety measure during transportation, we issue a Yellow Card<sup>3</sup> and/or Container Yellow Cards<sup>4</sup> that are affixed to containers. Moreover, we post warnings about potential hazards and harm according to the GHS<sup>5</sup> method.

Within Japan, the Shin-Etsu Group implements appropriate management in the research and development stage by confirming the safety of new chemical substances and submitting manufacturing permit applications in accordance with the requirements of the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. and other applicable legislation such as the Industrial Safety and Health Act. The Shin-Etsu Group conforms to the REACH regulation<sup>6</sup> and is working to comply strictly with the appropriate transmission of information along the supply chain and other aspects of the regulation. The Shin-

Etsu Group is also committed to developing new manufacturing technologies designed to totally eliminate the use of specified toxic substances in conformance with the RoHS Directive<sup>7</sup>.

- 1 FMEA (Failure Mode and Effects Analysis)  
Systematic method to identify and prevent problems before they occur in regards to products and processes.
- 2 SDS (Safety Data Sheet)  
SDS stands for Safety Data Sheet, which lists the physical and chemical properties of the chemical substance together with harmfulness and emergency response procedures. Designed to promote safer use of chemical substances and prevent accidents and incidents, SDS are supplied by manufacturers, importers and distributors to customers at the point of sales or shipment.
- 3 Yellow Cards  
The yellow cards on which all relevant information on treatment required in case of an accident during transportation of chemical substances is described. The cards are handed to the transport contractor to be brought by tanker lorry or other means at the time of transportation.
- 4 Container Yellow Cards  
The standard yellow card system is not suitable for use with mixed cargoes and small-lot deliveries. Instead, each container carries a label displaying safety information such as UN number of chemical name and emergency response procedure number.
- 5 GHS (Globally Harmonized System of Classification and Labeling of Chemicals)  
Internationally standardized system of classification and labeling of chemicals.
- 6 REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals)  
EU regulation on the registration, evaluation, authorization, and restriction of chemicals.
- 7 RoHS (Restriction of the Use of Certain Hazardous Substances) Directive  
EU directive on restricting the use of certain hazardous substances in electrical and electronic equipment.

### Delivering safe, reliable products to customers

**Yoji Fujimoto**, Strategic Planning Department, Silicone Division, Shin-Etsu Chemical

The products handled by the Silicone Division are unique because of the extremely large number of different types. Because we conform to a wide range of legislation on the management of chemical substances, we also provide support to overseas customers regarding conformance with legislation, through such services as the SDS Creation Support System we introduced in fiscal 2012. In addition, we have established quality assurance structures at overseas Group companies as well.

From fiscal 2013 we are continuing our assistance for conformance with legislation in overseas countries, and are also planning to take part in multiple exhibitions inside and outside Japan in order to widely provide product information to customers.



### Business Partners

## The Shin-Etsu Group is committed to fair and equitable procurement practices and to incorporating environmental considerations into the supply chain

### Basic Procurement Policy

A Basic Procurement Policy has been formulated for the purchasing of supplies needed for production activities, including raw materials, sub materials including transportation packaging, and machinery and equipment. This policy is ensured in the Group and posted on the website.

Business partners are expected to understand the Basic Procurement Policy and asked to incorporate the content of the Policy into their supply contracts.

### Compliance with the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors

For all business partners subject to the provisions of the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, the Shin-Etsu Group makes periodical checks in combination with reporting of new transactions to ensure full compliance. In addition, staffs in charge of purchasing and procurement frequently attend external seminars and internal training sessions to discuss specific examples of conduct. In this way, the Company works to boost awareness of compliance with the Subcontractors Act.

In addition, the Company requests that business partners who supply raw materials comply thoroughly with the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors.

### Procurement Audit

Before and after transactions, the business partner is asked to complete a procurement audit checklist, the results of which are used for evaluation. Additionally, we visit business partners in Japan and overseas whenever necessary to carry out audits.

