

Mitsui Chemicals Group

CSR Communication 2013



Outline of the Mitsui Chemicals Group

Corporate Profile	Name:	Mitsui Chemicals, Inc.	Domestic Manufacturing Sites:	Kashima Works, Ichihara Works (including Mobara Branch Factory), Nagoya Works, Osaka Works, Iwakuni-Ohtake Works (including Tokuyama Branch Factory), Omuta Works
	Head Office:	Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo 105-7117	R&D Laboratory:	Sodegaura Center
	President & CEO:	Toshikazu Tanaka	Domestic Sales Offices:	Head Office and three branches (Nagoya, Osaka, and Fukuoka)
	Paid-in Capital:	¥125,053 million	Overseas Office:	Beijing Office
	Employees:	12,846 (consolidated) (as of March 31, 2013)	Subsidiaries and Affiliates:	Consolidated subsidiaries (domestic: 34, overseas: 49) Non-consolidated subsidiaries and affiliates (domestic: 15, overseas: 12)



About CSR Communication 2013

Since fiscal 2011, we have provided comprehensive and detailed content primarily via the online version of the Mitsui Chemicals Group's CSR Report. We also publish a printed version, which is intended to provide information that we particularly want to share with our stakeholders, rather than merely being an abridged version of the online report. We have once again edited our reports in line with this policy in fiscal 2014. We produce CSR reports to maintain dialog with our stakeholders. Our reports highlight the Mitsui Chemicals Group's main CSR initiatives from three key perspectives (economy, society and environment), with a focus on social and environmental initiatives in particular. Please see our Annual Report for a more in-depth economic viewpoint.

 **Website** >> <http://www.mitsuichem.com/index.htm>

We will be posting the full version of the Mitsui Chemicals Group's CSR Report on our website, to provide comprehensive and detailed content. We have also edited our report with the aim of making it more varied, readable, and accessible. We encourage readers to access the website to learn more about our extensive CSR activities here at the Mitsui Chemicals Group.

The main areas covered in this year's report are as follows.

1 CSR Management

CSR at the Mitsui Chemicals Group, Management Framework

2 Responsible Care (RC)

Mitsui Chemicals's Responsible Care Policy, RC Promotion System, Occupational Health and Safety, Process Safety and Disaster Prevention, Environmental Protection, Chemical Management, Quality, and Logistics

3 Communication with Society

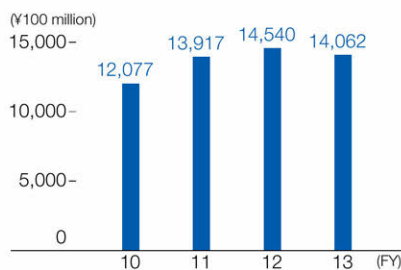
Working with our Customers, Working with our Suppliers, Working with our Shareholders, Working with our Employees, Working with Local Communities, Social Contribution Activities

4 Feedback from Inside and Outside the Company

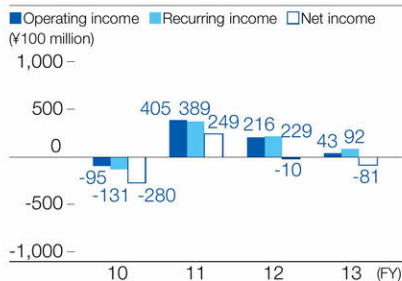
Results of CSR Report 2012 Survey, Third-Party Comments Regarding CSR Communication 2013



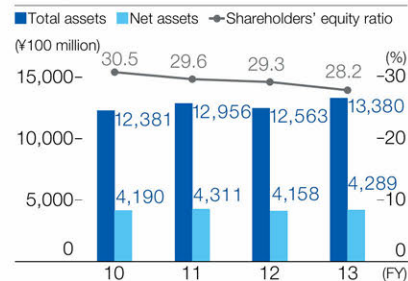
Net sales



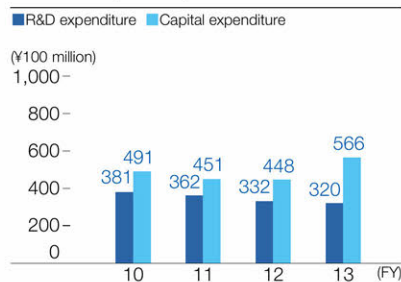
Operating income, recurring income and net income



