

Shin-Etsu Chemical

**Environmental  
and  
Social Report**  
**2010**

2010 Environmental and Social Report  
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## CSR Vision

The Shin-Etsu Group supports to the fundamental policies outlined in the Charter of Corporate Behavior of the Japan Business Federation (Nippon Keidanren). The Group aims to increase its corporate value in both economic and social terms while upholding respect for human dignity, and giving top *safety and environmental protection-first*, as basic guiding principles for its CSR activities.

## 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 advance of industry and society by providing key materials and technologies.

## Shin-Etsu Group's Basic CSR Policy

1

Based on the Shin-Etsu Group's corporate mission of "strictly complying with all laws and regulations, conducting fair business practices and contributing to people's daily lives as well as to the advance of industry and society by providing key materials and technologies", Shin-Etsu acts with integrity to faithfully comply with the laws and regulations in all the countries in which it is active.

The Group carries out corporate activities that are fair and sound. We endeavor to increase the Group's corporate value, and our goal is to be a company that will achieve continuous growth and development.

2

The Shin-Etsu Group puts its utmost priorities on the fundamental management principles of Safety-and Environment-First, and we aim to be a company that will continue to be trusted by all of our stakeholders. Shin-Etsu also works to help realize a sustainable society.

We endeavor to contribute to the mitigation of the impact of climate change and to promote the preservation of the biodiversity of the Earth.

3

Based on the universal principle of "respecting human dignity," Shin-Etsu strives to fulfill its responsibilities as a global enterprise by creating an ideal working environment for employees, one in which there is no discrimination of any kind, as well as no forced labor or child labor.

4

In order to continue to work in a harmonious and responsible relationship with global society, Shin-Etsu is committed to carrying out activities that contribute to society and to disclosing appropriate corporate information in a timely fashion. Furthermore, Shin-Etsu maintains a sound and transparent relationship with society through such policies as that of not making illegal payments to public officials in any country.

### 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 at the Shin-Etsu Group. The Report has been compiled in accordance with the *2005 Environmental Accounting Guidelines* and *FY2007 Environmental Reporting Guidelines* released by the Ministry of the Environment, Japan.

### Period Covered by the Report

The period covered by this report is April 1, 2009 through March 31, 2010 (with certain exceptions).

### Organizations Covered by the Report

This Report covers Shin-Etsu Chemical Co., Ltd. and associated Group companies as listed below, except where otherwise noted.

#### (1) Environmental Activity Report

Domestic (11 companies)

Shin-Etsu Chemical Co., Ltd., Shin-Etsu Handotai Co., Ltd., Nagano Electronics Industrial Co., Ltd., Naoetsu Electronics Co., Ltd., Mimasu Semiconductor Industry Co., Ltd., Shin-Etsu Quartz Products Co., Ltd., Yamagata Shin-Etsu Quartz Co., Ltd., Fukui Shin-Etsu Quartz Co., Ltd., Nissin Chemical Industry Co., Ltd., JAPAN VAM & POVAL CO., LTD., and Shinano Electric Refining Co., Ltd.

Overseas (24 companies)

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., and Shin-Etsu Handotai Taiwan Co., Ltd., and others

#### (2) Environmental Accounting

Shin-Etsu Chemical Co., Ltd.

#### (3) Sociality

Shin-Etsu Chemical Co., Ltd. and its consolidated subsidiaries both in Japan and overseas (excluding Shin-Etsu Polymer Co., Ltd.)

\* For reporting on the Shin-Etsu Polymer Group, please refer to the *Shin-Etsu Polymer Group Environment and Sustainability Report 2010*, issued at the end of September, 2010.

\* As for the date of issue, issuing department, contact information, website address and other information, please see the back cover.

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# Fulfilling corporate social responsibilities while aiming to be a company trusted by society



Chihiro Kanagawa  
Chairman

Today's society is closely linked at the global level, with new changes emerging every day and instantly spreading around the world. In such fast-moving times, the Shin-Etsu Group is strongly committed to such basic corporate mission as "To contribute to people's daily lives as well as to the advance of industry and society by providing key materials and technologies." At the same time, the Group is swiftly responding to changes in the social and economic environment.

## Putting Utmost Priority on Safety

A key management objective of the Shin-Etsu Group is to place its utmost priority on safety-first at all times. Taking every possible opportunity, I am endeavoring to spread a deeper sense of safety consciousness to all of the board members as well as to the employees of the Shin-Etsu Group. In this way, we are steadily nurturing a corporate culture in which each and every person working for the Shin-Etsu Group considers safety as his or her personal responsibility and keenly hones their sensitivity toward safety when carrying out their daily work.

In order to eliminate latent risks in facilities and manufacturing processes for safety assurance, we are continually making the most appropriate design and carrying out improvements in our facilities. Moreover, in the pursuit of the highest level of safety on the operational side, we are completely complying with our operation manuals, while constantly reviewing and repeatedly improving them whenever necessary.

## Taking Initiatives on the Environment

Together with safety, the Shin-Etsu Group places its highest management priority on taking initiatives on environmental conservation. We are making contributions to protecting the environment in all phases of our business operations, such as "manufacturing processes", "manufacturing technologies" and "products".

### Reducing the Environmental Burden in Manufacturing Processes

As a key part of its management policy, the Shin-Etsu Group complies with all laws and regulations involving the environment as well as proactively promoting the protection of the environment and the efficient use of limited resources to help achieve a sustainable society.

A half-century ago in the 1960s, Shin-Etsu Chemical introduced such perspectives as safety of operations, stability of high-quality products, resource-saving and energy-conservation in its manufacturing processes. Shin-Etsu created manufacturing technologies that led to the reduction of the environmental burden and was globally licensed these technologies to overseas manufacturers. In the fierce, international competition with other companies in the same business, our manufacturing technologies were adopted by customers from around the world because of their strict evaluations of the "safety of facilities" and the "cost and quality of products" as well as their "environmental impact." It was evidence that Shin-Etsu's technological excellence was objectively recognized, including the factor of its low burden on the environment.

Since then, we have been consistently promoting the development and improvement of manufacturing processes and technologies from the point of view of environmental performance. Each plant and those of all of our affiliated companies within the Group are competing with regard to the improvement of technologies by working hard, and at the same time, by horizontally developing superior technologies within the Group. Thus, we are continuing to enhance the technological level of the Group as a whole. We will continue to make use of our superior technologies and expertise on the production, design and construction of manufacturing facilities that we have devised in order to reduce the environmental burden around the world.

### Contribution to Protecting the Environment through Products and Technologies

Polyvinyl chloride (PVC), one of our main products consists of 60% salt and 40% petroleum resources as its raw materials. When compared to other plastics whose raw material is mostly petroleum resources, PVC depends less on such petroleum resources. Furthermore, the recycling system of PVC is highly advanced. Based on these characteristics and combined with its multiplicity of uses and durability, PVC can be said to be a material that contributes to the effective utilization of resources.

Moreover, in addition to the resource-saving characteristic of the raw materials of PVC, the products that use PVC also demonstrate its superior environmental effectiveness. One such product is PVC window frames, whose installation contributes to the improvement of energy-saving performance in homes and buildings. PVC window frames are superior in thermal insulation efficiency, dew-condensation prevention and soundproofing effect. Already in Europe and the U.S., they have become widely diffused. In recent years in Japan as well, the superior energy-saving effect of PVC window frames is attracting widespread attention and its use is growing. They have been adopted in such places as offices of the Japanese Ministry of the Environment and the main administration building of the University of Tokyo.

Semiconductor silicon wafers, another main Shin-Etsu product, are contributing to energy-saving in such applications as home appliances like LCD TVs and automobiles with advanced electronics controls, both of which consume less energy.

In addition, rare earth magnets with their strong magnetic force help make possible smaller, lighter weight and higher output equipment such as motors and also have a wide range of applications in such product areas as hybrid cars, electric vehicles and energy-efficient air conditioners. In these areas, rare earth magnets are playing a significant role in contributing to energy-saving and reducing carbon dioxide emissions in everyday life.

LEDs are also attracting a great deal of attention for application in lighting, featuring low-power consumption and long-lasting operational life. Shin-Etsu's highly reliable silicone products are being used for applications in areas indispensable to LEDs such as lenses, encapsulating material, reflectors and thermal-conductive material. Thus, these silicone products are contributing to improving the effectiveness of LEDs by reducing the environmental burden.

In addition to the products introduced above, Shin-Etsu is manufacturing many other materials and products that contribute to protection of the environment.

### Contributing to the Development of Renewable Energy

Nowadays, a reduction in the emission of greenhouse gases, such as carbon dioxide, is an important global issue. The Shin-Etsu Group will proactively contribute to the realization of a low-carbon society, not only by offering products that contribute to the reduction of greenhouse gases through energy-saving, but also by developing and offering products as well as materials that are essential to the practical, commercial realization of renewable energy such as solar photovoltaic power generation and wind power generation.

### Corporate Governance

Shin-Etsu is continually making maximum efforts to appropriately implement a high level of transparency with regard to our corporate activities. For this purpose, we are proactively

working to strengthen our corporate governance, auditing system and our internal control system as well as information disclosure. With regard to corporate governance, we have appointed six external directors with distinguished records of achievement in their respective areas of expertise. We are also benefitting in the areas of management and operational supervision from their broad insights and advice from an independent perspective. In addition, to enhance the auditing function, we have appointed attorneys and certified public accountants as external auditors, and we are carrying out fair audits, which take into consideration the perspectives of these specialists. Furthermore, by establishing the Auditing Department as an independent organization, we have implemented a system for stricter internal controls and supervision.

Shin-Etsu has established a basic internal control policy, including procedures to strictly respond to the Reporting System on Internal Control Over Financial Reporting stipulated in the Financial Instruments and Exchange Act, which went into effect from March 2009.

We disclose information about our corporate governance and specific related activities on our website as well as through a variety of public communication methods.

### Aiming to Be a More Trusted Company

The Shin-Etsu Group, which that conducts its business operations around the world, is carrying out various social contribution activities in order to build close relationships of trust in each region. Not only do Group companies contribute to society as a company, but also on a volunteer basis many of the staff members of the Shin-Etsu Group companies are actively participating in social contribution activities. For example, staff members of Shintech in the U.S. participate in the activities of the United Way, a typical American charitable organization, by such means as helping to repair the homes of senior citizens living in local neighborhoods.

In recent years, at a time when social life has been becoming more complex and diversified, a company's social responsibilities are becoming greater than ever. The Shin-Etsu Group will respond to the needs of the changing times and society and will do our best to further build trusted relationships with stockholders, investors, customers, suppliers and local communities in each society.

I would like to sincerely request your further understanding and support.

August 2010

Chihiro Kanagawa  
Chairman  
Shin-Etsu Chemical Co., Ltd

## Overview of the Shin-Etsu Group

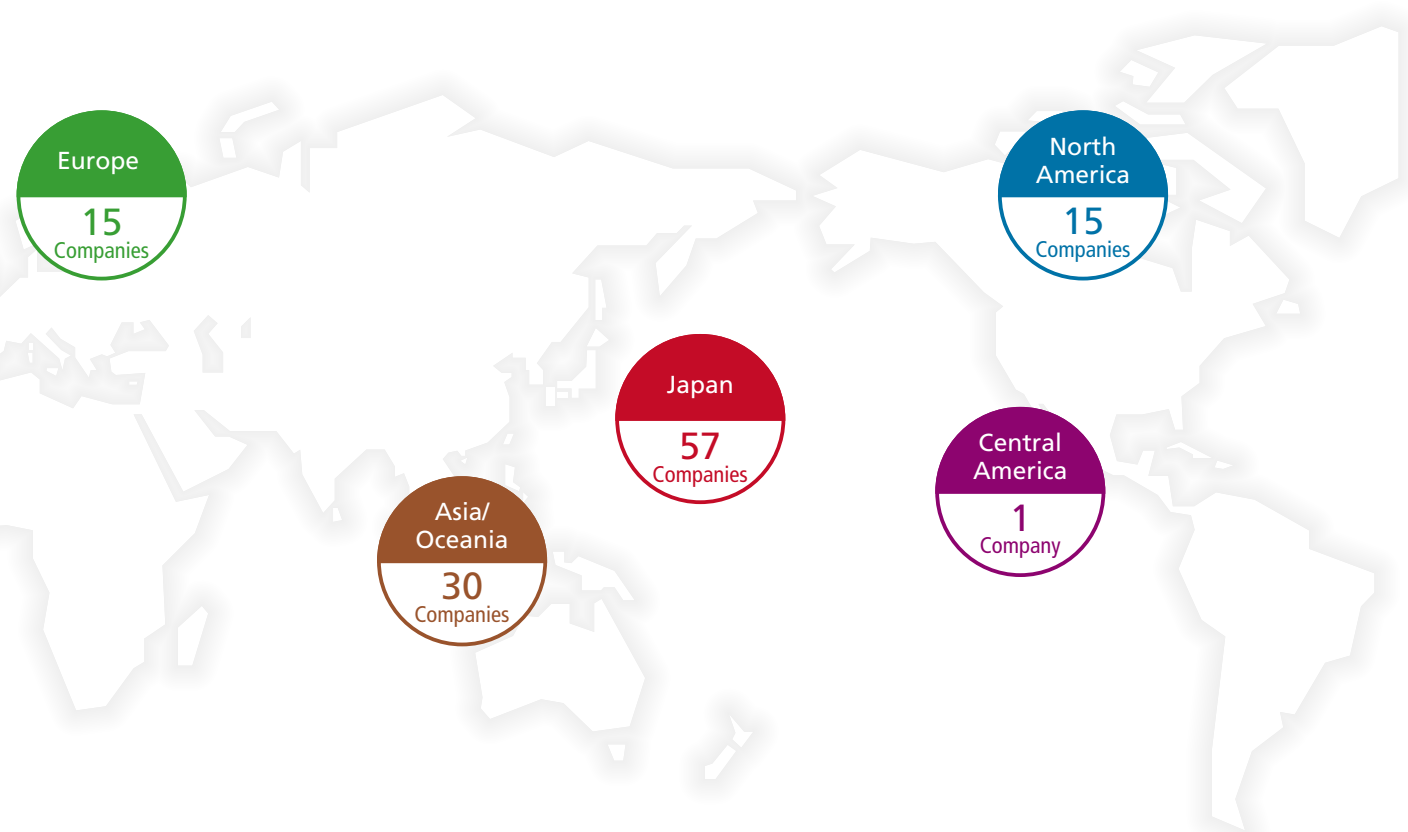
We aim to become an enterprise group that is trusted by society. To this end, we strive to achieve world-leading standards of technology, quality and cost-competitiveness and we are actively engaged in CSR activities.

As of March 31, 2010, the Shin-Etsu Group comprises Shin-Etsu Chemical and its 101 subsidiary companies and 16 affiliates, which share responsibility for sales, manufacturing and other operations and cooperate to develop their respective business activities.

The Shin-Etsu Group is categorized into three main business fields: Organic and Inorganic Chemicals, Electronics Materials, and Functional Materials and Others. In each of these three fields, the Shin-Etsu Group offers products that either have the largest share

of the global market such as PVC, semiconductor silicon, photomask substrates for LCDs and rare earth magnets for hard disk drives or the largest share of the domestic market in Japan such as silicones.

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



### 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., Mimasu Semiconductor Industry Co., Ltd., Shin-Etsu Quartz Products Co., Ltd., Kashima Vinyl Chloride Monomer Co., Ltd., 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., others

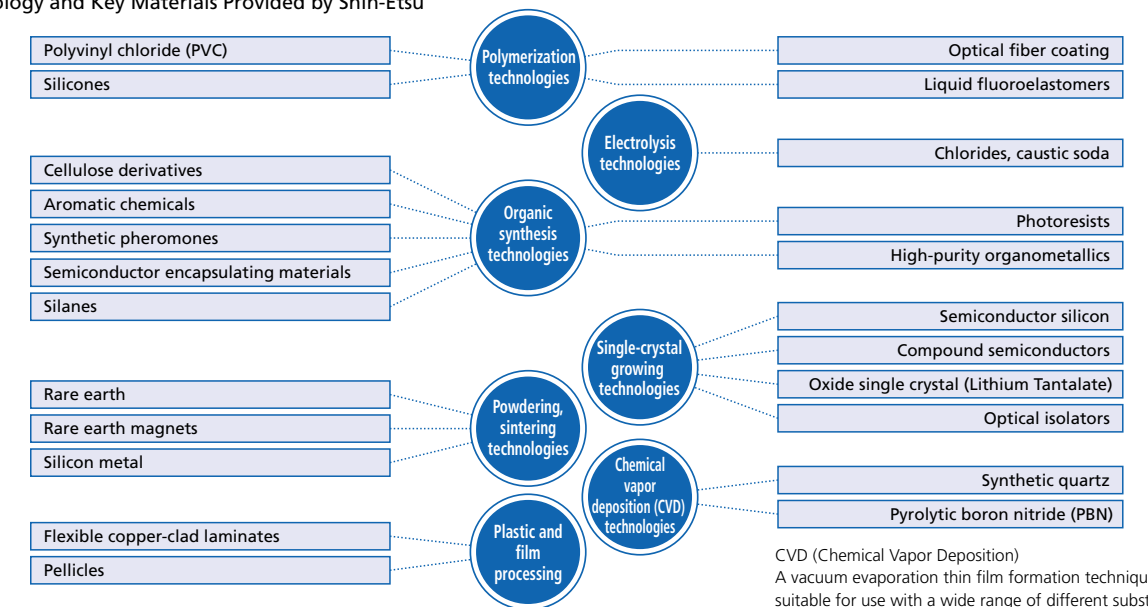
Note: The profile of the Shin-Etsu Group includes the Shin-Etsu Polymer Group.