### Business Continuity Initiatives

The Shin-Etsu Group has formulated a Business Continuity Plan and is prepared for contingencies. We would like business partners to understand the effectiveness and practicality of the Group's Business Continuity Plan and draw up a business continuity plan of their own.

### Control of Chemical Substances Used as Raw Materials

The Shin-Etsu Group checks the ISO 14001 status of business partners and considers preferential business transactions with business partners that have ISO certification so as to purchase materials of lower environmental impact.

When contracting specifications on supply of raw materials, we investigate the business partner's use of chemical substances with environmental impact in products and packaging, their environmental management systems, their handling of prohibited substances as stipulated in the RoHS Directive, and their Green Partner certification status.

In addition, we also comply with REACH regulation registration.

### Efforts for stable procurement of materials

**Tomoyoshi Tada**, Purchasing Department, Shin-Etsu Chemical

In fiscal 2012 there was concern about the procurement of raw materials due to factors such as major declines in supply amounts caused by exhausted resources and states of emergency at business partners. However, our business was not hindered because we took steps such as using multiple suppliers from inside and outside Japan.

In fiscal 2013 we are also paying attention to suppliers' supply chains for primary raw materials, and are also working to discover new suppliers. In this way, we are making efforts for stable procurement.





Local Communities

# We maintain communication with local communities through our business sites in various regions

● Related to the Great East Japan Earthquake

Participating in work to clean up marine debris in Oregon

**The United States of America**

Via the Japan-America Society and the Portland Chamber of Commerce, a small group of SEH America employees helped clean coastal areas in the state of Oregon, where they performed tasks such as confirming whether found articles were tsunami debris from the Great East Japan Earthquake.



Holding the 2nd Local Produce Market to support Tohoku

**Japan**

Just like in 2012, Shin-Etsu Chemical and Shin-Etsu Handotai participated in the Local Produce Market that was held in March 2013 in the Asahi Seimei Otemachi Building. There, specialty products from Fukushima, Iwate, and Miyagi Prefectures were sold.



● Raising funds for UN World Refugee Day

**Japan**

Since 2006, the Shin-Etsu Group has raised funds for the UN-established World Refugee Day, observed every year on June 20. In this way, assistance is provided to refugees across the world via the Japan Association for UNHCR. In 2012 the Company matched the contributions given by employees, and the total was donated.



● Support making a Japanese garden

**The United States of America**

A Japanese garden was completed at Clark College in Vancouver, Washington—where SEH America is located—through a personally support by Shin-Etsu Chemical Chairman Chihiro Kanagawa and support by SEH America. A dedication ceremony attended by persons including the mayor of Vancouver was held in April 2012, and the garden is currently beloved by residents as a place for relaxation.



● Plant tour for teachers in managerial positions in Annaka City

**Japan**

As part of activities to deepen understanding of Shin-Etsu's Gunma Complex among residents of the region, a plant tour was held for teachers in managerial positions who work at elementary and junior high schools in Annaka City.



● Participating in the mikoshi parade at the Naoetsu Gion Festival

**Japan**

Twenty-two Group employees working at the Naoetsu Plant district helped carry a mikoshi (portable shrine) in the parade at the Naoetsu Gion Festival, where they toured throughout the town.



● Participating in National Breast Cancer Awareness Month

**The United States of America**

In October 2012, Shintech employees in the Louisiana sector participated in National Breast Cancer Awareness Month, which is organized by the American Cancer Society. For one day during this month, employees worked while wearing pink clothing in honor of the movement to increase awareness of breast cancer.



● Blood drives

**Inside and outside Japan**

The Shin-Etsu Group carried out blood drives at its plants and Group companies. Approximately 80 employees took part in the blood drive held at Shin-Etsu Polymer Malaysia in February 2012.