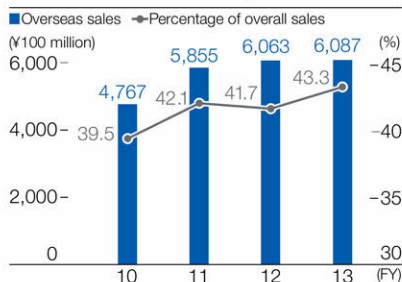
Total assets, net assets and shareholders' equity ratio



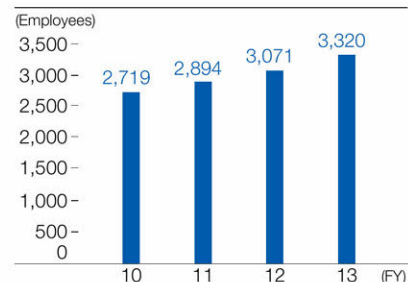
R&D and capital expenditure



Overseas sales / Percentage of overall sales



Number of employees at overseas consolidated subsidiaries



Printed version

Rather than an abridged version of our online report, the printed version focuses on aspects of the Mitsui Chemicals Group's activities that people particularly want to read about. As well as focusing on safety, one of our key priorities as a chemical manufacturer is the environment. This year's report contains special features on our initiatives in both of these areas. We hope you will enjoy reading it.



CSR Communication 2013: Contents

- 4 Message from the President
- 6 Implementing Fundamental Safety Measures and Promoting a Culture of Safety
- Learning from the Accident at Our Iwakuni-Ohtake Works Resorcinol Production Facility -
- 10 Mitsui Chemicals Group's Management Strategy and CSR
- 12 **Special Feature 1** Tahara Solar-Wind™ Joint Project
- 14 **Special Feature 2** Chemical Management
- 15 [Topics] Taking good care of Mitsui Chemicals employees
- 16 Tackling Social and Environmental Issues through the Mitsui Chemicals Group's Business and Main Products
- 18 The Mitsui Chemicals Group's Global Operations

Fulfilling our social responsibilities to help create a sustainable society

Implementing Fundamental Safety Measures and Promoting a Culture of Safety

We would like to sincerely apologize once again for the explosion and fire that broke out at the resorcinol production facility at our Iwakuni-Ohtake Works on April 22, 2012, and for the serious inconvenience it caused for all those involved.



田中 稔 一

Toshikazu Tanaka

President & CEO
Mitsui Chemicals, Inc.

We have always been committed to ensuring “safety as a top priority” in everything we do at the Mitsui Chemicals Group. That makes it all the more regrettable when an accident such as this does occur.

We took the situation extremely seriously and set up a third-party Accident Investigation Committee as soon as the accident occurred. We have since implemented preventive measures to tackle the immediate and underlying causes identified by the committee. We have also established a Fundamental Safety Committee, including outside experts, carried out a comprehensive review of our organizational climate, culture and technical training practices in order to guarantee safety, and put together a set of fundamental safety measures.

We intend to effectively implement these measures and establish a safety framework to ensure that nothing like this ever happens again. I am determined to lead the way as we work as a team to restore public trust as quickly as possible.

Three-Axis Management and Results for Fiscal 2013

At the Mitsui Chemicals Group, we have been setting ourselves targets along three key axes—economic, social and environmental—and working to achieve those targets via our system of three-axis management ever since fiscal 2008, in an effort to contribute to the sustainable development of society and our own operations.

From an economic standpoint, sales fell by 3.3% year on year, to ¥1,406.2 billion, with operating income down by 80.1%, to ¥4.3 billion. This was due to a serious deterioration in business conditions, because of factors such as the sharp appreciation of the yen and the continuing global downturn, as well as the tragic accident at our Iwakuni-Ohtake Works. We also posted an extraordinary loss due to restructuring, resulting in a net loss of ¥8.1 billion for the year.

We have nonetheless been taking steps to transform our business portfolio for some time now, and are

starting to see a steady increase in income from our functional chemical and functional polymeric material operations. We have also acquired a South Korean company manufacturing and selling glasses lens monomers and have signed up to a mega-solar project, one of the largest of its kind in Japan. With other developments such as the acquisition of German dental material company Heraeus, we have laid solid foundations for growth in the future.

From a social perspective, we took the accident at our Iwakuni-Ohtake Works extremely seriously and have been working diligently on initiatives to ensure that nothing like that happens again. We have also earmarked employee health as a key management priority, based on our philosophy that healthy employees make for a healthy company. In recognition of initiatives such as these, we have received a special award from the Development Bank of Japan (DBJ) under its DBJ Health Management Rating scheme.