## Product Information

### Guide to Materials

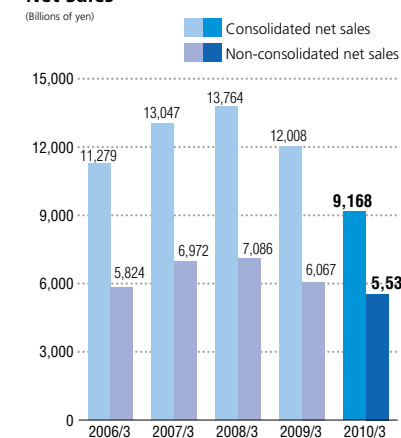
<b>Semiconductor materials</b>	As the world's leading supplier of semiconductor-related materials, we provide a diverse range of items that are indispensable to the manufacture of silicon wafers and semiconductors. We also deal in synthetic quartz photomask substrates, gases, chemicals and jigs used in their manufacture.	<b>Environmentally friendly materials</b>	Such products as our PVC, silicones and synthetic pheromones help save resources, conserve energy and reduce environmental impact.
<b>Electronic materials</b>	Through a wide range of products including silicones, rare earth magnets and liquid fluoroelastomers, we contribute to the improved performance, function and reliability of such devices as electrical home appliances, communication equipment and computers.	<b>Automobile related materials</b>	Because of their diversity and varied characteristics, our products are expected to be crucial for the development of new automobile technologies in the areas of improved reliability size and weight reduction, as well as environmental responsiveness.
<b>Optical materials</b>	Using both natural and synthetic quartz as a base, we develop a diversified range of optical materials, including synthetic quartz preform for optical fibers and assorted optical parts. We supply a wide range of items, from raw materials to processed products.	<b>Architectural/civil engineering materials</b>	We respond to a wide range of needs in the architecture and civil engineering fields by providing such building/civil engineering items as sealing materials, coating materials and admixtures.

### Technology and Key Materials Provided by Shin-Etsu

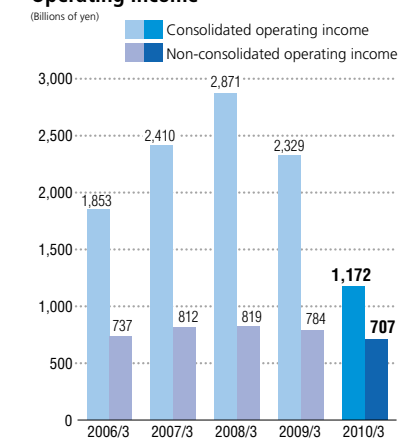


## Financial Highlights

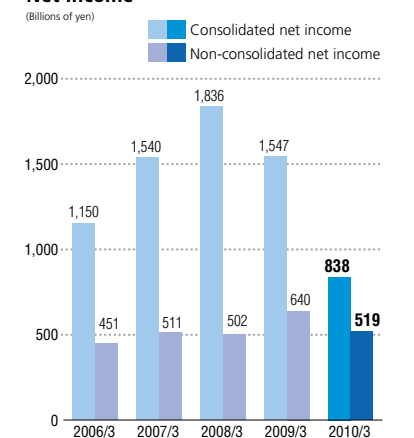
### Net Sales



### Operating Income



### Net Income



Note: Final accounts include the Shin-Etsu Polymer Group.



# Environmental technologies and products can create new platforms for growth! (extract)



Participants

- Chihiro Kanagawa** Chairman, Shin-Etsu Chemical Co., Ltd.
- Toshihiko Fukui** External Director, Shin-Etsu Chemical Co., Ltd. (Former Governor of the Bank of Japan)
- Hiroshi Komiyama** External Director, Shin-Etsu Chemical Co., Ltd. (Former President of The University of Tokyo)
- Shunji Kono** External Director, Shin-Etsu Chemical Co., Ltd. (Honorary Adviser of Tokio Marine & Nichido Fire Insurance Co., Ltd., Former Chairman of Tokio Marine Insurance Co., Ltd.)
- Tsuyoshi Miyazaki** External Director, Shin-Etsu Chemical Co., Ltd. (Adviser of Mitsubishi Logistics Corporation)
- Masashi Kaneko** External Director, Shin-Etsu Chemical Co., Ltd. (Former Director and Chairman of the Board of Nikko Cordial Corporation)
- Kiichi Habata** Managing Director, Shin-Etsu Chemical Co., Ltd.

External Directors Mr. Fukui, Dr. Komiyama, Mr. Kono, Mr. Miyazaki and Mr. Kaneko attended a round-table discussion with Chairman Mr. Kanagawa on environmental activities with such keywords as “reducing CO<sub>2</sub> emissions” and “improving energy efficiency”.



**Chihiro Kanagawa**  
Chairman, Shin-Etsu Chemical Co., Ltd.

## Point of view for global warming prevention

**Habata** Today we would like to hear from Chairman Mr. Kanagawa and our outside directors regarding the future direction of the Company in relation to addressing global environmental issues.

**Fukui** Nowadays, it has become international challenges to avoid catastrophic global warming. Consumer lifestyles and corporate activities are deeply involved in global warming. Thus, we should not ignore the underlying economic calculations. Because global warming is an issue affecting multiple generations, it is important to predict future technology trends as much as possible, to set ourselves targets step by step and to work towards the ultimate goal.



**Toshihiko Fukui**  
External Director, Shin-Etsu Chemical Co., Ltd.  
(Former Governor of the Bank of Japan)

**Komiyama** During preparation of the *Vision 2050* statement in 1997, I conducted a scientific investigation on global warming that yielded two conclusions: (1) an ultimate target year of 2050 and (2) a greenhouse gas concentration of 460 ppm. In order to resolve the current impasse between industrialized and developing nations and create an international consensus, what we need is convincing theoretical arguments based on scientific knowledge, rather than simply ideology. Industrialized and developing countries should not be expected to cut greenhouse gas emissions at the same rate. Instead, we need to adopt a shared understanding of the responsibility for industrialized nations to utilize advanced technologies to improve energy efficiency in developing countries, while acknowledging that increased emissions is an inevitable adjunct to economic growth in developing countries.

In an address to the United Nations, the former prime minister of Japan, Hatoyama, announced a 25% target reduction in greenhouse gases. This represents a key opportunity for Japan. If we can achieve this target ahead of other nations, we will gain the lead in this area. I advocate a 12-3-5-5 breakdown of this 25% target. This means that emissions associated with household and everyday activities should be reduced by 12%, manufacturing by 3%, energy generation by 5% and conservation activities such as forest protection by 5%.

**Kaneko** The modern-day socio-economic model is built based on consumption of fossil fuel energy. In order to switch to alternative energy sources, we will need to change all schemes of society. In Japan, the public and private sectors will need to work together to promote knowledge integration and structuring of intellectual assets, which Dr. Komiyama repeatedly proposed, if we are to maintain a successful balance between environmental conservation and economic activities,

particularly with respect to economic growth strategies to assure employment levels.

**Kono** At the international level, the larger nations have already begun to exhibit a common understanding on the need for CO<sub>2</sub> reductions based on numerical targets. I expect that Japan capitalizes on this common perception by showing initiative in areas such as technology.

**Miyazaki** The materials and chemicals industries play a large role in the environment and energy fields. As a leading company, the Shin-Etsu Group is pursuing a wide range of initiatives aiming to create superior production technologies and environmentally friendly products. We have also released an Environmental Charter which constitutes the basic direction for expansion and enhancement of management structures. It is important to perform the comprehensive power of All Shin-Etsu in creating a new platform for the development of environmental solutions in the future.

**Kanagawa** It's clear from this discussion that we need to review the technologies and products of Shin-Etsu Chemical from the perspective of reducing CO<sub>2</sub> emissions and other environmental concerns. While modification and enhancement of production technology is an ongoing process, we also need to reevaluate all current manufacturing processes from this perspective and develop proprietary solutions as required.

## Efforts by Shin-Etsu Chemical

**Habata** Shin-Etsu Chemical is pursuing environmental solutions at two points: refining production technologies and supplying products that contribute to reduction of environmental burden. With respect to production technologies, we are striving to make production processes cleaner, with minimal waste output and CO<sub>2</sub> emissions. Our 2010 goal was to reduce unit CO<sub>2</sub>



**Hiroshi Komiyama**  
External director, Shin-Etsu Chemical Co., Ltd.  
(Former President of The University of Tokyo)



**Shunji Kono**  
External Director, Shin-Etsu Chemical Co., Ltd.  
(Honorary Adviser of Tokio Marine & Nichido  
Fire Insurance Co., Ltd., Former Chairman of  
Tokio Marine Insurance Co., Ltd.)

emissions to less than 66% of 1990 levels, and this was in fact achieved during 2009.

\* Please refer to graph on page 19: Greenhouse Gas Emissions Index relative to 1990 Level.

Shin-Etsu Chemical supplies a wide variety of products that contribute to reduction of environmental burden as outlined on pages 11 and 12. These have already generated potential new business opportunities in fields such as solar energy, electric vehicles and low-energy housing. We would like to your feedback on the environmental initiatives of the Shin-Etsu Group.

**Fukui** I believe that we have no option but to pursue the current direction more strongly. When you run a business, there would be an occasion you might encounter an obstacle being much expensive, which seems too difficult to overcome. But the important thing is to be undaunted, to pursue a solution with the understanding that you are setting in place a global dynamism that will eventually transform the cost

into an investment. At first, the idea of upgrading or replacing production processes to reduce greenhouse gas emissions might seem cost increase; but there is every possibility that this will give rise to production technologies that are more competitive in the global arena, generating a global marketplace that is larger than originally anticipated. We should regard this as an investment that challenges the growth limitations of the global market.

**Miyazaki** I agree with Mr. Fukui. Local governments are about to bring in overall emissions regulations designed to reduce CO<sub>2</sub> emission levels, and these should be seen as more than just regulations. It is important to have the dynamism for converting the cost of responding to these regulations into an investment in the creation of future business opportunities. The European Union has introduced mandatory environmental regulations for new housing to be built from 2012, and environmental friendly housing attracts attentions in Japan also. Residential housing consists of a wide range of different products and technologies, and this will expand new opportunities for Shin-Etsu Chemical to make contribution with its products and technologies.

**Komiyama** As for Japanese housing, the lack of airtight structures is a major drawback. Because of the structures that heat can easily escape, energy efficiency is poor. If airtight structures are improved, we would have better energy efficiency and would provide more comfortable living spaces.

**Kaneko** As Chairman Mr. Kanagawa has pointed out many times, even ordinary materials such as PVC can be put to highly advanced and innovative uses. For instance, the airtight structures of housing mentioned just now can be much improved by using windows made of PVC. PVC for window applications has immense potential.

**Komiyama** I did some calculations when PVC window frames were installed in the office of the president of The University of Tokyo, and worked out that the initial cost of installing the extra window frames would be recouped in about ten years through the savings of heating costs. This was based on costs at that time, so the figures now would be even better. Incidentally, if low-energy LED lighting were used, the period to recoup the initial investment fell to just three years. So we need to make more effort to demonstrate these benefits to people in visible form.

**Kono** Long and slow process is required to carry out environmental activities. It is extremely important to implement these solutions ourselves and then announce our efforts to the public as widely as possible. In addition to the environment conservation through products, Shin-Etsu Chemical has introduced schemes such as the Environmental Products Purchasing Subsidies Program that are designed to promote awareness of environmental issues among employees. It is important to announce such efforts to society.

**Kanagawa** Based on our discussion today, I have learned that the environmental activities are major issue that cannot be handled incidentally. At Shin-Etsu Chemical, we must set up a specialized organization to gather information and pursue reevaluation and product development in areas such as potential new environmental applications for our products and strategies for reducing CO<sub>2</sub> emissions in manufacturing processes. The greatest environmental contribution we can make is to incorporate environmental activities into our daily work routines. Thank you for your time today.

(The above is an edited extract of a discussion featured in the 2010 New Year special edition of the Shin-Etsu Chemical internal company newspaper.)

### Message from the President

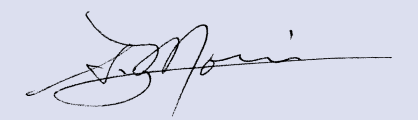
## Through manufacturing we will contribute to environmental improvement.

Tackling environmental issues, particularly global warming, represents an extremely important task for us. The Shin-Etsu Group is committed to reducing the environmental impact of its manufacturing processes and responding to the expectations of society through products that contribute to environmental conservation.

To this end, the *Safety and Environmental Protection-First* manifesto promulgated by Chairman Mr. Kanagawa is firmly kept as our highest management priority. The Shin-Etsu Group supplies a variety of environmental materials including PVC used for PVC window frames effective for low energy housing; rare earth magnets for hybrid vehicles and low-energy air-conditioners; and silicone materials for LEDs, all of which are utilized around the world. Furthermore, we are working hard to develop products that meet society's needs while always adopting an environmental perspective.

We look forward to your continued support and understanding in the years ahead.



  
**Shuzo Mori**  
President



**Tsuyoshi Miyazaki**  
External Director, Shin-Etsu Chemical Co., Ltd.  
(Adviser of Mitsubishi Logistics Corporation)



**Masashi Kaneko**  
External Director, Shin-Etsu Chemical Co., Ltd.  
(Former Director and Chairman of the Board  
of Nikko Cordial Corporation)



# Shin-Etsu Group products and technologies contributing to materialization of low-carbon society

## Dr. Hiroshi Komiyama's *Vision 2050* and the "12,3,3,5" theory of greenhouse gas reduction

In 1997, Dr. Hiroshi Komiyama, Former President of The University of Tokyo and an external director of Shin-Etsu Chemical, released *Vision 2050* on the theme of technology for global sustainability. In *Vision 2050*, he pointed out that tripling energy efficiency, establishing

a material recycling system and doubling renewable energy sources are indispensable to achieving a low carbon, recycling-based society. He also details his "12, 3, 5, 5" proposal, a concrete vision for reducing greenhouse gas emissions by 25% as announced by the

Japanese government in 2009. This incorporates a 12% reduction from daily life (including emissions from homes, offices, transportation and solar cells); a 3% reduction from manufacturing, a 5% reduction from energy generation, and a 5% reduction from conserva-

tion of the natural environment such as forest protection. The point he makes clear is that strategically promoting increased energy efficiency in these areas is essential for Japan's growth and for raising energy self-sufficiency.

## Shin-Etsu Group products and technologies contributing to improvement of energy efficiency in a wide range of fields from everyday life to forest conservation

(Figures show Dr. Hiroshi Komiyama's breakdown of Japan's greenhouse gas reduction target)

# 12%

**Everyday life**  
(households, offices, transportation)

### Polyvinyl Chloride (PVC)

#### Thermal insulating PVC window frames

About **25% - 40%** reduction in heating/cooling energy

(Survey conducted by the industry body; model case comparing conventional single-pane glass and aluminum window with PVC window frame used in combination with double-layer glass)

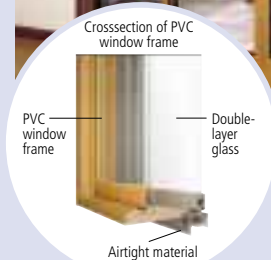
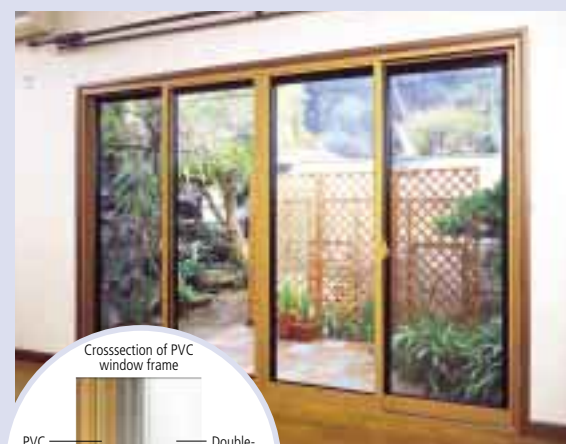


Photo provided by TOSTEM CORPORATION

Monocrystal silicon, abrasive, silicone assembly materials, silane gas



Silicon wafers and ingots

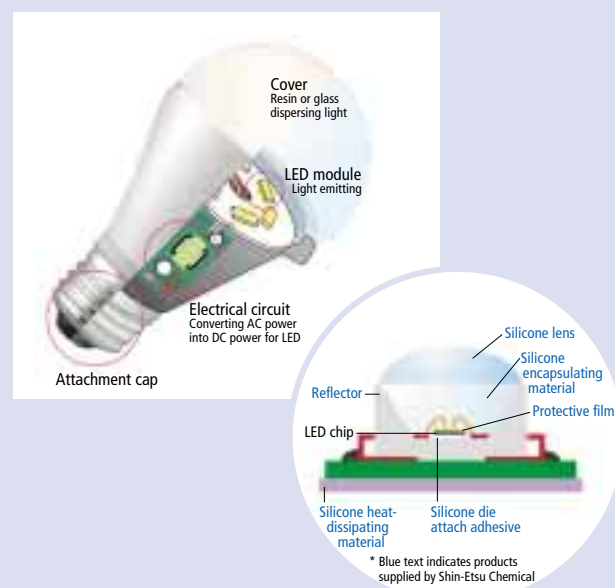
#### Solar photovoltaic power generation

Silicone-based LED related materials (lenses, encapsulating material, reflector, heat-dissipating material, etc.)