Employees

# People create and support technology. We provide assistance for the efforts of each employee to fulfill his or her potential

The Shin-Etsu Group respects human rights and implements a variety of approaches to create workplaces that are conducive to work, and where each employee is healthy, fulfills his or her potential, and can build a career.

### Health Considerations

#### Employee health programs

To decrease staff sickness, we are working to offer a fulfilling regular health consultation service, provide health guidance for lifestyle-related diseases, take measures to ensure mental health, and focus on activities that promote fitness and develop physical strength.

We have also established Health Committees at our head office and branch offices, as well as Safety and Health Committees at each plant district. These committees undertake activities while receiving information and guidance—including about measures to improve the work environment and prevent damage to health—from industrial physicians.

In addition, our Fitness and Physical Strength Development Promotion Committees work together with Medical Treatment Rooms to organize physical strength monitoring, and to hold seminars and events for physical strength improvement. To provide health support to include employees' families, the corporate health insurance society cooperates with

expert organizations to provide the 24-hour Family Health Consultation Desk.

### Respect for Human Rights

#### Human Rights Enlightenment Promotion Committee

The Shin-Etsu Group, from a corporate viewpoint, organized the Human Rights Enlightenment Promotion Committee with the aim of coping with various human rights issues and creating cheerful workplaces where people are inspired to work. This committee also holds regular human rights enlightenment training for directors and employees to promote the improvement of human rights awareness.

In addition, Shin-Etsu belongs to both the Industrial Federation for Human Rights, Tokyo, and the Industrial Federation for Anti-Discrimination, Osaka. Our employees participate proactively in events held by both federations, as well as training sessions put on by other organizations.

#### Efforts to abolish child labor and forced labor

The Shin-Etsu group conforms to international guidelines, and does not approve of forced labor or child labor of any type. We conduct a survey of Group companies, including overseas companies, each year. Through this survey, we confirm that our employment conditions are based on the

international labor standards of the International Labour Organization (ILO) and that no forced or child labor is taking place.

### Performance-based personnel evaluation systems and equal opportunities

We have introduced a personnel system that places importance on employee ability and work performance. This system proves useful for increasing employees' motivation, as their treatment reflects their performance, attitude, and evaluations of how they meet their challenges to achieve higher goals.

To operate the personnel system in a fair and appropriate manner, evaluation training is provided for all managers who conduct performance review so that they can carry out personnel evaluations in a fair way. To further increase transparency, evaluation standards are made available and the results are also disclosed. Furthermore, a system of interviews between the evaluator and the person being evaluated has been established to ensure that the two parties can communicate successfully.

During interviews, each staff member and his/her immediate superior use Communication Sheets to ensure mutual awareness of the superior's expectations regarding what he/she would like the subordinate to accomplish, as well as what challenges the subordinate would like to take on. The interviews

are also an opportunity to set targets for the next six months and to provide feedback on progress, and serve in this way to promote further development of abilities.

### Education/Training and Personal Development

#### Auditing student system

In 1962, we established an auditing student system with the goal of improving workplace cohesion. Under the system, up to about ten employees each year are chosen from plant manufacturing sites and sent to study at universities for one year. In the 50 years since the system was introduced, 506 employees have completed the program and now function as leaders in the workplace.

#### Training for international adaptation

The Shin-Etsu Group is expanding its business activities throughout the world. Competency to communicate in foreign languages is therefore an essential skill for smooth operations. To this end, the Group provides English language training to teach meeting and presentation skills and offers intercultural communication training to promote understanding of cultural differences commonly encountered overseas. Chinese conversation classes are also held.

<sup>1</sup> QC Quality Control. Or, activities in manufacturing industry that encourage employees to make proactive contributions to workplace management and improvement, leading to improvements in quality.