In terms of environmental initiatives, we set out a new CSR-oriented environmental policy with an even greater emphasis on “visualizing” the social and environmental contribution made by Mitsui Chemicals Group products and technologies, as one of our top priorities for fiscal 2013. We intend to build on that and focus even more on promoting visualization in the future. On other fronts, we successfully met our mid-term target for reducing greenhouse gas emissions in fiscal 2013, and were also able to achieve our targets with regard to minimizing industrial waste.

Progress with our Mid-Term Business Plan

Under our current Mid-Term Business Plan, which started in fiscal 2012 and concludes in fiscal 2014, we set out a “5-5-5 Strategy” (focusing on five world-leading businesses, five priority businesses and five development areas), with the aim of establishing Mitsui Chemicals as a chemical company with a global presence. We have been channeling management resources into three areas in particular. These are highly functional products, in sectors such as health care, high added value polymers, including elastomers and polypropylene compounds, and phenol chains. We are planning to speed up efforts to transform our business portfolio in the future, revolving around these three core lines of business.

Recovery Support for the Great East Japan Earthquake

We would like to once again extend our sympathies to all those who have been affected by the Great East Japan Earthquake and are still having to deal with inconveniences on a day-to-day basis, more than two years later.

We have continued to provide assistance for people in the affected area ever since the immediate aftermath of the earthquake, through a range of different activities.

For example, we have sent group employees out to local schools and children’s centers to organize “Adventure Class in Wonder-Chemistry” laboratory classes for children, at the request of people in the affected areas. We continue with initiatives such as these today. We will keep on pooling our intelligence and working hard on unique employee-led initiatives in the future, so that we can assist with the recovery of the affected area and do our bit for the children of the future.

Contributing to the Sustainable Development of Society

There are countless social issues that need to be addressed, from climate change to energy issues and shortages of resources and food. At the Mitsui Chemicals Group, we regard these as risks and opportunities, and have provided various materials and services to date with the aim of fulfilling our corporate social responsibility (CSR) to contribute to the sustainable development of society through our business activities. As we are now living in an aging society, we are particularly focused on the health care sector. In an effort to take things to the next level, we radically restructured our research and development operations in April 2013. In August 2012 meanwhile, we formulated a set of Core Values, aimed at capturing the spirit of everyone within the Mitsui Chemicals Group and to act as a unifying force, to ensure that we can all keep on working together as a team.

We have made it one of our priorities to tackle issues and risks facing society, and are committed to stepping up innovation throughout the Group, so that we can provide products, technologies and services that make a difference to society.

Implementing Fundamental Safety Measures and Promoting a Culture of Safety

- Learning from the Accident at Our Iwakuni-Ohtake Works Resorcinol Production Facility -

On April 22, 2012, an explosion occurred and a fire broke out at the resorcinol plant at our Iwakuni-Ohtake Works.

As well as saying a prayer for the employee who tragically lost his life in the accident, and offering our heartfelt condolences to his family, we would like to sincerely apologize once again to all those who were injured, sustained damage to their homes or facilities, or were otherwise inconvenienced as a result of the accident, including local residents, the authorities and our customers.

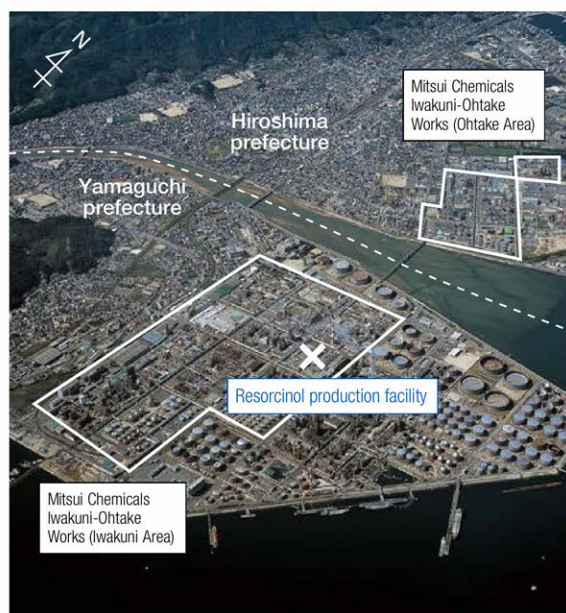
We took the accident extremely seriously and have since implemented a series of fundamental safety measures to ensure that nothing like this ever happens again, anywhere within the Mitsui Chemicals Group. We are working as a team to restore public trust and reestablish ourselves as a safe chemical manufacturer.