#### LED lighting

**52%** reduction in greenhouse gases

(Surveyed by an electrical manufacturer; comparison with incandescent light bulb)



\* Blue text indicates products supplied by Shin-Etsu Chemical

Rare earth magnets (high-efficiency motor)

#### Heat-pump system for hot water supply

**65%** reduction in greenhouse gas emissions

(Surveys conducted by non-profit industry organization; EcoCute compared with conventional hot water supply system)

Rare earth magnets (high-efficiency motor)

#### Energy-efficient air-conditioners

**5% - 10%** reduction in heating/cooling energy

(Surveys conducted by air-conditioner manufacturers; air-conditioner with high efficiency inverter compared to conventional air-conditioner)

Rare earth magnets (high-efficiency motor), silicone (Eco tires)

#### Clean energy vehicle

**50%** reduction in greenhouse gas emissions

(Surveys conducted by research organization; mass-produced hybrid vehicle compared to gasoline-engine vehicle of equivalent class)



Rare earth magnets

Hybrid car

# 3%

**Manufacturing**

Efficiency improvement technologies in manufacturing processes  
Resource recycling technology

# 5%

**Power generation**

Rare earth magnets (electric power generators)

Wind power generators

# 5%

**Conservation of natural environment such as forest protection**

Synthetic pheromones (pest control agents in forests)

CSR Promotion Structure/Environmental Management Promotion Structure

Returning to the basic principles of corporate social responsibility, we promote CSR activities with a new outlook.

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 by providing key materials and technologies”. We believe we have a social responsibility to contribute to many stakeholders starting with our shareholders, by realizing this vision.

In order to implement the Basic CSR Policy in line with the corporate mission of the Shin-Etsu Group 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. In this way, the Shin-Etsu Group endeavors to maintain the trust and respect of all.

Environmental Management Promotion Structure

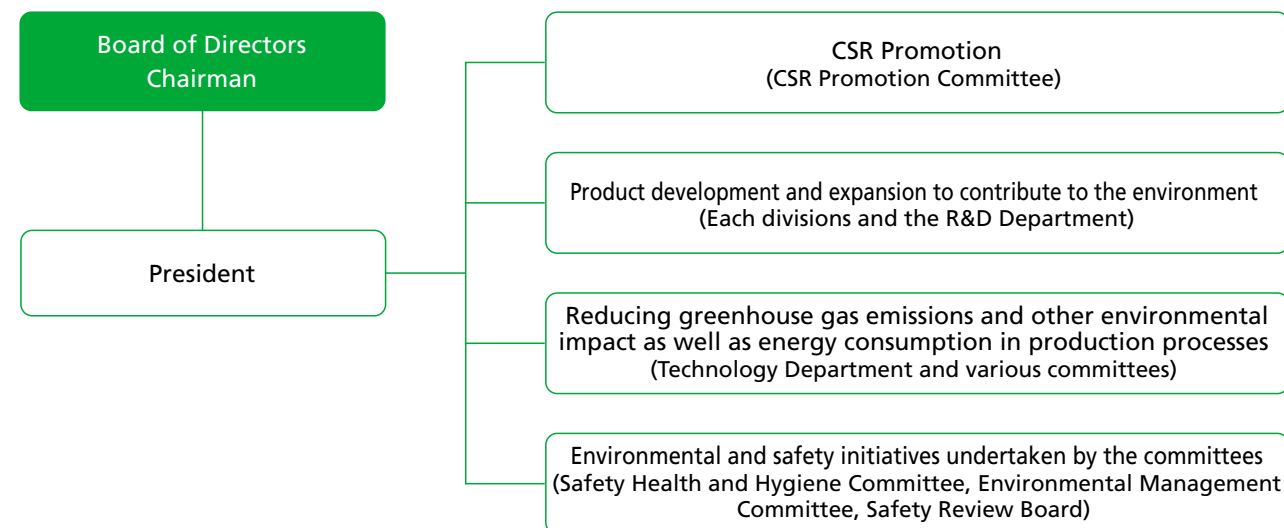
The Shin-Etsu Group incorporates environmental considerations into all aspects of corporate activity, with the aim of helping to prevent global warming and working towards the establishment of a sustainable society.

We are striving to reduce greenhouse gases and other environmental impact associated with production processes by setting out ambitious targets and working towards cleaner production processes through structured and continuous programs. As a key materials manufacturer, we are highly committed to the development of products and technologies designed to reduce environmental impact, as a means of contributing to the conservation of the global environment.

To this end, we conduct joint programs and activities involving research, production and sales departments, which are coordinated by a committee across multiple departments and overseen by the Officer Responsible for Technology.

Furthermore, we have to properly meet every environmental regulation and/or standard when we develop and produce our products. The Officer Responsible for Environmental Control and Safety has overall company responsibility for this area and is dedicated to servicing for customer’s trust.

Shin-Etsu Group CSR and Environmental Management Promotion System and Associated Activities



Compliance

The Company and its employees are united in their commitment to compliance.

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

Completing Awareness of Compliance

In the event of promulgation of or amendments to legislation pertaining to the corporate activities, the Legal Department issues internal bulletins and holds presentations as appropriate. In the event of a violation of legislation by other company, internal bulletins are used to draw attention from all employees. In this way, we are always working to raise awareness of compliance issues.

Compliance Pledge

The Compliance Pledge between the Company and its directors and employees represents a statement of resolve by every individual to practice compliance in their daily work. Disciplinary procedures or other punishments may be invoked in the event of a violation of the Compliance Pledge.

Compliance Consultation Office

The role of the Compliance Consultation Office is to support all employees of the Shin-Etsu Group in conducting their work in strict compliance with the relevant laws and regulations as well as internal rules and procedures. The Compliance Consultation Office is available for consultations and notifications at any time.

The Office is committed to protecting the privacy of all those who use its services to prevent any unfair treatment or disadvantage. All information is investigated and acted upon, and corrective action is implemented where appropriate. No employee may be subject to dismissal or any other form of unfair treatment or disadvantage in connection with a consultation with or notification to the Compliance Consultation Office that has been undertaken in accordance with the Compliance Consultation and Notification Regulations.

Export Management

The Security Export Control Committee at Shin-Etsu Chemical provides an export management structure designed to ensure proper standards of international peace and safety in relation to exporting, supply and associated agency transactions of cargo and technology in categories subject to regulation under export legislation such as the Foreign Exchange and Foreign Trade Laws. The Internal Control Program on Security Export Control is established to classify categories of goods requiring export clearance and implement screening procedures for clients and transactions. The Company also conducts internal audits and provides training and guidance for executives and employees as well as instruction to Group companies.

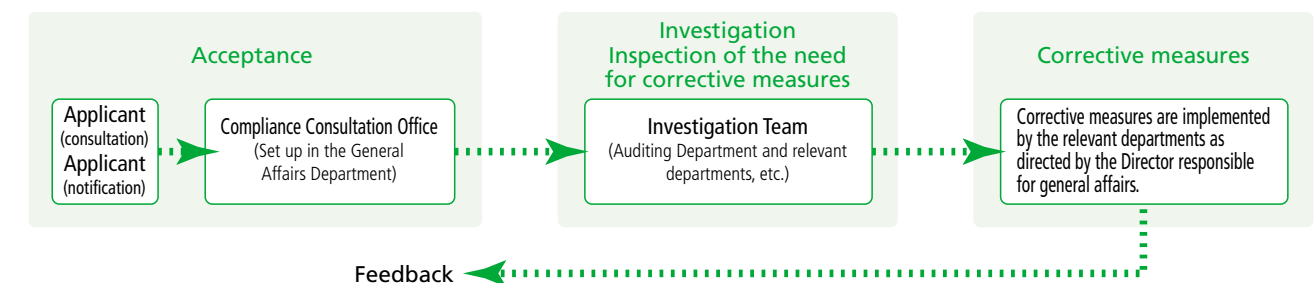
Information Management System

The Company has developed a fundamental policy concerning information security to ensure the confidentiality, safety and stability of its information assets and prevent the leakage of important information concerning our customers and business partners. We are constructing an information asset management system, have appointed an officer responsible for information control, and are striving to manage its information in accordance with established information management regulations and standards.

Protection of Personal Information

In relation to the “law regarding the protection of personal information” and in order to properly protect personal information, we have established a personal information policy, which is available on our website (Japanese only). Moreover, we hold explanatory meetings within the Group related to compliance with all relevant laws, and are making exhaustive efforts related to the appropriate handling and protection of personal information.

Flow of Consultation or Notification on Compliance





Corporate Governance

The enhancement of corporate governance is the most important task in our CSR management.

Basic Principles of Corporate Governance

Shin-Etsu Chemical has the fundamental policy of management, which continually enhances corporate value and put importance on shareholders as the top priority. To this end, the Company has instituted an efficient structural framework complemented by associated systems and procedures designed to enable a more flexible response to changes in the business environment. Shin-Etsu Chemical is committed to accurate and timely information disclosure to shareholders and investors as a means of enhancing management transparency and strengthening the integrity of audit systems.

Board of Directors and Managing Directors' Meeting

The Company is managed by a Board of Directors and Managing Directors' Meeting. These two organs, which are held on a monthly basis, are responsible for deliberations and decision-making in relation to the operation of the Company.

The Board of Directors consists of 23 members, six of whom are external directors with extensive management experience. By minimizing the number of members, Shin-Etsu is working to establish a system

capable of faster decision-making and more flexible management.

The Board of Directors sets out the fundamental policies of the Company and makes decisions regarding key aspects of Company operations in accordance with the Companies Act and the Shin-Etsu articles of incorporation. Meanwhile, the Managing Directors' Meeting makes deliberations and decisions regarding a variety of other business and operation proposals.

Statutory Auditors

Shin-Etsu Chemical adopts a statutory auditor system whereby the auditing duties of the auditors in relation to the operation of the Company by its directors are as per the Companies Act. There are five auditors, of whom three are independent statutory auditors. This arrangement ensures expansive and strengthened auditing functions. The auditors attend meetings of the Board of Directors and Managing Directors' Meeting, along with other important internal meetings, in order to audit business operations. The auditors also hold monthly meetings with the Auditing Department where they receive progress reports on all activities and internal auditing results, provide advice and recommendations on corporate activities and key auditing topics, and request further investigation when necessary.

Independence of External Directors and Statutory Auditors

External directors and external statutory auditors of Shin-Etsu Chemical have neither connection to the parent company or sister companies, nor to companies associated with major shareholders, or any of the Company's main business partners. External directors are appointed on the basis of their ability to provide advice and recommendations on all areas of company management based on prior experience. External statutory auditors are expected to provide auditing services drawing upon their highly specialized knowledge, experience, insight and judgment. The external directors and auditors are ideally implementing supervision and providing advice from the independent position once appointed to serve at the Company.

Officers' Remuneration Committee

The Officers' Remuneration Committee consists of four directors including an external director chairing the Committee. The Committee holds two regular meetings per year and other meetings when necessary. It deliberates on remuneration of directors in accordance with the Regulations of the Officers' Remuneration Committee, and submits recommendations to the Board of Directors.

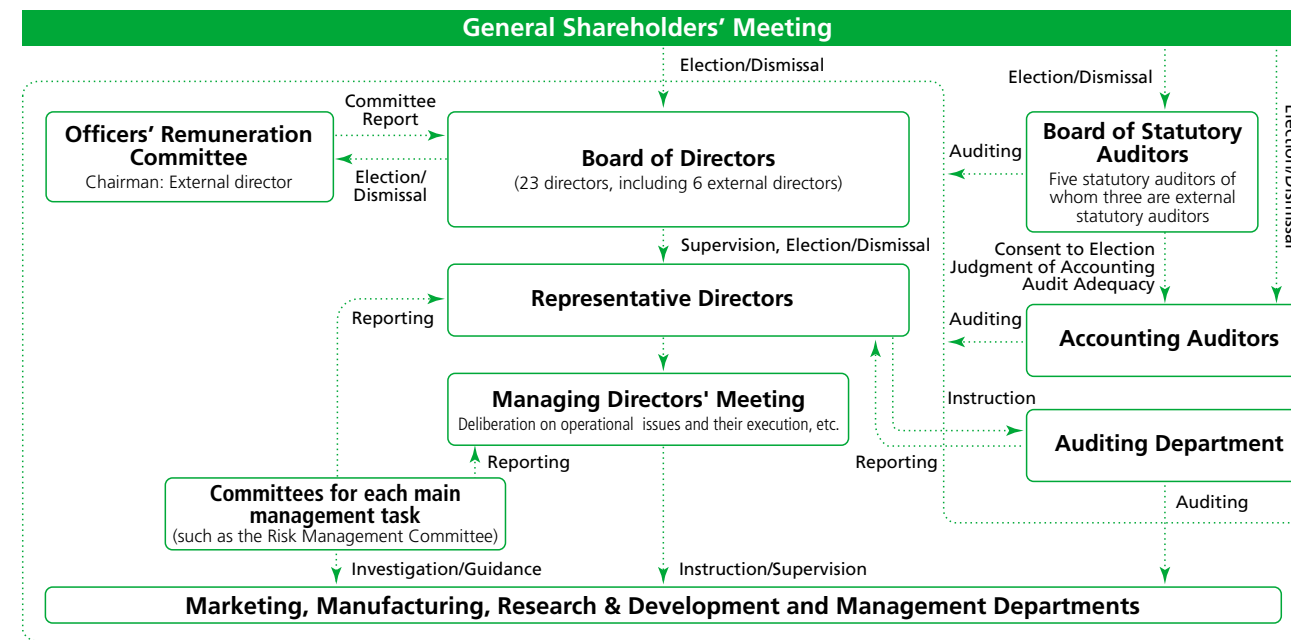
Internal Control Reporting System

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

Risk Management Committee

The Risk Management Committee, which is chaired by a managing director, is responsible for designing risk management structures, associated rules and regulations, as well as working to identify and prevent potential risks arising in connection with the operations of the Company. The Risk Management Committee also promotes broad-based programs in the risk management area such as providing information and training. The Committee reports directly to the Board of Directors, the Board of Statutory Auditors and the Managing Directors' Meeting on major issues. In this way, the Risk Management Committee works to ensure appropriate risk management.

Corporate Governance structure at Shin-Etsu Chemical



Internal Control System and Auditing on Operation

The Basic Policy on Internal Controls instituted by Shin-Etsu Chemical constitute the "structures for ensuring that performance of duties by directors is fully compliant with the relevant legislation and the articles of incorporation as well as proper and efficient execution of business duties" as stipulated in Article 362, Paragraph 4, Item 6 of the Companies Act and other relevant statutes.

The establishment, implementation and development of internal controls systems are recognized as important management responsibilities at Shin-Etsu Chemical. To this end, internal control systems are structured and implemented in accordance with the Basic Policy on Internal Controls. Internal control systems are constantly being revised and updated to maximize relevance and efficacy.

The Auditing Department is in charge of all matters concerning internal operation audits and internal control systems. This Department also strives to further strengthen corporate governance.

CSR Procurement

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

### Basic Procurement Policy

The Basic Procurement Policy is instituted for the purchasing of supplies needed for production activities, including raw materials, secondary materials such as packaging for transportation, and machinery and equipment. The Basic Procurement Policy governs all procurement activities by the Company. It is thoroughly announced within the Company and posted on the website. URL:<http://www.shinetsu.co.jp/e/purchasing/kihon.shtml>

### Compliance with the Subcontractors Act

To ensure full compliance with the Subcontractors Act (actual title: The Act against Delay in Payment of Subcontract Proceeds, Etc.), the Shin-Etsu Group maintains close lines of communication with its business partners in order to avoid any acts that would abuse the Company's position of superiority relative to subcontractors. Concerning a business partner subject to the provisions of the Subcontractors Act, the Shin-Etsu Group makes periodical checks by using in a special checklist in combination with reporting of new transactions to prevent any omissions. Purchasing and procurement managers are constantly attending external seminars and presentations as well as internal training sessions to discuss specific examples of conduct. In this way, the Company is working to boost awareness of compliance with the Subcontractors Act.

In addition, the Company requests the raw material suppliers to thoroughly comply with the Subcontractors Act.

### Promoting CSR Procurement

The Basic Procurement Policy applies to the selection of suppliers and the development of business relationships. Suppliers are expected to understand the Basic

Procurement Policy and instructed to incorporate the contents of the Policy into their supply contract. Suppliers are requested to complete the CSR Procurement Auditing Checklist prior to commencement of the commercial business, and also after the business has commenced. Suppliers are evaluated and inspected on the basis of checklist responses. Furthermore, purchasing and procurement managers visit suppliers whenever necessary to conduct CSR audits.

### Control of Chemical Substances Used as Raw Materials

The Shin-Etsu Group checks the ISO14001 status of suppliers and considers preferential business transactions with suppliers that have ISO certification so as to purchase materials that have less environmental burden.

When contracting specifications on supply of raw materials, we investigate the supplier's usage of chemical substances, which highly impact on the environment, used in products and packaging, their environmental management systems, their handling of prohibited substances as stipulated in the RoHS directive<sup>1</sup>, and their Green Partner certification status.