### Training system

	Training for different staff grades	Specialized education	General education	Special education	Environment and safety education	Quality control education	Six Sigma education					
General manager level	Advanced management training S/M job family training	<ul style="list-style-type: none"> <li>Patent training</li> <li>Training for adaptation to internationalization</li> <li>English language training, meeting skills course I/II</li> <li>English language training, presentation skills course I/II</li> <li>Chinese conversation classes</li> <li>Intercultural communication training</li> </ul>	Mental health seminars Human rights awareness training	Auditing student system (1 year)	Specialized education in environmental control and safety	QC <sup>1</sup> master course	Black belt training					
Section manager level	Middle management training							Course for management development training (external training)	Supervisor education	QC intermediate course	Green belt training	
Junior manager level	Line management training Staff management training Leader training							Safety education				Special education
Regular employees	Junior leader training New employee second-phase training New employee induction training											
	Job family change training			New recruit education								

### Utilizing diverse human resources

#### Akito Murayama,

Personnel & Labor Relations Department, Shin-Etsu Chemical

We implemented the hiring of persons with disabilities by advertising jobs via job-placement office and other job placement services in each region. Consequently, our employment rate for persons with disabilities is 2.0% as of March 2013. And due to the revisions to the Act for Stabilization etc. of Employment of Older Persons etc., we have also introduced a new system for the employment of elderly persons.

From fiscal 2013 we will continue promoting the utilization of person with disabilities and elderly persons. We will also make efforts including promoting the hiring of international students, and introducing overseas training, so that we can respond to further overseas developments in our business.





Respect for Diversity

Childcare and nursing care systems

The Shin-Etsu Group offers a full range of systems to support employees who give birth to and are raising children. Our childcare leave system can be used by employees until their children have reached the age of three, and many employees take advantage of the system. Meanwhile, the shorter working hours system allows employees with children up to grade three of elementary school to shorten their working hours by up to two hours a day.

As for nursing care leave, under certain conditions, employees can take up to one year of leave per eligible family member. No employees took advantage of the system in fiscal 2012.

Number of employees who have taken childcare leave (Fiscal 2012)

Shin-Etsu Chemical Co., Ltd.	14 (Male: 2; Female 12)
Consolidated companies in Japan	45 (Male: 3; Female 42)
Consolidated companies total <sup>1</sup>	103 (Male: 30; Female 73)

<sup>1</sup> The length of childcare leave differs from country to country, as the program is based on local law.



Users of the childcare system (Shin-Etsu Handotai Co., Ltd.'s Shirakawa Plant)

Promoting active roles by foreign nationals, disabled persons, and the elderly

As one facet of ensuring the required human resources for engaging in global business, the Shin-Etsu Group carries out employment at overseas Group companies and also makes efforts to employ foreign nationals who are studying in Japan.

The entire Group is also working to proactively employ disabled persons and create environments where it is easy for them to work.

We have created the Internal Re-employment Program for employees who have reached the retirement age of 60 years, which allows them to be re-employed until age 65.

Labor-management Relations

Shin-Etsu Chemical holds council with the Shin-Etsu Chemical Labor Union to promote communication between labor and management. Meetings of the Central Staff Council are held once a month at the head office and are attended by senior management themselves, who discuss with staff subjects such as management policy, outline information about individual businesses, and the personnel system. Meanwhile, each business site holds a monthly Local Labor Meeting with the local branch of the Shin-Etsu Chemical Labor Union.

Repeated dialog and discussion between labor and management deepen mutual understanding and trust and facilitate business operations in which staff and management can come together to present speedy responses to the changing business environment.

I decided to work in Japan because I was fascinated with Japanese technologies

My connection to Shin-Etsu Chemical came about because I used our yttrium oxide in my undergraduate and graduate research. I found Shin-Etsu Chemical appealing because they had expanded overseas from an early stage, so it is possible to work not just in Japan but across the world, too. That's why I joined the Company.