 **Website** >> For further details, please see the special feature on safety on our website.
URL: <http://www.mitsuichem.com/csr/special/index.htm>

Outline of the Accident

How the accident happened

- 1** At 23:20 on April 21, the work's steam supply plant was shut down and instructions given to shut down all plants using steam. After the steam supply plant was shut down, all plants at the works were safely shut down in accordance with procedure.
- 2** The emergency shutdown switch was thrown on the resorcinol production facility in order to shut down the plant. The emergency shutdown system then began cooling the oxidation reactor using emergency cooling water and nitrogen agitation.
- 3** Approximately 70 minutes after the emergency shutdown, the decision was made to switch to the plant's regular cooling water supply, in order to speed up the cooling process. The emergency shutdown switch was released, interrupting the supply of nitrogen for agitation.
- 4** Once nitrogen agitation had stopped, the upper part of the oxidation reactor was no longer being cooled, because there was no cooling coil in that part of the reactor. This caused the liquid inside the reactor (hydroperoxide) to decompose. The resulting decomposition heat gradually raised the temperature and increased the speed of decomposition.
- 5** This produced decomposition gas and increased the pressure inside the oxidation reactor. Once the pressure exceeded the reactor's pressure capacity, the oxidation reactor burst, causing an explosion.



Aerial image of the Iwakuni-Ohtake Works

Outline of the resorcinol production facility: Started operations in 1980, annual production capacity of 7,600 tons. Resorcinol is used for purposes such as wood and tire adhesives.

Damage

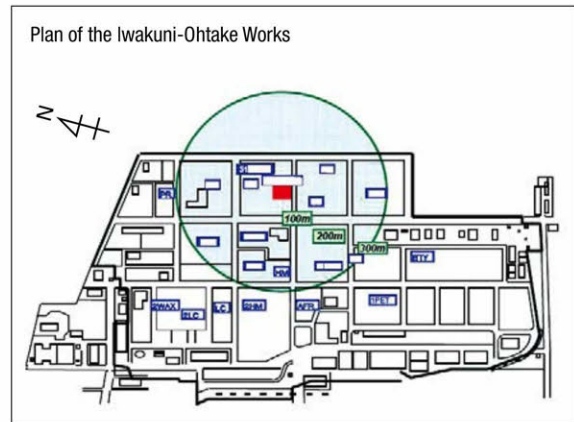
(1) Casualties

1 dead, 25 injured

(2) Physical damage

- External
 - Damage to 999 buildings/homes
 - Partial damage to facilities owned by neighboring companies
- Onsite
 - Severe damage to resorcinol production facility around the oxidation reactor
 - Damage to cymene plant and utilities piping rack, caused by the force of the explosion, flying debris and subsequent fire
 - Damage to 15 nearby plants, caused by the force of the explosion and flying debris