The Shin-Etsu Group is also committed to compliance with REACH<sup>2</sup> registration requirements by working with the production and sales departments and obtaining the raw material supplier's confirmation on REACH registration status of raw materials. In this way, we are building our supply chain with our business partners in consideration of the environment.

1 RoHS Directive: An EU directive, formally known as the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations.

2 REACH: An EU regulation, formally known as the Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals.

### Statement of the Shin-Etsu Group's Basic Procurement Policy

Shin-Etsu Chemical Co., Ltd. together with all of the Shin-Etsu Group companies (hereinafter called "Company") makes every possible effort to commit to conducting their corporate activities in a law-abiding spirit, carrying out their corporate activities in a fair manner and contributing to society, including local communities. At the same time, the Shin-Etsu Group dedicates itself to help create a richer life for society through putting first priority on protecting the environment from a global point of view. From this perspective, the Shin-Etsu Group in its purchase and procurement activities also endeavors to carry out fair and objective business activities by widely disseminating important information about the following principles of its basic procurement policy throughout the Company and among its suppliers.

#### 1. Abiding by the law

As the most important of its management objectives, the Company conducts all of its business activities in a law-abiding spirit. Each and every staff member is made fully aware of corporate social responsibilities, and they carry out their business activities in strict conformity with the law, business ethics and the various rules and regulations of the Company. In its purchase and procurement activities, the Company acts in good faith and in a fair manner, and does not practice favoritism, nor make improper demands. In addition, based on mutual trust, not only between the Company and the suppliers that the Company directly procures from, but also with vendors in the linked supply chain, all those companies involved carry out their business activities in strict accordance with the principal labor standards of International Labor Organization (ILO), any laws and regulations related to protection of the environment and rules and regulations concerning business transactions, including those of small- and medium-size enterprises (SMEs).

#### 2. Selection of vendors

The Company follows an open-door policy regarding its transactions and globally seeks suppliers based on open, fair, impartial and equal-opportunity principles, both within the Company and with outside suppliers, comprehensively taking into consideration the following core considerations:

1. Globally competitive in product quality, price, delivery time and supply stability

#### 2. Objective standards such as suppliers' management stability, reliability and technological abilities

Based on these rational considerations, the Company selects suppliers.

#### 3. Meeting the needs of the suppliers, conducting performance reviews

The Company provides suppliers with the essential information necessary for transactions and also cooperates with suppliers' VA and VE improvement activities as well as in activities related to the maintenance and improvement of product quality. The Company also routinely or as necessary promotes evaluation and review of suppliers' performance in areas that reflect on the Company's basic procurement policy and "Green" procurement standards.

#### 4. Promotion of corporate social responsibility

The Company places primary importance on corporate social responsibility (CSR) activities and strongly emphasizes compliance management. For the promotion of CSR, the cooperation of all the Company's suppliers is essential, and we ask you to comply with the Company's CSR policies in the areas listed below. At the same time, we will strive to maintain mutual trust and close, friendly relationships.

- (1) Strive to strengthen and promote conformance with social norms, business ethics and laws
- (2) Place first priority on assuring safety and effective environmental management (i.e. REACH regulation, ISO 14001 standard, .....etc), cooperate in "Green" environmentally friendly purchasing and procurement activities, and at the same time, each person should have a clear consciousness of the importance of these issues
- (3) Strive for accurate and impartial disclosure of information and assuring the delivery of safe and reliable products and taking speedy measures to deal with various contingencies
- (4) Foster respect for human rights and follow non-discriminatory policies based on religion, gender, or race
- (5) Act in conformity with the labor standards of the ILO by prohibiting forced labor and child labor and following the general principles of labor conditions such as equal compensation for equal work and not engaging in unfair labor practices
- (6) Protect against the disclosure of classified information, personal confidentiality and respect intellectual property rights

URL:<http://www.shinetsu.co.jp/e/purchasing/kihon.shtml>

Activities on Business Continuity Plan (BCP)

# BCP is instituted as a means of fulfilling our responsibility to supply products with assumption of every potential risk.

### Basic BCP Policy

Shin-Etsu Chemical considers supply of high-quality materials based on superior technologies to be an important contribution to society. Therefore, the Company regards ensuring the supply continuity as a major corporate responsibility.

Many of Shin-Etsu'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. Therefore, an interruption of the supply of these products would have a major social impact. For this reason, Shin-Etsu Chemical is committed to Business Continuity Plan that enables the Company to fulfill its responsibility to maintain continuity of supply in the event of every risk such as a large-sized earthquake, fire, explosion and outbreak of influenza or equivalent.

### Overview of BCP

The BCP Basic Policy forms the basis of the Business Continuity Management Standards at Shin-Etsu Chemical. The Business Continuity Management Standards comprehensively cover all aspects of operational management of Business Continuity Plan, and are used to formulate detailed specific business continuity plans for each department and production plant.

The specific business continuity plans in each department are predicated on the damage that could be caused by a large-sized earthquake, fire or explosion, and set out the procedures for each business unit. They concretely institute the five points, as follows:

- (1) Assumed disaster
- (2) Business and products priority
- (3) Target recovery period
- (4) Alternative plans to enable continuation of business
- (5) Improvement program in advance

The business and products, on which we put the higher priority, includes products and services that have difficulties to be replaced by other products or suppliers such as pharmaceutical and medical products, specially customized products and products that have high market share in their respective markets. In light of the supply responsibility to society, we strive to ensure supply continuity even in the event of disaster.

Each production plant has its own business continuity plan detailing compliance with specific business continuity plans for each department as well as the emergency procedures at the plant in the event of a large-sized earthquake, fire or explosion.

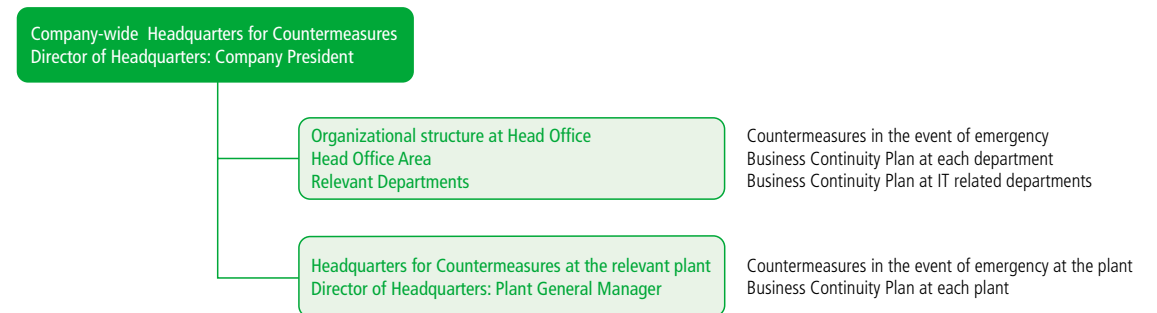
As for the new-type influenza, Shin-Etsu instituted Action Plan to Deal with the new-type Influenza. At the 2009 flu epidemic, this action plan was smoothly operated and succeeded in prevention of any adverse impact on the Company operations.

### Business Continuity Management System in the Event of Emergency

In the event of an emergency, a Company-wide Headquarters for Countermeasures chaired by the President will be immediately set up under the Emergency Response Regulations. The relevant departments at head office will set up a Head Office Organization, while each plant will set up a Plant Headquarters for Countermeasures chaired by the plant manager. Under this system, each headquarters for countermeasures and organization is responsible for implementing emergency action procedures in accordance with pre-instituted business standards along with measures to ensure continuity of operations.

### Outline of Business Continuity Plan (BCP)

Assumed risks: large-sized earthquake, fire, explosion or other serious risks.  
Major objective: to ensure continuity of high-priority business and products supply



Challenges and Results of Shin-Etsu Chemical in Fiscal 2009

During fiscal 2009, Shin-Etsu Chemical achieved its mid-term environmental goals of a reduction in greenhouse gas emissions to 66% of the 1990 level in terms of the energy consumption rate in 2010.

Shin-Etsu Chemical has been working steadily towards two key mid-term environmental goals: a reduction in unit greenhouse gas emissions to 66% of the 1990 level in 2010, and achievement of zero emissions (buried waste under 1% of the total amount of industrial waste) in 2010.

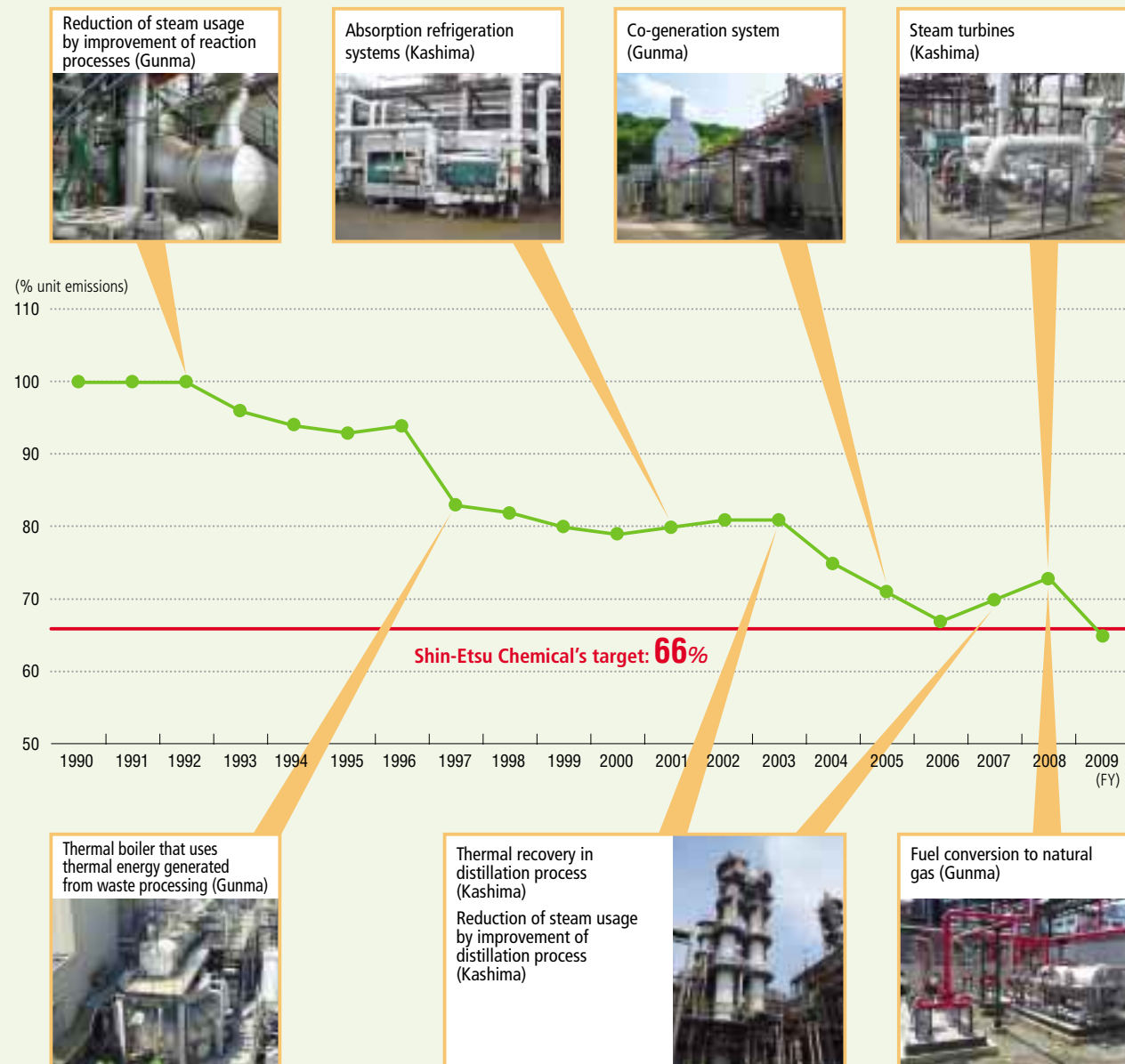
Unit greenhouse gas emissions fell to 61% of the 1990 level during fiscal 2009, meaning that the mid-term environmental goals were reached ahead of schedule. This outcome was achieved through a variety of initiatives including introduction of co-generation system and steam turbines, energy-saving investment such as absorption refrigeration, and other initiatives such as switch of fuels from heavy oil to natural gas. Although the target reduction in unit greenhouse gas emissions is

applied only to Shin-Etsu Chemical, as a result of similar efforts elsewhere in the Shin-Etsu Group, overall unit greenhouse gas emissions fell to 65% in fiscal 2009.

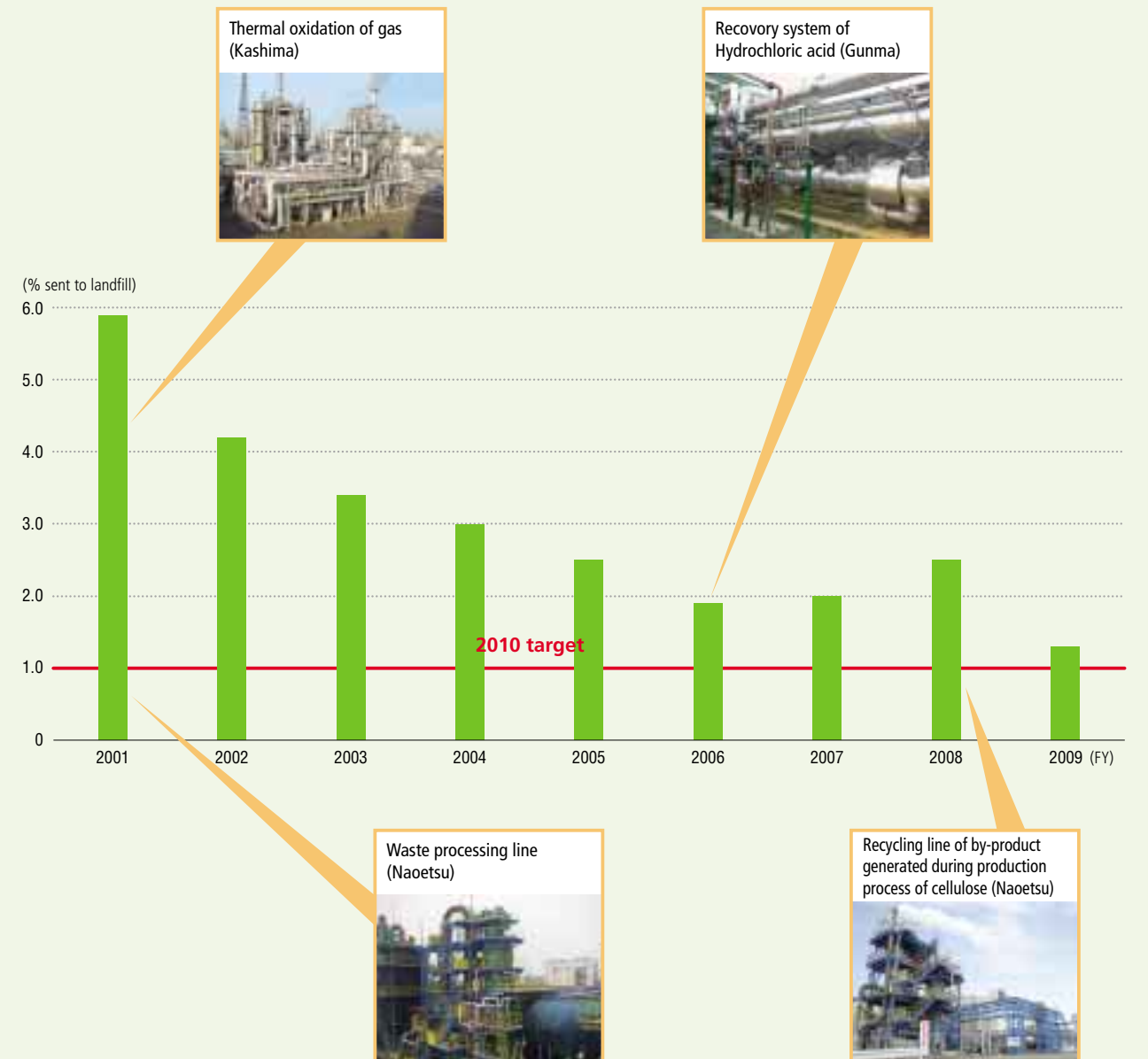
As for the zero emissions target, the proportion of buried waste to total amount of industrial waste was 1.3% (Shin-Etsu Chemical only), and we further endeavor to reduce buried waste in order to reach the goals in fiscal 2010.

We are already seeing the benefits of environmental investment such as the equipments for hydrochloric acid recovery, cellulose by-product recycling and waste processing. In addition, we are reprocessing inorganic sludge into cement base material and improved earth, and sorting valuable metals for recycling and reuse.