I am currently learning many things since I am in charge of a broad range of tasks, including the improvement, manufacture, quality control, and shipping of silicone resins for LEDs. Before entering the Company I was concerned about my lifestyle and work, but this was resolved via the courteous advice from the human resource staff. In addition, I am always supported by the wonderful bosses, senior employees, and colleagues in my workplace.

In the future I hope to return to my home country and share with my people about the wonderful qualities of Japan, as well as the technologies I have learned here.

Nur Hazwani Binti Khusaini,

Organic Electronics Materials Technology Group, Gunma Complex, Shin-Etsu Chemical



Welfare and Benefits

Accumulated holidays

A certain number of annual paid holidays are granted in accordance with labor regulations. If those annual paid holidays are not taken, a certain number can be treated as accumulated holidays, which are then carried over to the next year and may be utilized as family-care leave days or as days off for injury or illness. Employees may also use these holidays to volunteer in disaster areas or serve as donors for organ or bone marrow transplants.

Employee Hotline

As a counseling service for trouble with work or other issues, we have set up Dial Shin-Etsu, which is staffed by experienced and qualified specialist counselors from outside of the Company. Consultations are received anonymously and treated with strict confidentiality, but if requested the counselor will contact the Personnel Department to discuss possible solutions.

Shinkansen commuting benefits

Since 1989, Shin-Etsu has allowed commuting by Shinkansen at company expense. This option has allowed more employees to own houses and enables personnel who are reassigned to headquarters from plants and other business sites in Gunma and Fukushima prefectures to transfer jobs without changing their lifestyles. As of March 2013, 65 employees were taking advantage of this Company offer.

Other systems

The BAKER-KANAGAWA Japan-U.S. scholarship program was established by Mr. Robert Baker, founder and the first president of Dow Chemical Japan Ltd. and a former chairman of the American Chamber of Commerce in Japan, and Mr. Chihiro Kanagawa, chairman of Shin-Etsu Chemical. It can be used for the children of Japanese employees of the Shin-Etsu Group to attend universities in the United States and for the children of American employees to attend universities in Japan.

In addition, we have established asset-building schemes, a shareholding system, and a mutual aid society to provide support for weddings, childbirth, and sudden hospitalization of family members.

A Shin-Etsu Group employee competed in the London Paralympic Games

Manabu Tamura of Skyward Information System Co., Ltd.'s Isobe Complex represented Japan in wheelchair rugby<sup>1</sup> at the Paralympic Games that were held in London in August 2012, where he won fourth place. It was Tamura's third appearance in the Paralympics after Athens in 2004 and Beijing in 2008.

Tamura is currently employed at Skyward Information System as a system engineer. At the same time he is part of BLITS, a team that constantly occupies the top position in the Japan Wheelchair Rugby Federation. Although he is extremely busy each day with his work, he never misses a practice.

Tamura said, "Everyone has the right to live happily as a part of society. Equality is essential for acquiring the rights to life and happiness. In my case I have a physical disability, but I can work in the same way as a non-handicapped person in an environment that is free of barriers. I can also devote myself to sports." The Shin-Etsu Group will increase its employment of persons with disabilities in the future through the creation of workplace environments, and will support the active roles of persons with disabilities in society.

<sup>1</sup> Wheelchair rugby  
Rugby in which the players use wheelchairs. One team is composed of four people, and one game consists of four eight-minute periods. Japan won the Bronze Medal in the 2010 World Wheelchair Rugby Championships. As of February 2013, it is ranked fourth in the world.