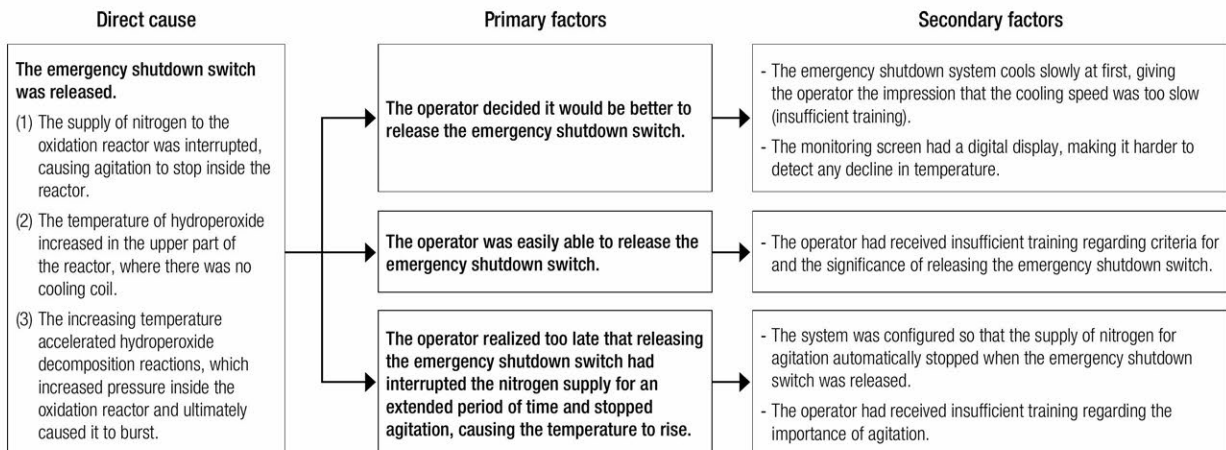
Extent of onsite damage



Determining the Cause of the Accident and Preventive Measures

We put together an Iwakuni-Ohtake Works Resorcinol Production Plant Accident Investigation Committee, consisting of outside academic experts and specialists, as quickly as possible, to identify the causes of the accident and look into preventive measures to guard against similar accidents. The committee held a total of eight meetings, until the causes of the accident had been ascertained and our preventive measures approved.

Causes of the Accident



Preventive measures

Inherent measures to prevent accidents

Equipment	<ul style="list-style-type: none"> - Increase cooling capacity - Continue agitation
Operational measures	<ul style="list-style-type: none"> - Tighten conditions under which emergency shutdown switch can be released - Review procedures for and provide training in reaction temperature management

Improving emergency operational management and technologies

Equipment	<ul style="list-style-type: none"> - Improve the automatic shutdown systems in the event of elevated temperatures inside the oxidation reactor - Develop a monitoring screen to make it easier to detect irregularities inside the oxidation reactor, and install an alarm to alert the operator when agitation stops
Operational measures	<ul style="list-style-type: none"> - Review training manuals and improve training in relation to emergency shutdown procedures - Regularly review emergency shutdown procedures and equipment

Restoration Initiatives

With safety as our top priority, we have been working hard to restore operations at the Iwakuni-Ohtake Works, through measures such as ensuring that all equipment is sound and safe, restoring utility supplies, clearing away debris, removing damaged equipment and treating residual liquid inside the plant. This section outlines some of our initiatives.

1. General Piping Restoration Team

We put together a General Piping Restoration Team to carry out restoration work to repair damage caused to general piping throughout the works.

2. Logistics Group

The Logistics Group worked with partner companies to provide support for additional work that wouldn't normally be required, including transporting essential materials for restoration work, and collecting and removing rubble. It also focused on essential measures to enable us to maintain supplies of products to our customers while dealing with the accident, with the assistance of overseas affiliates in some cases.



Transporting materials and waste

3. Iwakuni Analysis Department, Mitsui Chemical Analysis and Consulting Service

As analysis buildings were damaged in the accident, we had to relocate to an off-site research facility. Mitsui Chemical Analysis and Consulting Service worked flat-out to restore our analysis capabilities, including basic infrastructure, and provided backup so that we could start shipping products and get the plant up and running again.

4. Iwakuni-Ohtake Office, MC Operation Support

Following the accident, roads inside the works were strewn with pipes, glass, slates, oil and other debris. MC Operation Support laid TAFNEL Oil Blotter (an oil adsorbent made by Mitsui Chemicals) over roads throughout the site to remove oil and other such substances, and worked flat-out to restore onsite roads. Cleaning was also required in numerous locations other than onsite roads. MC Operation Support took care of cleaning activities essential to the restoration process, including removing liquid debris from locations such as drainage channels.

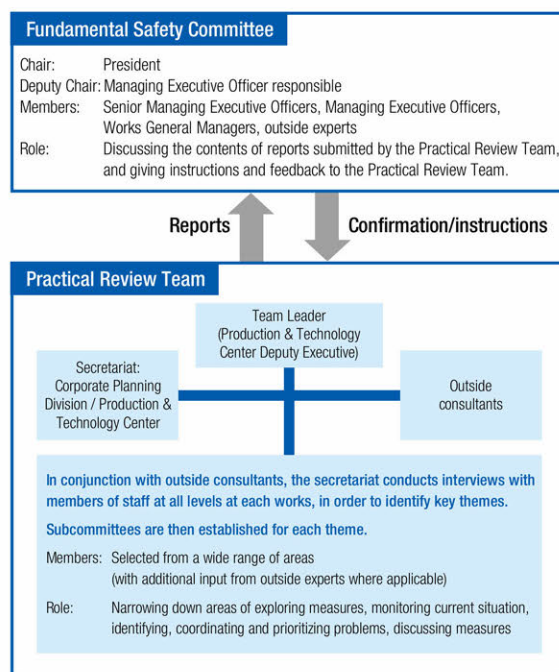
Fundamental Safety Committee

We implement a range of safety activities throughout the Mitsui Chemicals Group, based on our management policy of making safety our top priority in everything we do. Despite our best efforts however, a serious accident still occurred and caused considerable inconvenience to a great many people.