● Unit greenhouse gas emissions relative to fiscal 1990 levels for the Shin-Etsu Group



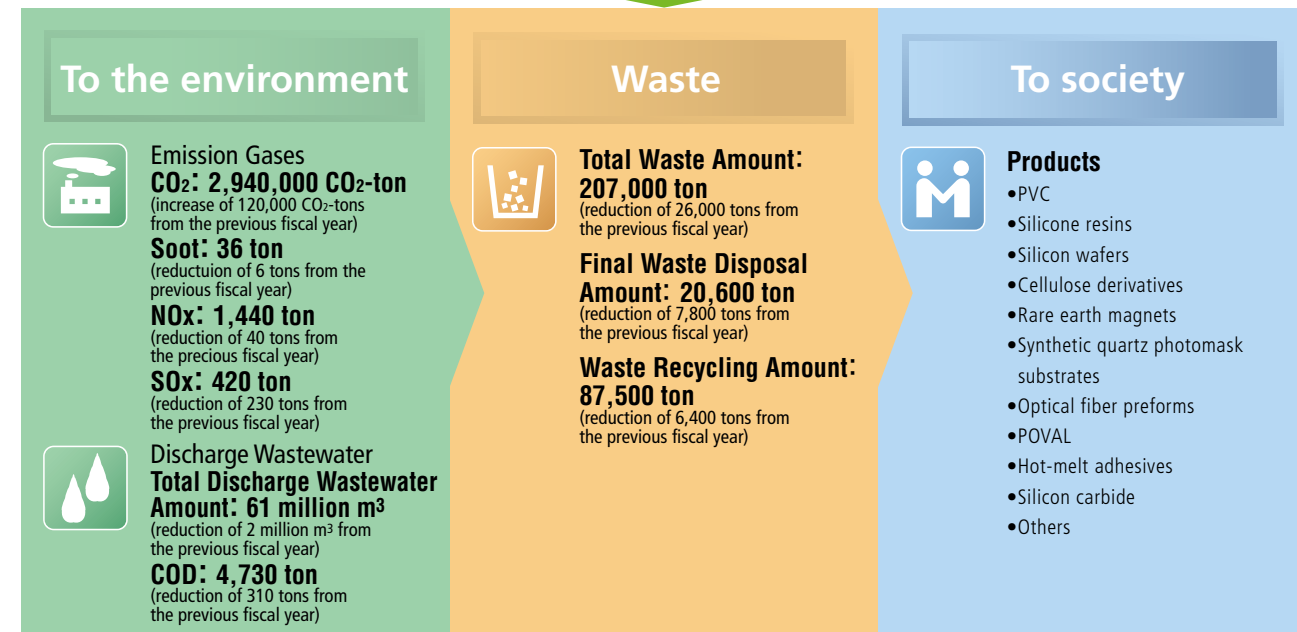
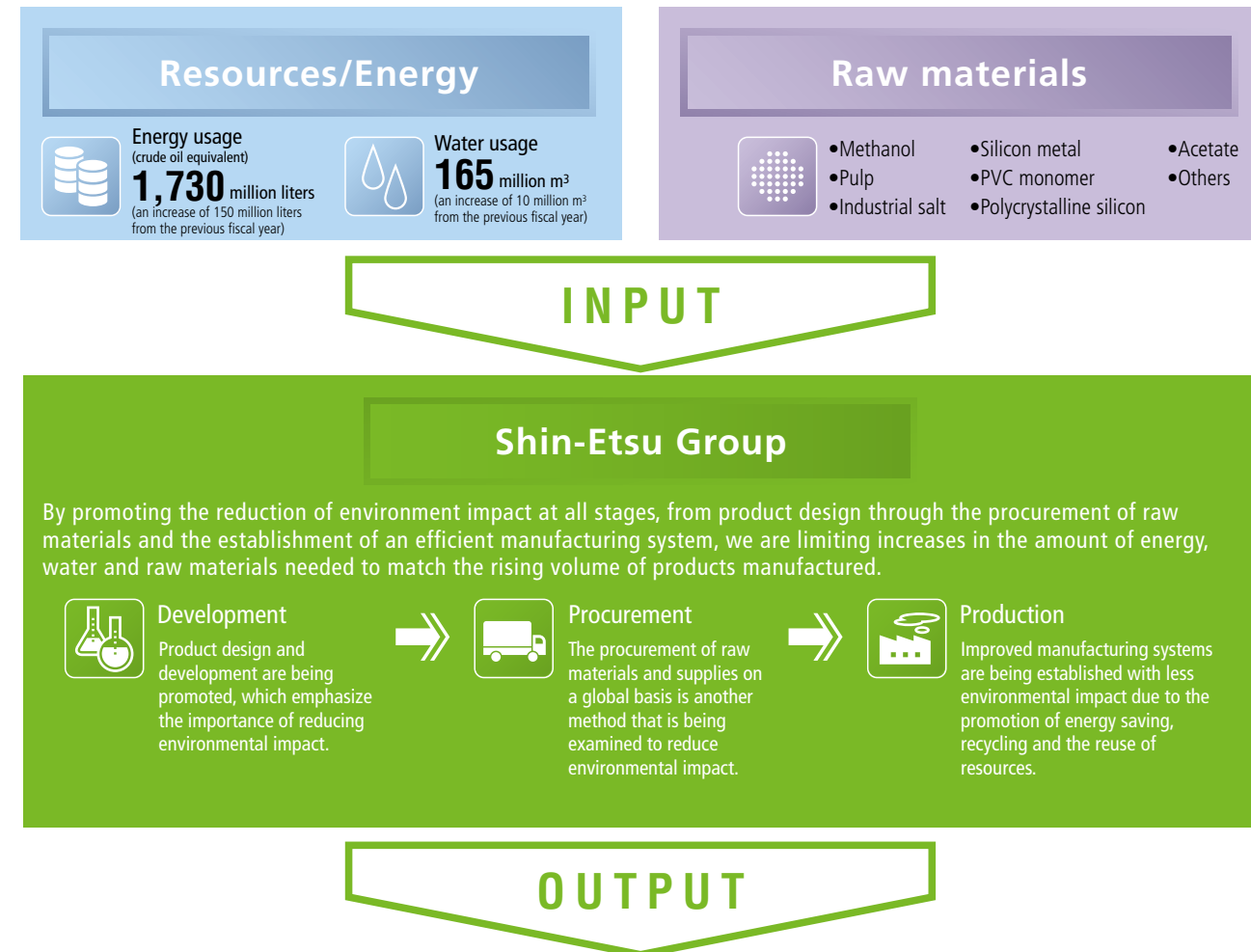
● Percentage of total waste material sent to landfill (Shin-Etsu Chemical only)





Reducing the Environmental Impact of Business Activities Input/Output

As a key materials manufacturer, we aim to reduce environmental impact, not only for our own benefit but also for that of the whole society, by developing advanced technologies.



\* The numbers shown here are the fiscal 2009 total of 11 companies in Japan and 24 overseas companies in the Shin-Etsu Group as listed in the Editorial Policy described on page 2.  
 \* For environmental statistics of Shin-Etsu Group companies, please refer to Shin-Etsu Chemical's website, at <http://www.shinetsu.co.jp/ie/profile/kankyo.shtml>.  
 \* Two overseas production plants use river water for cooling systems. The water is returned to the river as it is and not included in the total wastewater calculation. For this reason, the wastewater volume appears extremely low relative to the water consumption figure.

Environmental Accounting

In fiscal 2009, Shin-Etsu Chemical calculated its investments and expenditures on reducing the environmental impact from such factors as air pollution, water pollution, the emission of chemical substances into the air, saving energy to conserve the global environment, reducing waste by improving resource recycling and recycling used goods. The company computed this amount in accordance with the Environmental Accounting Guidelines prepared by the Ministry of the Environment, Japan.

- Major investments**
- Introduction of an energy recovering facility
  - With increase in productivity, implementation of energy saving
  - Strengthening energy loss prevention
  - Expansion of wastewater treatment equipment
  - Installation of raw materials, etc. collection processing equipment and waste disposal and recovery facilities
  - Improvement of the industrial waste disposal yard
  - Environmental improvement, etc., of areas around other plants

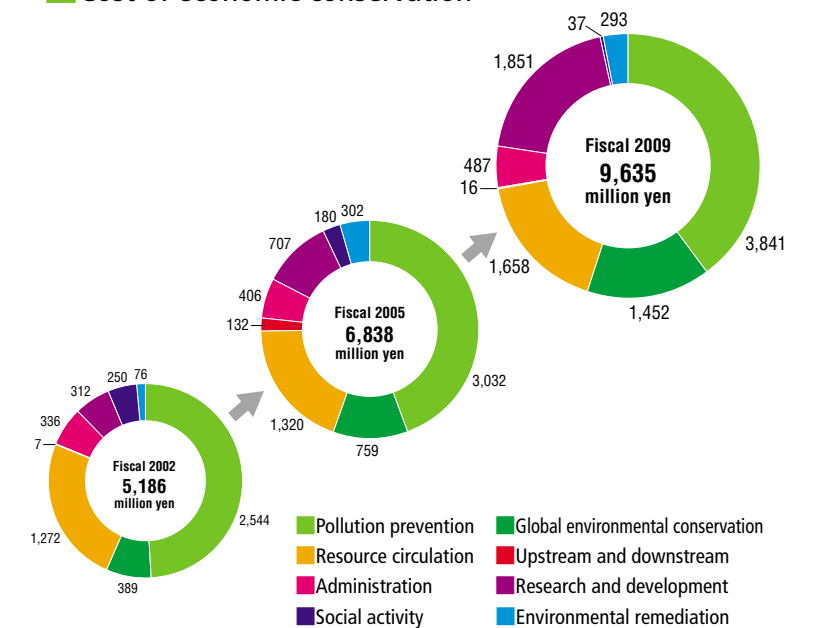
Environmental Costs in Fiscal 2009

Category	Details	Investment	Expenditure
<b>Business area costs:</b>			
(1) Pollution prevention costs	Air, water, noise and other types of pollution prevention measures	1,460	3,841
(2) Global environmental conservation costs	Energy conservation and global warming prevention measures	420	1,452
(3) Resource circulation costs	Waste prevention, recycling and other measures	76	1,658
Upstream and downstream costs	Green purchasing and container and packaging measures	0	16
Administration costs	Environmental management, monitoring environmental impacts and education measures	0	487
Research and development costs	Research and development on environmentally conscious products and processes	0	1,851
Social activity costs	Donations and contributions to environmental protection	47	37
Environmental remediation costs	Assessment, handling and other costs related to environmental degradation	0	293
<b>Total</b>		<b>2,003</b>	<b>9,635</b>

Environmental Accounting on Economic Benefits in Fiscal 2009

Details of benefits	Economic benefit (Millions of Yen)
Energy savings	822
Improved production efficiency	1,107
Reduction in waste costs	268
Profit from sale of valuable substances	268
<b>Total</b>	<b>2,465</b>

Cost of economic conservation



Environmental Initiatives

The Group is addressing all issues that are relevant to realizing energy saving and preventing global warming, including reducing the environmental impact, protecting the environment and recycling resources.

Reduction of Environmental Burden

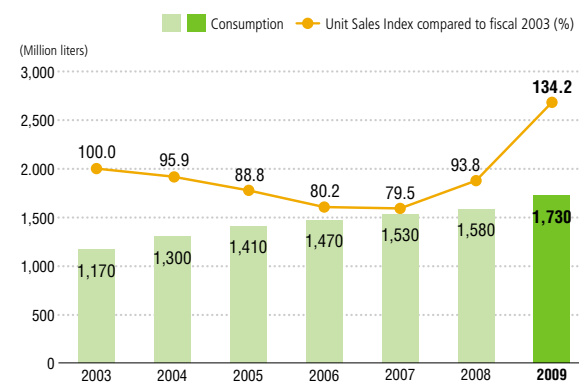
Reducing energy consumption

The Shin-Etsu Group manufactures a variety of products handling a range of energy sources, including electricity, fuel oil, kerosene, diesel oil, liquefied petroleum gas, liquefied natural gas and steam. We select the most suitable energies for manufacturing facilities and utilities used in such processes as reaction, refining, synthesis and processing.

Although overall energy usage is growing, owing to increased Group-wide production, each company and plant also strives to save energy.

The Shin-Etsu Group consumed 150 million liters more energy in fiscal 2009 than the previous fiscal year, increasing total usage to 1,730 million liters (crude oil equivalent).

Energy Consumption (crude oil equivalent)



1. The increase in energy consumption in fiscal 2009 can be attributed to the new production plants and increased capacity overseas during 2009.
2. The pronounced increase in unit energy consumption relative to sales in fiscal 2009 can be attributed to a significant decrease in sales in fiscal 2009.

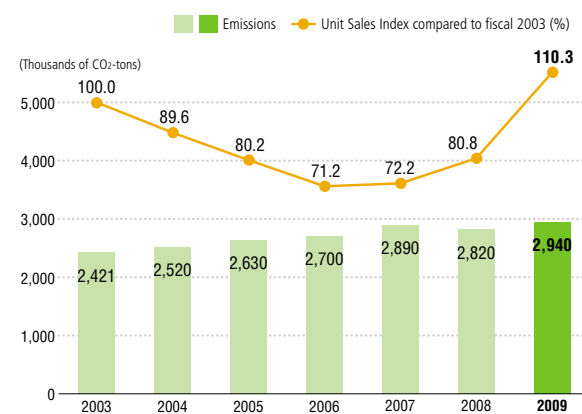
Prevention of Global Warming

The Shin-Etsu Group is trying to reduce greenhouse gases to prevent global warming.

CO<sub>2</sub> emissions have risen as our energy consumption increases, every company and plant is making an effort to reduce CO<sub>2</sub> emissions.

In fiscal 2009, carbon dioxide emissions from energy used by the Shin-Etsu Group were 120,000 CO<sub>2</sub>-tons higher than the previous fiscal year, bringing the total up to 2,940,000 CO<sub>2</sub>-tons.

Carbon Dioxide (equivalent volume)



1. The increase in carbon dioxide emissions in fiscal 2009 can be attributed to the new production plants and increased capacity overseas during 2009.
2. The pronounced increase in unit emissions relative to sales in fiscal 2009 can be attributed to a significant decrease in sales in fiscal 2009.

Prevention of Air Pollution

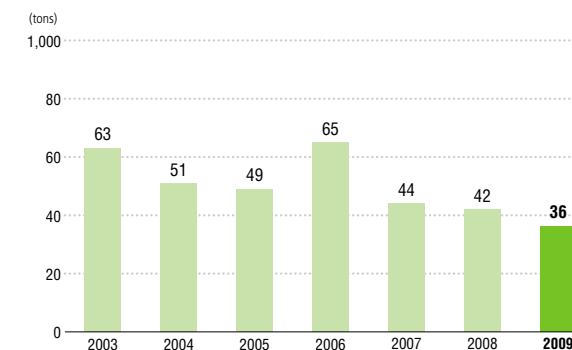
The Shin-Etsu Group is endeavoring to reduce emissions of air pollutants. While some of our affiliates use a specific CFC as a refrigerant, this substance is strictly managed so as not to be released into the air. The Group has decreased air pollutants, including soot, nitrogen oxide (NO<sub>x</sub>) and sulfur oxide (SO<sub>x</sub>) compared with fiscal 2008. Soot has been decreased gradually, and SO<sub>x</sub> emission has reduced substantially due to the conversion from heavy oil to natural gas at some facilities. All of these emissions were within Japanese regulatory limits for air pollutants from boilers and incinerators. The Shin-Etsu Group complies with all regulations and also monitors emissions regularly to ascertain the impact on air.

Soot emissions fell to 36 tons in fiscal 2009, six tons less than fiscal 2008.

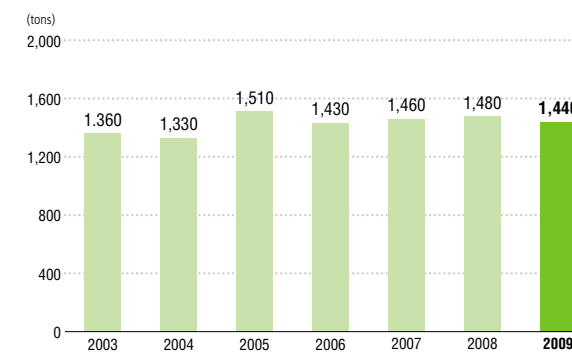
NO<sub>x</sub> emissions fell to 1,440 tons in fiscal 2009, a decrease of 40 tons compared to fiscal 2008.

SO<sub>x</sub> emissions fell to 420 tons in fiscal 2009, a reduction of 230 tons from fiscal 2008.

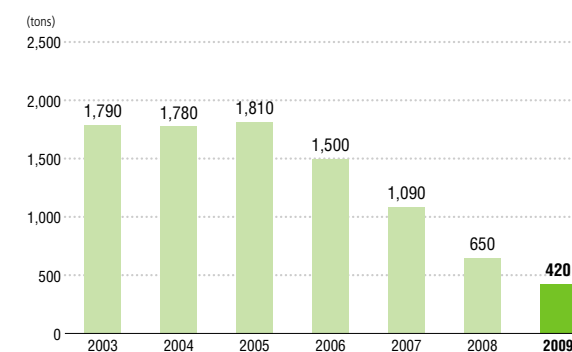
Soot Emissions



NO<sub>x</sub> Emissions



SO<sub>x</sub> Emissions



Sample of Emission Gas Monitoring Result: Boiler (Naoetsu Plant)

	Regulation value	2003	2004	2005	2006	2007	2008	2009
Soot (g/Nm <sup>3</sup> )	≤0.25	0.02	0.02	0.03	<0.01	<0.01	<0.01	<0.01
NO <sub>x</sub> (ppm)	≤150	110	83	110	99	88	98	98
SO <sub>x</sub> (k value)	≤11.5	1.11	1.16	0.45	<0.025	<0.025	<0.025	<0.025

1. The numbers represent the maximum value of multiple measurements.
2. The mark of "<" shows the number less than each detectable limit.
3. SO<sub>x</sub> are converted to the unit value (k value) as per the reporting standards stipulated in the Air Pollution Control Act.