## History of Activities

Measures taken by the Shin-Etsu Group	
1926	Founded as Shin-Etsu Nitrogen Fertilizer Co., Ltd. (name changed to Shin-Etsu Chemical Co., Ltd. in 1940)
2000	ISO 14001 certification obtained for all domestic production plants of Shin-Etsu Chemical
2000	Installation of wastewater pretreatment system (Shin-Etsu Silicone Taiwan)
2000	Final waste disposal system completed (Shin-Etsu Chemical/Gunma)
2001	Waste disposal system completed (Shin-Etsu Chemical/Naoetsu)
2001	Installation of absorption refrigeration system (Shin-Etsu Chemical/Kashima)
2001	Installation of thermal recovery system for distillation process (Shin-Etsu Chemical/Kashima)
2002	Installation of co-generation system (Shin-Etsu Chemical/Kashima)
2003	Participation at First International Conference on GSC Tokyo 2003
2003	Installation of steam recycling system (Shin-Etsu Silicone Taiwan)
2004	OHSAS 18001 certification obtained (Shin-Etsu Electronics Malaysia)
2005	Corporate Social Responsibility (CSR) Promotion Committee established
2005	Installation of cellulose wastewater recovery system (Shin-Etsu Chemical/Naoetsu)
2005	Environmental Charter revised
2005	Co-generation system further expanded (Shin-Etsu Chemical/Kashima)
2006	Hydrochloric acid recovery system installed on silica production line (Shin-Etsu Chemical/Gunma)
2006	Signed the Responsible Care Global Charter
2006	Fuel for boiler system switched (Nagano Electronics/Chikuma)
2007	SA 8000 certification obtained (Shin-Etsu Magnetics Philippines)
2007	Installation of system to reduce steam usage by improvement of distillation process (Shin-Etsu Chemical/Kashima)
2008	Installation of natural gas fuel conversion system (Shin-Etsu Chemical/Gunma)
2008	Augmentation of wastewater biological treatment system (Shin-Etsu Chemical/Gunma)
2008	Installation of thermal recovery system for distillation column (Japan Vam & Poval)
2008	Installation of gas turbines (Shin-Etsu Chemical/Gunma)
2008	Fuel conversion of boiler (Tatsuno Chemical Industries)
2008	Installation of LNG-fueled through-flow boiler (Nissin Chemical Industry)
2008	Thermal recovery system installed on silica production line (Shin-Etsu Chemical/Gunma)
2009	Installation of high-efficiency turbo refrigerator (Shin-Etsu Handotai/Isobe)
2009	Installation of air conditioning system using process based on free cooling (Shin-Etsu Handotai/Isobe)
2009	OHSAS 18001 certification obtained (Asia Silicones Monomer)
2010	Fuel for boiler system switched (Nagano Electronics/Plants II and III)
2010	Installation of inverter turbo refrigerator (Nagano Electronics/Plant V)
2010	Participation to UN Global Compact
2010	Installation of oil clarification system (Shin-Etsu Silicone Taiwan)
2011	Gold Medal at the Korean Ministry of Knowledge Economy's National Quality Management Convention (Shin-Etsu Silicone Korea)
2011	Installation of electricity demand monitoring system (Shin-Etsu Chemical/Gunma)
2011	ISO 50001 certification obtained (Shin-Etsu Silicones Thailand)
2012	Gold Medal at the Korean Ministry of Knowledge Economy's National Quality Management Convention (second consecutive year) (Shin-Etsu Silicone Korea)
2012	ISO 50001 certification obtained (SE Tylose)