Sample of Emission Gas Monitoring Result: Incinerator (Gunma Complex)

	Regulation value	2003	2004	2005	2006	2007	2008	2009
Soot (g/Nm <sup>3</sup> )	≤0.15	0.088	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
NO <sub>x</sub> (ppm)	≤250	89	100	110	62	55	92	82
SO <sub>x</sub> (k value)	≤17.5	0.67	0.55	0.51	0.47	1.03	1.87	0.66
Hydrogen chloride (mg/Nm <sup>3</sup> )	≤700	54	28	18	24	51	27	23
Dioxin (ng/Nm <sup>3</sup> )	≤5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

1. The numbers represent the maximum value of multiple measurements.
2. The mark of "<" shows the number less than each detectable limit.
3. SO<sub>x</sub> are converted to the unit value (k value) as per the reporting standards stipulated in the Air Pollution Control Act.

Prevention of Water Pollution

The Shin-Etsu Group uses large quantities of industrial water, groundwater and tap water for manufacturing and cleaning products, and maintaining and managing facilities. Wastewater is discharged into rivers after being checked for compliance with laws and regulations specifying the limits. pH<sup>1</sup>, BOD<sup>2</sup>, SS<sup>3</sup> and COD<sup>4</sup> are measured on a regular basis to monitor their impact on water quality. We are also trying to reduce our water consumption.

Examples of our approach

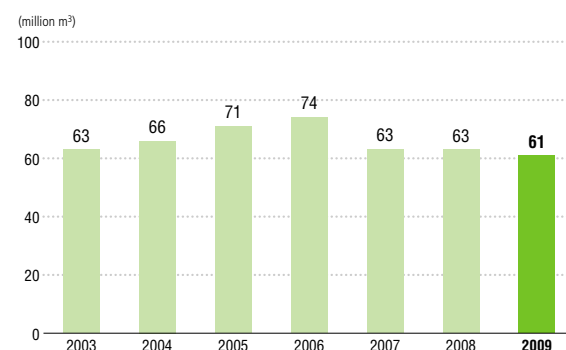
- Improvement and expansion of wastewater treatment equipment
- Leveling of effluent water quality and volume
- Recycling and reuse of cooling water

In fiscal 2009, the Shin-Etsu Group discharged a total 61 million m<sup>3</sup> of wastewater, down 2 million m<sup>3</sup> from fiscal 2008.

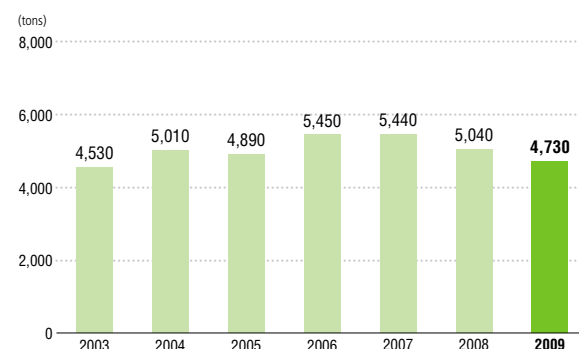
COD emissions were down 90 tons from fiscal 2009, for a total of 4,730 tons.

- \*1 pH: Hydrogen ion concentration (- log [H<sup>+</sup>]) indicating acidity (< pH7), neutrality (=pH7) and alkalinity (> pH7) of water solution.
- \*2 BOD: Biochemical Oxygen Demand (BOD): This indicates the amount of oxygen required for water-borne micro-organisms to break down contaminants in water. This value is a measure of the degree of water pollution.
- \*3 SS: Suspended Solids (SS): These are organic and mineral particles suspended in water. They are a major cause of turbidity, and have a significant impact on aquatic life.
- \*4 COD: Chemical Oxygen Demand (COD): This is the amount of oxygen required to degrade the organic compounds of wastewater. A higher COD value means more polluted wastewater.

**Total Discharge Wastewater Amount**



**COD Emissions**



**Sample of Effluent Water Quality Monitoring Result: (Naoetsu Plant)**

	Regulation value	2003	2004	2005	2006	2007	2008	2009
pH	5.8~8.6	7.0~7.6	7.0~7.6	6.7~7.5	6.9~7.5	6.4~7.3	6.9~7.5	7.1~7.7
BOD (mg/L)	≤60	34	34	41	50	—	—	—
	≤40	—	—	—	—	31	23	23
SS (mg/L)	≤50	47	34	30	42	26	24	29

- 1 pH values show the maximum and minimum values from multiple measurements.
- 2 The numbers of BOD and SS are the maximum values of multiple measurements.
- 3 BOD regulations were 60 mg/L up to 2006, but this limit was changed to 40 mg/L from 2007 onwards.

**Prevention of Soil Pollution**

At each of our plants, groundwater and soil quality are monitored and the pollution status is checked. However, no soil pollution has yet been identified at any of our plants.

From November 2009, the list of environmental monitoring items was expanded to include PVC monomers and dioxanes etc.

**Reduction of Waste Output and Recycling**

The Shin-Etsu Group applies the 3Rs (reduce, reuse, and recycle) to ensure effective use of the Earth's limited resources. We also periodically check outside contractors at their sites so as to ensure proper handling of waste consigned to them.

Examples of our approach

- Utilization of inorganic sludge as a raw material for cement/steel
- Utilization of organic sludge as a fertilizer
- Reuse of acids and alkalis through separate recovery
- Thermal recycling of waste oil and waste solvent
- In-house incineration, in-house disposal
- Separate recycling of valuable metals
- Recycling of cellulose by-products

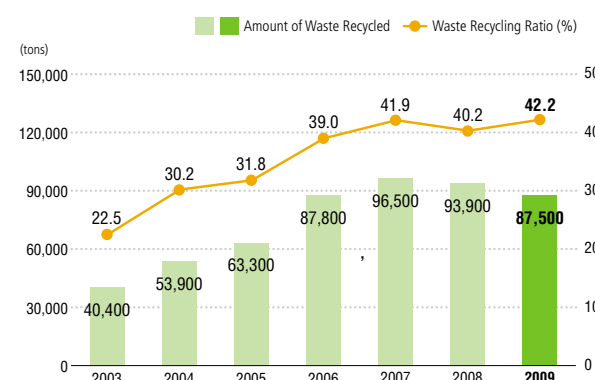
The amount of waste recycled by the Shin-Etsu Group in fiscal 2009 was 87,500 tons. Although this is less than that of fiscal 2008, the difference can be attributed to a decrease in overall waste output.

The waste recycling ratio was 42.2% in fiscal 2009, up 2.0% from fiscal 2008.

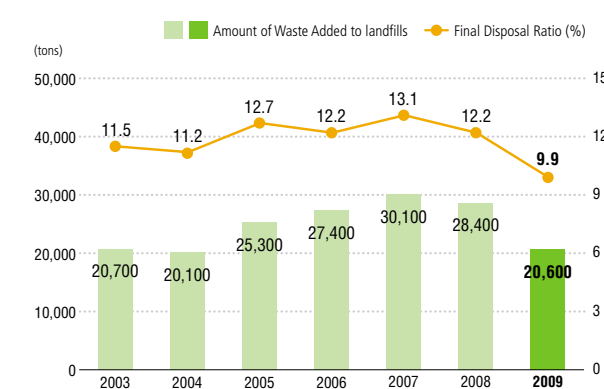
The amount of waste added to landfills in fiscal 2009 was 20,600 tons, a decrease of 7,800 tons compared with fiscal 2008.

The final disposal ratio (the volume of waste added to landfills as a proportion of total waste) in fiscal 2009 was 9.9%, a reduction of 2.3% from fiscal 2008.

**Amount of Waste Recycled**



**Amount of Industrial Waste Added to Landfills**



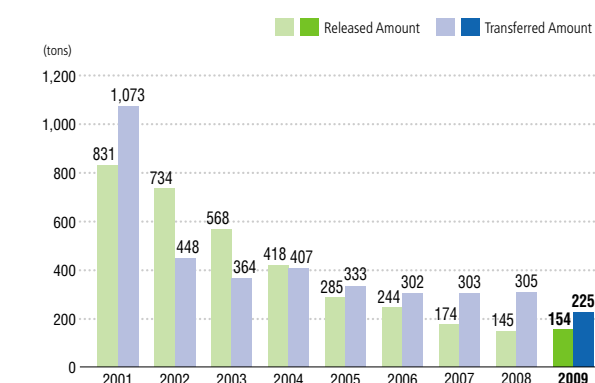
**Responding to PRTR Law**

Shin-Etsu Chemical reports the amount of atmospheric emissions of chemical substances we handle in accordance with the PRTR Law\*. The Company is also committed to reducing usage of these chemicals.

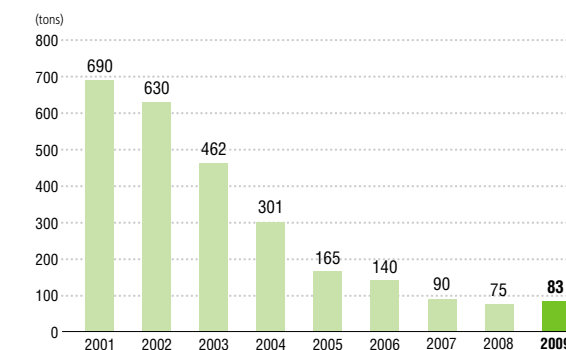
The amount PRTR designated chemical substances emitted by Shin-Etsu Chemical in fiscal 2009 reached 154 tons, an increase of 9 tons from fiscal 2008. The amount of transferred chemicals was 225 tons in fiscal 2009, a reduction of 80 tons compared with fiscal 2008.

\* PRTR Law: Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management:

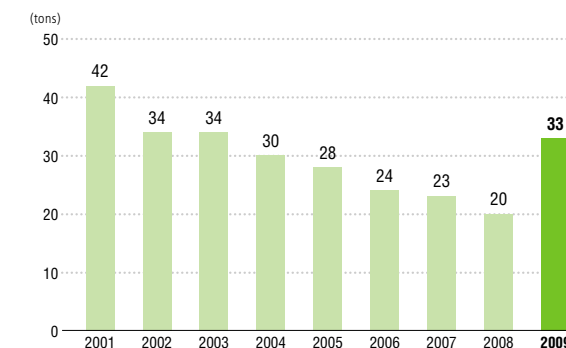
**Amount of Released and transferred PRTR Substances**



**Amount of Methyl Chloride Emissions**

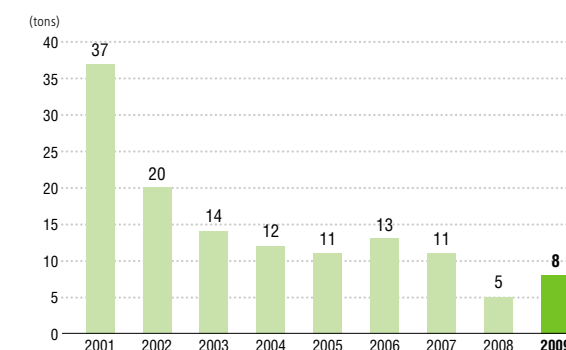


**Amount of 1,2-Dichloroethane Emissions**



Emissions are mainly caused during unloading process from tankers into storage tanks. In 2009, higher emissions are generated because of increase in transportation by tanker.

**Amount of PVC Emissions**





## Safety Measures

## To ensure the safety and security of local residents and employees by taking every possible measure to keep workplace safe and prevent accidents.

### Process Safety and Disaster Prevention

#### ■ Safety Measures for facilities

Every plant of the Shin-Etsu Group uses many different types of machinery and equipment in production facilities and utilities. Some of them often require a substantial amount of energy, may process hazardous and toxic substances, and are frequently operated at high pressures and extremely hot or cold temperatures. In order to ensure safe and stable operation, machinery and equipment must be maintained in good working order and safety measures must be properly implemented.

Every plant of the Shin-Etsu Group is committed to ensuring that technical standards comply with applicable legislative requirements at the stage of designing equipments and facilities. In addition, prior assessment of safety measures (risk assessment) is carried out to identify any remaining risks and make improvement. The results of risk assessment are deliberated and confirmed by expert committees in the form of the Safety Inspection Committee and the Preventative Safety Committee.

A number of techniques are available to identify risk factors, but HAZOP<sup>1</sup> is typically used in chemical plants. For processing machinery and stand-alone equipment, FMEA<sup>2</sup> used for analysis of accidents and What-if<sup>3</sup> analysis used for examining abnormal phenomena are effective. The Shin-Etsu Group uses these techniques to identify equipment risks, develop countermeasures and make improvements.

Following the implementation of countermeasures and improvements in response to a comprehensive review of all existing equipment, the Shin-Etsu Group will continue working to identify equipment risks and make improvements on an ongoing basis. In this way, we try to further strengthen safety measures of overall equipment.

1 HAZOP (Hazard and Operability Study)

HAZOP is a comprehensive approach for developing safety countermeasures in chemical processes with assumption of potential malfunctions in manufacturing facilities and the resultant environmental pollution that may caused by variation in the operating conditions.

2 FMEA (Failure Mode and Effects Analysis)

FMEA is used to develop appropriate countermeasures for each individual piece of equipment and machinery of the plant. FMEA is conducted by identifying the possible failures and analyzing the overall impact of each.

3 What-if

The What-if technique uses such repeated questions as "what-if" scenario to identify potential problems within a process in order to evaluate safety countermeasures in terms of level.

#### ■ Safety Measures for Chemical Substances

The Shin-Etsu Group handles a wide variety of chemical substances and manufactures and sells a diverse range of chemical products. Many of these are flammable, explosive, toxic, corrosive or otherwise of a dangerous

and/or harmful nature. Such materials are regulated by the Industrial Safety and Health Law, the Fire Services Law, the Poisonous and Deleterious Substances Control Law and other relevant legislation. The Shin-Etsu Group is committed to complying with legislative and regulatory requirements in relation to the provisions with proper utilization of information on the dangers and harmfulness.

As for purchased chemicals such as raw materials, intermediates and products, the Shin-Etsu Group obtains MSDS\* from each supplier. Shin-Etsu Group companies likewise issue and provide MSDS for intermediate and products that are produced in the companies. MSDS is used to provide information to employees and other related parties concerning the dangers, harmfulness and proper handling procedures.

We are also implementing countermeasures against such equipment accidents and incidents as leakage, spillage, fires and explosions, and installing pollution-control equipments and detectors.

\* MSDS

MSDS stands for Materials 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, MSDS are supplied by manufacturers, importers and distributors to customers at the point of sales or shipment.

#### ■ Emergency Response

The Shin-Etsu Group handles high-pressure gases and hazardous chemicals listed under the Fire Services Law for the production of intermediates and products.

When a severe accident such as a fire, explosion happens or a large-scale earthquake causes the collapse of facilities and equipments, this could lead to a major disaster, in which the employees and the local residents could be involved. The Shin-Etsu Group instituted the Emergency Response Regulations for incidents such as fires, on-site accidents and natural disasters such as earthquakes and typhoons. The Emergency Response Regulations is arranged on a company-wide basis as emergency response procedures.

Each plant and site implements periodical drills designed to verify the efficacy of response procedures, based on scenarios such as an explosion, fire, leak of hazardous materials or large-scale earthquake. In order to ensure an immediate response to accidents arising during transportation of hazardous materials and high-pressure gases, the Shin-Etsu Group set up an emergency communication and supporting systems between plants and sites, together with arranging appropriate equipment and materials. In addition to accident and disaster drills performed by individual divisions and workplaces, we also carry out joint training drills in the whole of plants and sites, assuming the scenario of a major incident or

earthquake. These drills are open to the public and are performed in conjunction with local fire authorities and fire-fighting groups, police authorities and government bodies when needed.

In recent years, we have been working to incorporate defensive preparations for potential accidents and natural disasters into the Business Continuity Plan (BCP), while strengthening our emergency response ability through improved procedures for minimizing damage and better communication between head office and the various divisions of the Company.



Joint public emergency response training drill with local authorities at Gunma Complex, November 2009

### Occupational Health and Safety

#### ■ Occupational Health and Safety Initiatives

Every plant and site of the Shin-Etsu Group uses a wide variety of machineries and equipments and handles various chemical substances. Putting the top priority on ensuring safety, we promote a safety-first approach in machinery and equipment operation, and use such techniques as risk assessment of work processes and HAZOP analysis of equipment to identify risks and make improvements in the workplace. In recent years, it is seen that problems are caused at the point of contact between operators and equipment, known as the man-machine interface, as robots and automation systems are introduced to production processes. The Shin-Etsu Group applies the fool-proof<sup>1</sup> approach to minimize problems that could be caused by human error (particularly errors of judgment and erroneous assumptions) and takes such measures as installation of safety covers, fences, and switches for safety checking purpose. Furthermore, fail-safe<sup>2</sup> systems are also employed so that safety devices, interlock mechanisms and warning systems can certainly ensure to work to safe side.

Meanwhile, the Shin-Etsu Group is also strongly committed to non-physical safety measures including promotion of safety activities such as compliance with manuals and its arrangement. The zero-accidents program is designed to raise awareness and appreciation of dangers among all employees and is deployed throughout

the Shin-Etsu Group. The program includes activities such as hazard prediction training, reporting close-call incidents and concern, pointing-and-calling safety procedures, risk assessment, and hazard awareness training. Moreover, the Shin-Etsu Group provides that thorough compliance with manuals, the fundamentals of safe operation, is important rule to develop further safety activities.