1926


2000

2010

Awards in the Fields of Safety, the Environment and Industrial Health	
2000	Fire Defense Agency Director General's Prize for superior handling of hazardous materials (JAPAM VAM & POVAL)
2000	Superior Prize, Minister of Labour (Nissin Chemical Industry)
2000	Superior Prize, Minister of Labour (Naoetsu Electronics)
2000	Superior High-Pressure Gas Production Facility Award, Director of Kinki Bureau of Economy, Trade and Industry (Shin-Etsu Quartz Products/Takefu)
2001	Commendation for Occupational Health Activities, Minister of Health, Labour and Welfare (Shin-Etsu Quartz Products/Takefu)
2001	Superior High-Pressure Gas Production Facility Award, Minister for Economy, Trade and Industry (Shin-Etsu Chemical/Kashima)
2001	Improvement Prize, Director of Saitama Labor Bureau (Shin-Etsu Polymer/Tokyo)
2002	Thirty-Year Lost Time Incident-free Special Achievement Award, Japan Soda Industry Association (Shin-Etsu Chemical/Naoetsu)
2002	Superior Company in the Field of the Environment Award, Hsinchu County, Taiwan (Shin-Etsu Silicone Taiwan)
2002	Superior High-Pressure Gas Production Facility Award, Director of Kinki Bureau of Economy, Trade and Industry (Fukui Shin-Etsu Quartz)
2003	Superior High-Pressure Gas Production Facility Award, Director of Kanto Bureau of Economy, Trade and Industry (Kashima Vinyl Chloride Monomer)
2003	Achieved seven million Lost Time Incident-free hours, a 1st class Lost Time Incident-free record (Shin-Etsu Handotai/Isobe)
2003	5th Class Lost Time Incident-free record (Naoetsu Electronics)
2003	Superior Facility Award, Yamaguchi Prefecture Hazardous Materials Safety Convention (Shin-Etsu Polymer/Nanyo)
2004	Superior Prize, Head of Saitama Labor Bureau (Shin-Etsu Polymer/Tokyo)
2004	Safety and Health Encouragement Prize, Head of Nagano Labour Bureau (Shinano Polymer/Hotaka)
2004	Bureau Director Encouragement Prize for Safety and Hygiene, Niigata Labour Bureau (Niigata Polymer)
2005	Excellent Safety and Hygiene Workplace Award, Minister of Health, Labour and Welfare (Shin-Etsu Chemical/Kashima)
2005	Good Management Program Prize of Occupational Safety and Health, Malaysian Ministry of Human Resources (S.E.H. (Shah Alam))
2005	Superior Prize for Safety and Health, Niigata Labour Bureau (Niigata Polymer)
2006	Superior Prize for Health, Director of Niigata Prefecture Labour Standards Bureau (Naoetsu Precision Engineering)
2006	5th Class Lost Time Incident-free Certificate (Shin-Etsu Film: disaster-free record maintained to date)
2007	Superior Prize, Director of Nagano Labour Bureau (Nagano Electronics)
2007	Encouragement Prize, Director of Nagano Labor Bureau (Shinano Polymer)
2008	Superior Prize for Industrial Safety and Health, Director of Fukui Prefecture Labour Bureau (Fukui Shin-Etsu Quartz)
2009	Special award from Thai Ministry of Labour and Social Welfare for one million consecutive hours of Lost-Time Incident-free operation (Shin-Etsu Silicones Thailand)
2009	High-pressure Gas Safety Award, Minister of Economy, Trade and Industry (Shin-Etsu Handotai/Isobe)
2009	Superior High-Pressure Gas Production Facility Award, Minister of Economy, Trade and Industry (Kashima Vinyl Chloride Monomer)
2010	Encouragement Prize, Director of Saitama Labor Bureau (Urawa Polymer)
2010	Committee Chairperson's Award from Committee for Promotion of Electricity Utilization in Seven Tohoku Prefectures (Shin-Etsu Quartz Products/Koriyama)
2010	Superior Prize for Environmental Preservation, Niigata Prefecture (Naoetsu Precision)
2010	High-Pressure Gas Safety Award, Head of Nuclear and Industrial Safety Agency (Nissin Chemical Industry)
2010	500,000 Lost Time Incident-free Hours Award, State of Ohio (Shin-Etsu Silicones of America)
2010	Occupational Excellence Achievement Award, National Safety Council (US) (Shintech)
2012	Forty-Year Lost Time Incident-free Special Achievement Award, Japan Soda Industry Association (Shin-Etsu Chemical/Naoetsu)
2012	Achieved 8.1 million Lost Time Incident-free hours, a 2nd class Lost Time Incident-free record (Shin-Etsu Chemical/Gunma)