During the calendar year 2009, two LTI<sup>3</sup> were recorded at the Shin-Etsu Group in Japan, both of which were conventional type of accidents such as falling from equipment and cutting a wound. In response, we are working to provide operator safety training and arrangement of thorough operation procedures while improving safety measures of equipments.

As for the occupational health, the Shin-Etsu Group monitors environmental concentrations of harmful substances as well as noise and light levels in the workplace and confirm that those levels comply with the required standards. We are constantly striving to improve the workplace environment, for instance, by upgrading local ventilation systems and switching to materials with less impact on human health.

1 Fool-proof:

Application of safety countermeasures to industrial products and production equipments at the design stage in order to prevent operators being exposed to dangers even in case of improper or incorrect operation.

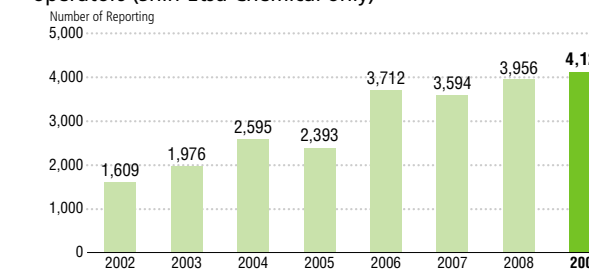
2 Fail-safe:

The design of equipments and systems, which revert to safe operating mode in the event of improper user operation or machine fault.

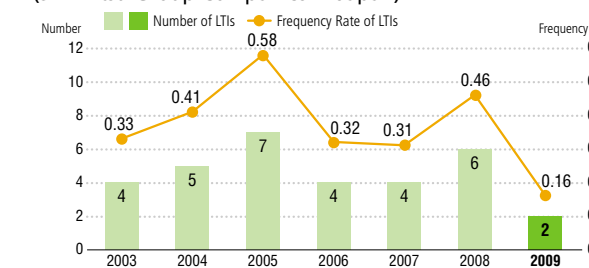
3 LTI (Lost-Time Incident):

An incident in the workplace that results in lost time where the employee requires time off work. Note that the reporting period for workplace incidents is January through December 2009.

#### Number of close-call incidents and concern reported by operators (Shin-Etsu Chemical only)



#### Change in the Number of LTIs and Frequency Rate (Shin-Etsu Group Companies in Japan)



### Education and Training

The Shin-Etsu Group takes appropriate measures for environmental conservation, disaster prevention, occupational safety and proper handling of chemical substances in order to prevent accidents and minimize the impact of disasters. For this purpose, it is essential for each employee to improve the skill and capability together with providing the appropriate equipment and facilities. To this end, production plants and workplaces at the Shin-Etsu Group companies provide a systematic range of education and training programs. These include skills training in operation and work procedures; safety training designed to prevent accidents; virtual education simulating experiences of dangers; education for environmental conservation and chemical handling procedures; and emergency drills for situations such as electric power interruptions. The Shin-Etsu Group strives to enhance employee competency through regular education and training sessions for employees at various levels and job descriptions as well as study programs for legal qualifications.

In addition, from the point of view to prevent accidents of employees caused by their activities, we are providing hazard prediction training along with safety procedures such as pointing-and-calling and comprehension tests on manuals, in order to raise awareness and appreciation of dangers among all employees.

Furthermore, as the countermeasures for accidents and disasters, other programs are implemented such as drills for emergency notification and communication, firefighting drills, and training in the use of breathing apparatus and fireproof clothing. Together with training programs undertaken at individual workplaces, there are also two joint disaster prevention training drills in each of production plant.



Training new employees in the use of firefighting equipment at Gunma Complex, June 2009

### Accident and Incident Reporting

In fiscal 2009, Shin-Etsu Chemical experienced two incidents. In the first incident, the employee was injured through contact with a harmful chemical substance during filling of raw material, which was caused by inadequate checking prior to operation and inadequate execution of the procedure stipulated in the manual. Workers were retrained in the importance of thorough compliance with the manual and checking items prior to operation. The equipment was also improved as a countermeasure to prevent the reoccurrence of the accident.

The second incident was an equipment incident of leakage from a pipe flange. The incident was caused by stress corrosion cracking of bolts which made from a material unsuited to the chemical substance carried in the pipe. The bolts were replaced with a more suitable material and the relevant equipment inspection standards were reviewed. Neither of these incidents had any impact on the surrounding environment.

### Environment Control and Safety Audits

Periodical environment and safety audits and special audits with specific themes are performed to assess progress towards targets in areas such as disaster prevention, environmental conservation and occupational health and safety. External experts participate in audits to provide advice and recommendations.

In recent years, audits have placed particular priority on setting quantitative targets, raising the level of internal audit, arrangement and thorough implementation of manuals, and ensuring safety at constructing site in order to strengthen and upgrade management systems. Furthermore, we provide that the risk assessment for equipments and production plants and associated countermeasures are also important subjects in audits so that we can improve the quality of evaluation techniques and evaluate the suitability of countermeasures and improvements.



Spring environment control and safety audit at Gunma Complex, May 2009

## Product Safety and Quality-related Initiatives

# The Shin-Etsu Group is committed to the safe use of products at our customers.

### Product Safety

#### Product Safety Promotion

Based on the basic company policy of respect for human being, the Shin-Etsu Group puts the highest priority on product safety as well as plant safety and environmental conservation, and implements necessary measures throughout the Group.

FMEA is carried out at every process from research and development of the products to identify potential issues that affect overall system performance and/or product safety. Qualitative analysis is made to evaluate those identified issues in order to improve product designs and manufacturing processes.

#### Providing Information on Products and Responding to Associated Legislative Requirements

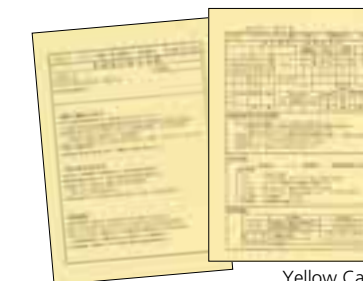
The Shin-Etsu Group provides MSDS for each product to customers. Customers are encouraged to take appropriate safety precautions including: understanding hazardous and harmful characteristics of products; undertaking all required legal procedures whenever necessary; installing system and/or equipment to eliminate harm; and wearing protective gear.

As the safety measures during transportation, the Shin-Etsu Group issues the Yellow Card<sup>1</sup> and/or Container Yellow Cards<sup>2</sup> that are affixed to containers. While hazardous and toxicity warning information by GHS<sup>3</sup> system were introduced following amendments to the Japanese Industrial Safety and Health Law in 2006, the Shin-Etsu Group complies with legislative requirements on product safety indication.

Within Japan, the Shin-Etsu Group confirms safety of new chemical substances at the stages from research and development to commercial production. The Shin-Etsu Group submits manufacturing permit applications in accordance with the requirements of the Law concerning the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.<sup>4</sup> and other applicable legislation such as the Labor Safety and Sanitation Law. In addition, we have already completed preliminary registration required by the REACH regulation (which came into force in the EU in June 2007), and are working to achieve compliance with other requirements such as information systems in the supply chain. The Shin-Etsu Group is also committed to developing new manufacturing technologies designed to totally eliminate the use of RoHS-designated substances as required under the RoHS directive.

#### 1 Yellow Cards:

The yellow cards on which all relevant information on treatment required in case of an accident during transportation is described. These are prepared in the interests of safety and handed over to the transport contractor whenever chemicals are transported and retained throughout delivery.



Yellow Cards

#### 2 Container Yellow Cards:

The standard Yellow Card system is not suitable for mixed deliveries with other items and small-lot individual deliveries. Instead, a label indicating safety information is attached to each container showing safety information such as the UN number of chemical name and the specific number describing emergency response procedures.

#### 3 GHS (The Globally Harmonized System of Classification and Labeling of Chemicals):

This internationally accorded system addresses the classification of chemicals of type of hazard, in accordance with labels and safety data sheets.

#### 4 Law concerning the Evaluation of Chemical Substances and Regulation of Their manufacture, etc.:

A law concerning examination and regulation of manufacture and other aspects of chemical substances.

### Quality Control

#### Quality Control System

The structure of the Shin-Etsu Group is essentially a divisional organization, where each division operates on an independent and self-concluding basis (including associated Group companies) and takes responsibility for product quality assurance for its own products.

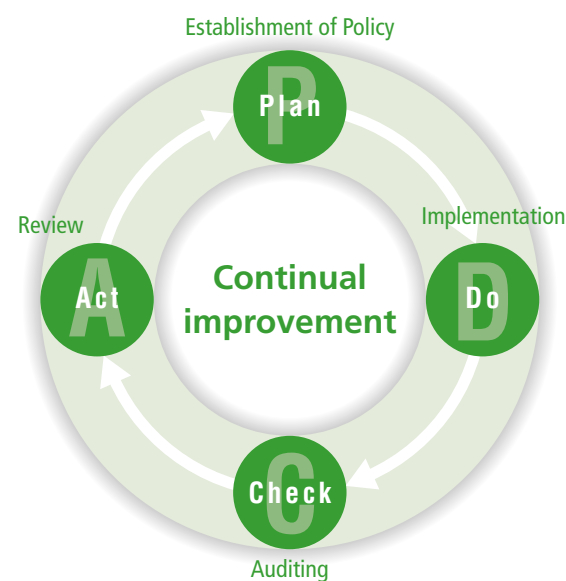
Requests and suggestions from customers are channeled immediately by the sales related departments that are in direct contact with customers to the appropriate division or affiliated company department such as the research and development, quality assurance and manufacturing departments. This feedback is incorporated into new product research and development and also used to improve manufacturing processes of existing products. The internal feedback system helps to strengthen reliable relationship with our customers.

All Shin-Etsu Chemical business establishments and nearly all production plants of the Group companies have such quality management certification as ISO 9001 and ISO/TS 16949.

Every business establishment has a quality management policy of products and services to maximize customer satisfaction. The policy forms the basis of the PDCA (Plan-Do-Check-Action) cycle and that is used to improve the efficacy of quality management systems and quality of products and services.



● Quality Management System



■ Responding to Complaint

Each individual company and business division is basically responsible for dealing with quality complaints, pursuing follow-up by identifying the cause of the problem and taking appropriate countermeasures to prevent future recurrence. Product recalls and product liability issues with a potentially serious impact on society are defined as serious complaints and are controlled with higher priority than other complaints. In the event of occurring a serious complaint, senior management is informed immediately so that a company-wide response can be made.

Shin-Etsu made a thorough rule that we make an initial response to all quality complaints from customers within 48 hours since received such information.

■ Auditing and Support for Quality Improvement

Quality audits are implemented to learn from complaints and improve quality and customer service with the target of reducing quality issues to zero. Quality audits provide customer-oriented and cost-based evaluations of quality programs in each division. This information is used to identify and remedy weak points in quality control activities and system. The aim is to learn from past complaints and identify the root cause of quality issues in order to build a stronger basis for future prevention. The PDCA cycle is applied to problems pointed out by customers for improvement and follow-up. The Six Sigma program\* is also deployed on a company-wide basis as a means of improving quality levels.

\* Six Sigma program  
A quality improvement technique developed by Motorola in the 1980s. Focused on the processes where variation appears, it is designed to minimize variation within the processes and thereby reduce the incidence of quality defects. The Six Sigma program is deployed across the entire Shin-Etsu Group.



Quality Auditing at the Kashima Plant (October 2009)

Status of ISO Certification

Status of ISO 9001 Certification Acquisition by Major Production Companies of the Shin-Etsu Group (as of June 2010: excluding the Shin-Etsu Polymer Group)

Company and Plant	Certification Date	Certifying Organization
Shin-Etsu Chemical Co., Ltd.		
Naoetsu Plant	September 28, 1994	JCQA
Takefu Plant	April 25, 1994	JQA
Gunma Complex	April 21, 1994	JCQA
Kashima Plant	February 27, 1995	JCQA
Shin-Etsu Handotai Co., Ltd.		
Isobe Plant	March 1, 1994	SGS Japan
Shirakawa Plant	March 1, 1994	SGS Japan
Takefu Plant	March 1, 1994	SGS Japan
Saigata Plant	March 1, 1994	SGS Japan
Naoetsu Electronics Co., Ltd.	November 25, 1994	SGS Japan
Nagano Electronics Industrial Co., Ltd.	April 15, 1994	SGS Japan
Mimasu Semiconductor Industry Co., Ltd.	November 15, 1994	SGS Japan
Shin-Etsu Quartz Products Co., Ltd.		
Takefu Plant	December 9, 1994	ABS-QE
Koriyama Plant	November 22, 1995	ABS-QE
Sasebo Plant	October 6, 2000	ABS-QE
Kyushu Plant	February 21, 1997	ABS-QE
Yamagata Shin-Etsu Quartz Co., Ltd.	October 25, 1995	ABS-QE
Fukui Shin-Etsu Quartz Co., Ltd.	December 7, 1994	ABS-QE
Nissin Chemical Industry Co., Ltd.	September 30, 1996	JCQA
JAPAN VAM & POVAL Co., Ltd.	October 30, 1995	JCQA
Shinano Electric Refining Co., Ltd.	November 9, 1999	SGS UK
Shintech Incorporated		
Freeport Plant	August 4, 1995	BSI
Addis Plant	July 18, 2005	SGS
S.E.H. America, Inc.	November 4, 1993	UL
S.E.H. Malaysia Sdn. Bhd.	December 7, 1993	SIRIM
Shin-Etsu PVC B.V.		
PVC Plant	August 16, 1993	DNVC
VCM Plant	September 4, 2003	DNVC
SE Tylose GmbH & Co. KG	February 20, 1996	TÜV Rheinland
S.E.H. Europe Ltd.	December 16, 2000	BUREAU VERITAS
Shin-Etsu Silicone Taiwan Co., Ltd.	August 19, 1998	LRQA

Status of ISO 14001 Certification Acquisition by Major Production Companies of the Shin-Etsu Group (as of June 2010: excluding the Shin-Etsu Polymer Group)

Company and Plant	Certification Date	Certifying Organization
Shin-Etsu Chemical Co., Ltd.		
Naoetsu Plant	May 31, 1999	JCQA
Takefu Plant	December 25, 1998	JQA
Gunma Complex	July 1, 1996	JCQA
Kashima Plant	March 21, 2000	JCQA
Shin-Etsu Handotai Co., Ltd.		
Isobe Plant	January 21, 1997	SGS UK
Shirakawa Plant	January 21, 1997	SGS UK
Takefu Plant	January 21, 1997	SGS UK
Saigata Plant	January 21, 1997	SGS UK
Naoetsu Electronics Co., Ltd.	January 21, 1997	SGS UK
Nagano Electronics Industrial Co., Ltd.	January 21, 1997	SGS UK
Mimasu Semiconductor Industry Co., Ltd.	January 21, 1997	SGS UK
Shin-Etsu Quartz Products Co., Ltd.		
Takefu Plant	January 5, 2000	ABS-QE
Koriyama Plant	June 14, 2000	ABS-QE
Sasebo Plant	October 21, 2002	ABS-QE
Kyushu Plant	October 3, 2003	ABS-QE
Yamagata Shin-Etsu Quartz Co., Ltd.	November 2, 2001	ABS-QE
Fukui Shin-Etsu Quartz Co., Ltd.	June 20, 2002	ABS-QE
Nissin Chemical Industry Co., Ltd.	April 24, 2000	JCQA
JAPAN VAM & POVAL Co., Ltd.	January 11, 1999	JCQA
Shintech Incorporated		
Freeport Plant	December 8, 2005	BSI
S.E.H. America, Inc.	September 25, 1998	UL
S.E.H. Malaysia Sdn. Bhd.	May 8, 1998	SIRIM
Shin-Etsu PVC B.V.		
PVC Plant	June 27, 1997	DNVC
VCM Plant	September 4, 2003	DNVC
SE Tylose GmbH & Co. KG	October 25, 1997	TÜV Rheinland
S.E.H. Europe Ltd.	January 26, 1999	NQA
Shin-Etsu Silicone Taiwan Co., Ltd.	August 24, 1999	LRQA Taipei

For further information on the status of ISO certification acquisition by the Shin-Etsu Group companies, please visit the website below:  
<http://www.shinetsu.co.jp/e/profile/kankyo.shtml>



## Relations with Employees

## People create and support technology. We aim to provide ideal working conditions so they can.

The Shin-Etsu Group respects fundamental human rights and implements a variety of approaches to establish a workplace environment that is easy to work in, help each employee realize an affluent and healthy life to make the most of his/her potential and career.

### Health Considerations

#### Employee health programs

To further decrease the number of sick, we focus on activities that promote fitness and developing physical strength, and by improving the regular health consultation service, health guidance for lifestyle related diseases and mental health treatment. Industrial physicians conduct interviews and provide guidance for people working long hours.

Fitness and Physical Strength Development Promotion Committees were also established in each plant and business establishment. These committees organize physical strength monitoring and hold seminars and events for physical strength improvement in cooperation with local Medical Treatment Rooms. A Family Health Consultation Desk was also established in the corporate health insurance society to help ensure the health of employees' families.



Physical strength monitoring and health seminar were held at Naoetsu Plant (December 2009)

### Respect for Human Rights

#### Human Rights Enlightenment Promotion Committee

We respect the human dignity of all individuals. To help accomplish this, the Human Rights Enlightenment Promotion Committee implements initiatives to ensure that work environments are free of all racial, gender and other forms of discrimination and are places where all employees can work together in a spirit of mutual trust.

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 in training sessions held by both federations to raise staff awareness of human rights.

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

We introduced a performance-based personnel evaluation system for wages, promotions, transfers, etc.. This system proves useful for increasing employees' motivation, as their treatment reflects the way in which they meet their challenges to achieve higher goals.

To operate the personnel evaluation system in a fair and appropriate manner, the evaluation standards are made available to all employees and evaluation training is provided for all managers. All possible steps are taken to ensure that all evaluation is carried out according to the uniform standards. Communication between the evaluator and the person being evaluated is ensured by holding two interviews per year.

A Communication Sheet is also prepared between each staff member and his/her immediate superior. This sheet is utilized for further capacity building by ensuring mutual confirmation of superior's expectations, the subordinate's desires, target setting for the next six months, and feedback on achievements discussed during the interview.

### Education/Training and Self-Enlightenment

#### Auditing student system

We established an auditing student system in 1962. In this system, designed to help mid-level employees upgrade their skills, about ten employees chosen from plant manufacturing sites are sent to study at university for one year. In 49 years since this system was introduced, 488 employees have completed the program and now function as leaders at their job sites.

#### Training for international adaptation

The Shin-Etsu Group is expanding its business activities throughout the world, and competency in foreign languages is an essential skill for smooth operations. To this end, the Group provides English language classes that teach English meeting and presentation skills as well as intercultural communication courses that promote awareness and understanding of cultural differences commonly encountered overseas. Recently, in light of the Company's business expansion in China, a Chinese language course has also been launched.

### Welfare and Benefits

#### BAKER-KANAGAWA Japan-U.S. scholarship program

This new scholarship program helps was set up for the children of Japanese employees of the Shin-Etsu Group to attend universities in the United States, and the children of American employees to attend university in Japan. The program is the brainchild of 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. Their shared idea for this program was to foster internationally active human resources and deepen the exchange between Japan and the United States.

#### Bullet train commuting benefits

Since 1989, Shin-Etsu has allowed commuting by bullet train, Shinkansen at company expense. This option allowed more employees to own houses and enables personnel who are reassigned to headquarters from business locations in Gunma and Fukushima prefectures to transfer jobs without changing their lifestyles. As of June 2010, 67 employees were taking advantage of this Company offer.

#### Accumulated holidays

Employees are granted a certain number of annual paid holidays in accordance with labor regulations. If those holidays are not taken, they are 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. From July 2007, this system has been applied to people who work as volunteers in disaster regions, as well as to donors for organ or bone marrow transplants.

#### Other systems

In the event of the death of a Shin-Etsu Group employee, we offer a scholarship system to support surviving children and family members. Because the Company has group long-term accident and indemnity insurance, workers may still receive a portion of their salaries, should they be unable to work due to long-term illness or injury. In addition, we have established asset-building schemes, a shareholding system, and a mutual aid society to provide support for weddings, childbirths and sudden hospitalization of family members.

#### Childcare and nursing care systems

Our childcare leave system permits employees to take leave till their children have reached the age of three in

cases where parents are unable to secure places for their children in nursery schools, and many employees take advantage of the system. Employees raising children who have yet to reach the age of three\* are also allowed to shorten their work time to as little as 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. This system was not taken by any employees during fiscal 2009.

From July 2010, the scope of eligibility for shortened working hours has been expanded to employees with children aged up to the third grade of elementary school in Japan.

#### Number of employees who have taken child-care leave (Fiscal 2009)

Shin-Etsu Chemical Co., Ltd. (non-consolidated)	12 (Male: 0; Female 12)
Consolidated companies in Japan	51 (Male: 1; Female 50)
Consolidated companies total*	167 (Male: 50; Female 117)

\* The length of childcare leave differs from country to country, as the program is based on the local laws.

### Taking Childcare System

Raising children is supported by cooperation of those around you. The happy smiles of children and their peaceful sleeping faces make it all worthwhile.



Employees taking advantage of childcare leave to achieve a successful balance between work and family (Ms. Fujita is in the middle of the back row)

Opto-Electronics Materials Dept. I,  
Advanced Materials Division

**Yasuko Fujita**

I took childcare leave for about six months in addition to childbirth leave. During this time I received timely messages of support from my colleagues and even from my manager which

kept me informed of business related information. Due to such communication, I didn't feel left out at all when I returned to work.

I was able to resume my previous position looking after overseas sales. Everyone was highly accommodating, for instance by arranging meetings to fit in with the new restrictions on my time. Without the support and understanding of everyone at the Company as well as my husband and parents, I would not have been able to balance my work and family responsibilities with such success. I feel tremendously lucky to have the opportunity to see my child's happy smiling face after work every day and asleep in bed every night.



## Communication with Local Communities

We maintain communications with local communities through our plants and business sites.

The Shin-Etsu Group continues its efforts to deepen mutual understanding by promoting an array of communications aimed at building trust-based relationships with a variety of stakeholders in society and successfully realizing the Group's mission to ensure that its global customers are satisfied with its business activities.

### Educational Support Activities

#### Summer School attracts 182 participants

Naoetsu Plant



Helping local elementary school students with their studies

The Summer School was held for one week at the local ward association facility. The Summer School, originally started as an opportunity for the new recruits to assist local elder-grades elementary school students with their summer holiday homework, helps to strengthen relationship with the local community and contribute to the area.

In 2009, the Summer School marked the 35th year. The school runs for two hours a day, with the first hour for study and the second hour for recreational activities. A total of 182 children attended the school for seven days.

#### Sixteen nominations for the Youth Sports Prize Awards

Takefu Plant



The 16 winners of the Shin-Etsu Chemical Youth Sports Prize Awards with their certificates

The Shin-Etsu Chemical Youngsters Sports Promotion Public Trust Fund was set up to commemorate the 60th anniversary of foundation. This year, there were 16 winners of the Shin-Etsu Chemical Youth Sports Prize Awards, prized in recognition of outstanding achievements of young people in the sporting arena. In 2009, the Sports Awards marked the 23rd year, which aims to promote the sports in the city of Echizen, Fukui prefecture, where the Takefu Plant is located. In addition to awarding prizes to young people, we provide sporting goods and equipment to local elementary schools in Echizen.

### Participating in Local Events

#### Cooperating for "Samurai Marathon"

Gunma Complex



Shin-Etsu employees in individually designed costumes running through the cedar trees

Annaka City, where the Gunma Complex is located, is the site of the annual Ansei Toh-ashi (Samurai Marathon Competition). In this year's event, which is the 35th, a total of 1,980 people competed, including many Shin-Etsu employees. This competition, in which runners compete while wearing costumes, is well-known throughout Japan. At this year's race, entertaining costumes that showcased the creativity of the competitors received cheers from the roadside spectators, and atmosphere of excitement was perfectly suited to mid-summer day. The Shin-Etsu Group supports the Annaka Samurai Marathon every year.

### Communication with Local Communities

#### Displaying rhododendrons to the Public, Inviting the families of new employees as well

Shirakawa Plant of Shin-Etsu Handotai



Visitors to the rhododendron garden

Shin-Etsu Handotai's Shirakawa Plant invited local government officials who have assisted the company as well as the families of employees who joined the company this year to view the rhododendrons on the grounds of the plant. A total of 139 people came and enjoyed the colorful rhododendrons in full bloom, and the visitors were presented with rhododendron seedlings and a commemorative photograph. This public viewing proved to be an excellent opportunity for the plant's neighbors to develop a better understanding of the plant's safe, secure environment.

## Other Activities

#### Cleaning up Oshozu River together with local residents

Takefu Plant



Shin-Etsu employees and local volunteers are working to clear the riverbed and surrounds

Shin-Etsu employees of the Takefu Plant and the related Group companies carry out cleanup activity together with local residents on the Oshozu River, which runs alongside the Takefu Plant. This regular event is an important component of local beautification activities. Encouraged by kind greetings from local residents, Shin-Etsu employees cleaned up the river for about half day.

#### Firefighting demonstration at the New-year Fire Brigade Ceremony in Kamisu City

Kashima Plant



The Shin-Etsu Emergency Response Team demonstrates firefighting procedures

The 2009 Kamisu City New-year Fire Brigade Ceremony, promoted by the City of Kamisu, the Kamisu Municipal Fire Brigade and the Kashima South Regional Association of Fire Services, took place at the Kamisu City Culture Center. The related people of 1,120 and 67 fire-fighting vehicles joined the ceremony from fire brigades and companies. The Shin-Etsu Emergency Response Team from the Kashima Plant took part in the ceremony and presented a demonstration of model firefighting techniques to the Mayor of Kamisu City and other delegates. It has passed 13 years since the Team had last presented such demonstration.

## Activities Overseas

#### Assisting university students majoring in chemical technology

SE Tylose GmbH &amp; Co. KG



Students using analytical instruments donated by SE Tylose

SE Tylose in Germany has for many years now been providing assistance to students interested in the natural sciences. Student trainees majoring in chemical technology are given opportunities to visit key divisions of the Company, such as research and development, quality assurance, technology and sales, to give them a concrete idea of their future in the industry. Many of the students come from a vocational school in the nearby town of Wiesbaden, with which SE Tylose has a close relationship.

The R&D Division at SE Tylose donated analytical instruments and gas chromatography equipment to the vocational school. All equipment was in excellent condition with no faults, and was immediately installed in the school's experimental laboratory.

#### SEST received an award from Thai Ministry of Labour and Social Welfare in recognition of Zero Accidents Record

Shin-Etsu Silicones (Thailand)



Presentation of the trophy in front of a large and appreciative audience

On August 24, 2009, the Ministry of Labour and Social Welfare in Thailand presented Shin-Etsu Silicones Thailand (SEST), with an award in recognition of the Company's achievements in reducing domestic workplace accidents.

SEST launched and implements a workplace environment, health and safety program in accordance with Thai regulations. Since January 2006, SEST has managed to complete one million uninterrupted work hours without a single lost time incident (LTI).

SEST officials were presented with the crystal trophy by the Minister for Labour and Social Welfare at an awards ceremony attended by a large number of government and industry leaders as well as media representatives.



## History of Activities

### Measures taken by the Shin-Etsu Group

1926	Founded as Shin-Etsu Nitrogen Fertilizer Co., Ltd. (the name was changed to Shin-Etsu Chemical Co., Ltd. in 1940)
1989	CFC Control Countermeasures Committee established
1990	Global Environment Issues Countermeasures Committee established
1992	Reduction of steam usage by improvement in reaction processes of Methyl Chloride at Gunma Complex
1995	Participation in Responsible Care (RC) promotion
1996	ISO14001 certification obtained for the Gunma Complex
1997	ISO14001 certification obtained for all production plants of Shin-Etsu Handotai
1997	Introduction of thermal boiler that uses thermal energy generated from waste processing at Gunma Complex
1998	Environmental Charter adopted
1998	First Environmental Report issued
1999	ISO14001 certification obtained for JAPAN VAM & POVAL Co., Ltd.
1999	Implementation of special audit on environmental issues in the whole of the Group companies in Japan
2000	ISO14001 certification obtained for all domestic production plants of Shin-Etsu Chemical
2000	ISO14001 certification obtained for Nissin Chemical Industry
2000	Final disposal facility completed at the Gunma Complex
2001	Waste disposal facility completed at the Naoetsu Plant
2001	Introduction of absorption refrigeration system at the Kashima Plant
2001	Introduction of thermal recovery system for distillation process at the Kashima Plant
2002	Introduction of Co-generation system at the Kashima Plant
2003	Attended First International Conference on Green and Sustainable Chemistry (GSC Tokyo 2003)
2005	Corporate Social Responsibility (CSR) Promotion Committee established
2005	Waste recycling system at the Naoetsu Plant began full-scale operation
2005	Environmental Charter revised
2005	Co-generation system at the Kashima Plant further expanded
2006	Recovery system of hydrochloride acid installed on silica production line at the Gunma Complex
2006	Signed on to the Responsible Care Global Charter
2007	Introduction of equipment to reduce steam usage by improvement of distillation process at the Kashima Plant
2008	Introduction of natural gas fuel conversion equipment at the Gunma Complex
2008	Introduction of gas turbines at the Gunma Complex
2008	Thermal recovery system installed on silica production line at the Gunma Complex
2008	Introduction of cellulose wastewater recovery system at the Naoetsu Plant

External Assessments	FTSE4 Good
Rating	Moody's Investors Service, Inc. has classified Shin-Etsu Chemical Co., Ltd.'s long-term debts as Aa3
Memberships	Nippon Keidanren (Japan Business Federation) Japan Chemical Industry Association Vinyl Environmental Council Plastic Waste Management Institute The International Friendship Exchange Council The Japan Committee for UNICEF, etc. As of March 31, 2010

### Safety/Environment/Industrial Health-related Commendation Results

1926	
1980	
1988	Fukui Prefectural Governor's Award for Excellent Manufacturer of High-Pressure Gases (Shin-Etsu Handotai/Takefu)
1992	International Trade and Industry Minister's Award for Excellent Green Factory (Shin-Etsu Handotai/Shirakawa)
1993	Osaka Prefectural Governor's Award for Excellent Manufacturer Related to High-Pressure Gases (JAPAN VAM & POVAL)
1994	Achieved 13,300,000 disaster-free hours, a 3rd class disaster free record (Shin-Etsu Handotai/Shirakawa)
1996	Prime Minister's Commendations for Outstanding Contribution to the National Greening Campaign (Shin-Etsu Handotai/Shirakawa)
1996	Minister of International Trade and Industry Award for Excellent Manufacturing Facility of High-Pressure Gases (Shin-Etsu Chemical/Gunma)
1997	Fire Defense Agency Director General's Prize for superior handling of hazardous materials (Shin-Etsu Chemical/Gunma)
1997	Fire Defense Agency Director General's Prize for superior handling of hazardous materials (JAPAN VAM & POVAL)
1998	Superior High-Pressure Gas Production Facility Award from the Head of the Kinki Bureau of Economy, Trade and Industry (Shin-Etsu Handotai/Takefu)
1999	Superior High-Pressure Gas Production Facility Award from the Head of the Kanto Bureau of Economy, Trade and Industry (Shin-Etsu Chemical/Kashima)
2000	Fire Defense Agency Director General's Prize for superior handling of hazardous materials (JAPAN VAM & POVAL)
2000	Minister of Labour Superior Prize (Nissin Chemical Industry)
2000	Minister of Labour Superior Prize (Naoetsu Electronics)
2000	Superior High-Pressure Gas Production Facility Award from the Head of the Kinki Bureau of Economy, Trade and Industry (Shin-Etsu Quartz Products/Takefu)
2001	Minister of Health, Labour and Welfare's commendation for industrial hygiene activities (Shin-Etsu Quartz Products/Takefu)
2001	Minister for Economy, Trade and Industry Award for Superior High-Pressure Gas Production Facility (Shin-Etsu Chemical/Kashima)
2002	Thirty-Year disaster-free Special Achievement Award from the Japan Soda Industry Association (Shin-Etsu Chemical/Naoetsu)
2002	Superior High-Pressure Gas Production Facility Award from the Head of the Kinki Bureau of Economy, Trade and Industry (Fukui Shin-Etsu Quartz)
2003	Superior High-Pressure Gas Production Facility Award from the Head of the Kanto Bureau of Economy, Trade and Industry (Shin-Etsu Chemical/Kashima)
2003	Achieved 7,000,000 disaster-free hours, a 1st class disaster free record (Shin-Etsu Handotai/Isobe)
2003	Achieved 5th class disaster-free record (Naoetsu Electronics)
2005	Excellent Safety and Hygiene Workplace Award from the Minister of Health, Labour and Welfare (Shin-Etsu Chemical/Kashima)
2005	Commendation of the Malaysian Ministry of Human Resources (a counterpart of the Japanese Health, Labour and Welfare Ministry) for One of Five Domestic Companies in Malaysia for Excellence in Safety and Occupational Health Management (S.E.H. (Shah Alam) Sdn. Bhd.)
2007	Nagano Labour Bureau Director's Superior Prize (Nagano Electronics Industrial)
2009	Special award from Thai Ministry of Labour and Social Welfare for consecutive one million hours of LTI-free operation (Shin-Etsu Silicones (Thailand))



Responsible Care Global Charter Certification

## RC Audits

### Responsible Care (RC) Audits

Aiming to further improve its RC activities, Shin-Etsu Chemical carries out RC audits. These audits involve the verification of all Group activities and reports by the Japan Responsible Care Council (JRCC).

RC audits are conducted in accordance with the "Fundamental Policy of the Japan Chemical Industry Association for Environment and Safety" (Revised edition, 2005) and the "Responsible Care Codes" \*.

The verification process aims to improve the quality of RC activities implemented by JRCC members, and serves to enhance the credibility of RC activities by publishing the results and ensuring accountability.

\* Responsible Care Codes: Six principle areas are addressed when implementing Responsible Care: environmental preservation, process safety (and disaster prevention), occupational health and safety, distribution safety, chemical and product safety, and social dialogue (with the public). The codes initiatives in these areas, together with the Management System Codes required for operating all the above.