**Membership** Keidanren (Japan Business Federation)  
Plastic Waste Management Institute  
Japan Chemical Industry Association  
The International Friendship Exchange Council  
Vinyl Environmental Council  
The Japan Committee for UNICEF, etc.  
As of March 31, 2013

## Responsible Care (RC) Audit of the Report



「環境・社会報告書 2013」  
第三者検証 意見書

2013年5月30日

信越化学工業株式会社  
代表取締役社長 森 俊三 殿

■ 検証の目的  
本検証は、信越化学工業株式会社が作成した「環境・社会報告書 2013」(以後、報告書と略す)に記載されている、下記の事項について、レスポンスブル・ケア検証センターが化学業界の専門家の意見を表明することを目的としています。

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性
- 2) 数値以外の記載情報の正確性
- 3) レスポンスブル・ケア活動の評価
- 4) 報告書の特徴

■ 検証の手順  
・本社において、各サイト(事業所、工場)から報告される数値の集計方法の合理性、及び数値以外の記載情報の正確性について調査を行いました。調査は、報告書の内容について各業務責任者及び報告書作成責任者に質問すること、並びに彼らより資料提示・説明を受けることにより行いました。

・直江津工場において、本社に報告する数値の算出方法の合理性、数値の正確性、及び数値以外の記載情報の正確性の調査を行いました。調査は、各業務責任者及び報告書作成責任者に質問すること、資料提示・説明を受けること、並びに証拠物件との照合することにより行いました。

・数値及び記載情報の調査についてはサンプリング手法を適用しました。

■ 意見

- 1) パフォーマンス指標(数値)の算出・集計方法の合理性及び数値の正確性について
  - ・数値の算出・集計方法は、本社及び直江津工場において調査した結果、合理的な方法を採用しています。本年度より、新集計システムが導入され、集計時の誤入力防止等効率的に集計されていることを評価します。
  - ・調査した範囲に於いて、パフォーマンスの数値は正確に算出・集計されています。
- 2) 数値以外の記載情報の正確性について
  - ・報告書に記載された情報は、正確であることを確認しました。原案段階では表現の適切性あるいは文章の分かり易さに関し、若干問題があることを指摘しましたが、現報告書では修正されており、現在修正すべき重要な事項は認められません。
- 3) レスポンスブル・ケア活動の評価について
  - ・海外を含む信越グループの環境パフォーマンス・データの対象範囲会社を年々拡充していること、ヒヤリ・ハット事例を毎年ホームページで公表し続けているなど 積極的に情報開示していることを評価します。
  - ・本年度より、信越グループの温室効果ガスのスコープ 3 排出量を算定し、原料調達から製品の廃棄までを含むサプライチェーン全体を通じた温室効果ガスの排出量を算定・公表を始めたことを評価します。
  - ・製造設備の安全性の評価・改善、作業のリスクアセスメントそしてマニュアルの見直しが計画的かつ着実に実施されていることを評価します。今後信越グループ全体への浸透が望まれます。
  - ・直江津工場では、HAZOP などに依る重要設備の緊急時の安全対策の再評価を実施したこと、また全作業のリスクアセスメント 3 年計画(2011~2013 年度)、全マニュアルの見直し 5 年計画及びヒヤリ・ハット・気がかり提案等の充実した保安活動を実施した成果として、第1種無災害記録が目前にあること及び日本ノーダ工業会 40 年無災害特別賞の受賞に結びついたものと評価します。
- 4) 報告書の特徴について
  - ・文字は少なめ図表や写真を多めにし読みやすく、従業員の顔の見える親しみやすい報告書となっています。
  - ・表紙のデザインをはじめ、構成もステークホルダー毎の活動報告を重視するものと改め、また報告書ガイドライン(2012 年版)に沿った内容の充実化を図るなど意欲的な見直しが行われています。

以上

一般社団法人 日本化学工業協会  
レスポンスブル・ケア検証センター長  
高瀬 純治