We took this accident extremely seriously and in May 2012 set up the Fundamental Safety Committee, a companywide team chaired by the President and including outside experts. The committee highlighted four key points, namely "ability to think," "professionalism," "technical skills" and "responsibility, authority and roles." Interviews were then carried out based on these key points with around 350 employees at five different works, in an effort to identify problem areas. Since then, the committee has carried out an extensive review of safety issues throughout the Mitsui Chemicals Group and looked into fundamental safety initiatives.

Based on the committee's findings, in January 2013 we set out and implemented a number of fundamental safety initiatives for the future.

Organizational structure of the fundamental safety committee





Creating a stronger corporate culture of safety, based on three broad issues and 11 specific issues

Hideki Matsuo
Executive Officer
Center Executive, Production & Technology Center
(then Deputy Executive, Production & Technology Center)

Fundamental Safety focuses on three broad issues and 11 specific issues, identified as a result of a companywide investigations and discussions.

The three broad issues are (1) "line manager focus and proper management of worksite," (2) "improve technical skills and ensure skills are passed down," and (3) "ensure safety is the top priority, cultivate professionalism, and give workers a sense of accomplishment."

Within those three issues, we have identified 11 specific measures, including "reduce work load to allow line managers to focus sufficient attention on managing worksites," "train engineers to understand onsite work," "review technical assessment systems and structure to prevent problems," and "implement measures to give workers a sense of accomplishment in safety performance and operations."

According to Matsuo, who headed up the Fundamental Safety Committee's Practical Review Team, "the subtitle to Fundamental Safety – 'You are responsible for your own safety. What should you do to stay safe?' – really captures the essence of our activities."

"As well as physically improving working environments and equipment in order to ensure safety, we need individual employees to think independently about risks and hazards, and to come up with improvements for themselves. We need to create a culture in which people are more proactive about ensuring safety, rather than just waiting for instructions. If we can establish safety initiatives and efforts to improve safety standards as part of our corporate culture, it will help us to create a team in which each and every employee has a strong sense of professionalism. Those are the two essential elements we need to ensure safety."

We have earmarked "efforts in fundamental safety" as one of our companywide objectives for fiscal 2014 and have also taken budgetary measures. As well as continuing to explore worksite-specific initiatives via the Fundamental Safety Committee, we are also planning to bring in outside experts and related organizations to conduct assessments. One point that Matsuo was particularly keen to stress is that "safety depends on every aspect of manufacturing." Ensuring safety will not only improve the quality of manufacturing at Mitsui Chemicals, but it will also strengthen our business. Maintaining safe works and a safe company is crucial in order to earn public trust and improve people's opinions of what we do.

"Safety initiatives have nothing to do with looking back over our shoulders. We are looking ahead and are focused on ensuring that all of our employees learn valuable lessons from the accident. We are determined to put our heads together and create an environment in which all of our employees can actively ensure safety."

Safety Day

Having designated April 22, the date of the accident, as "Safety Day," we implemented a number of companywide safety-related initiatives on April 22, 2013, one year on from the accident.

On the day itself, we got together just over 500 employees at the Iwakuni-Ohtake Works to listen to a speech delivered by the President. As well as reflecting on the accident once again, he underlined the need to effectively implement preventive measures and restore public trust in our safety record. We also erected a Safety Monument, to symbolize the thoughts and feelings of all employees working at the Iwakuni-Ohtake Works regarding the accident. The entire workforce pledged to make safety the top priority in everything they do, and to make sure that there are no more tragic accidents in the future.

We have also set up a Safety Training Room at the Iwakuni-Ohtake Works, including a display featuring photos of the accidents and fragments of the exploded oxidation reactor. This will be used as part of training for new recruits and plant operators.

We are committed to working together throughout the Mitsui Chemicals Group, to ensure that nothing like this ever happens again.



The President giving a speech in front of the monument



Employees demonstrating their commitment to safety initiatives

Mitsui Chemicals Group's Management Strategy and CSR

Three-axis management throughout the Mitsui Chemicals Group

If we want to help create a sustainable society as a company, we first of all need to inspire trust and hope in members of the public and other stakeholders.

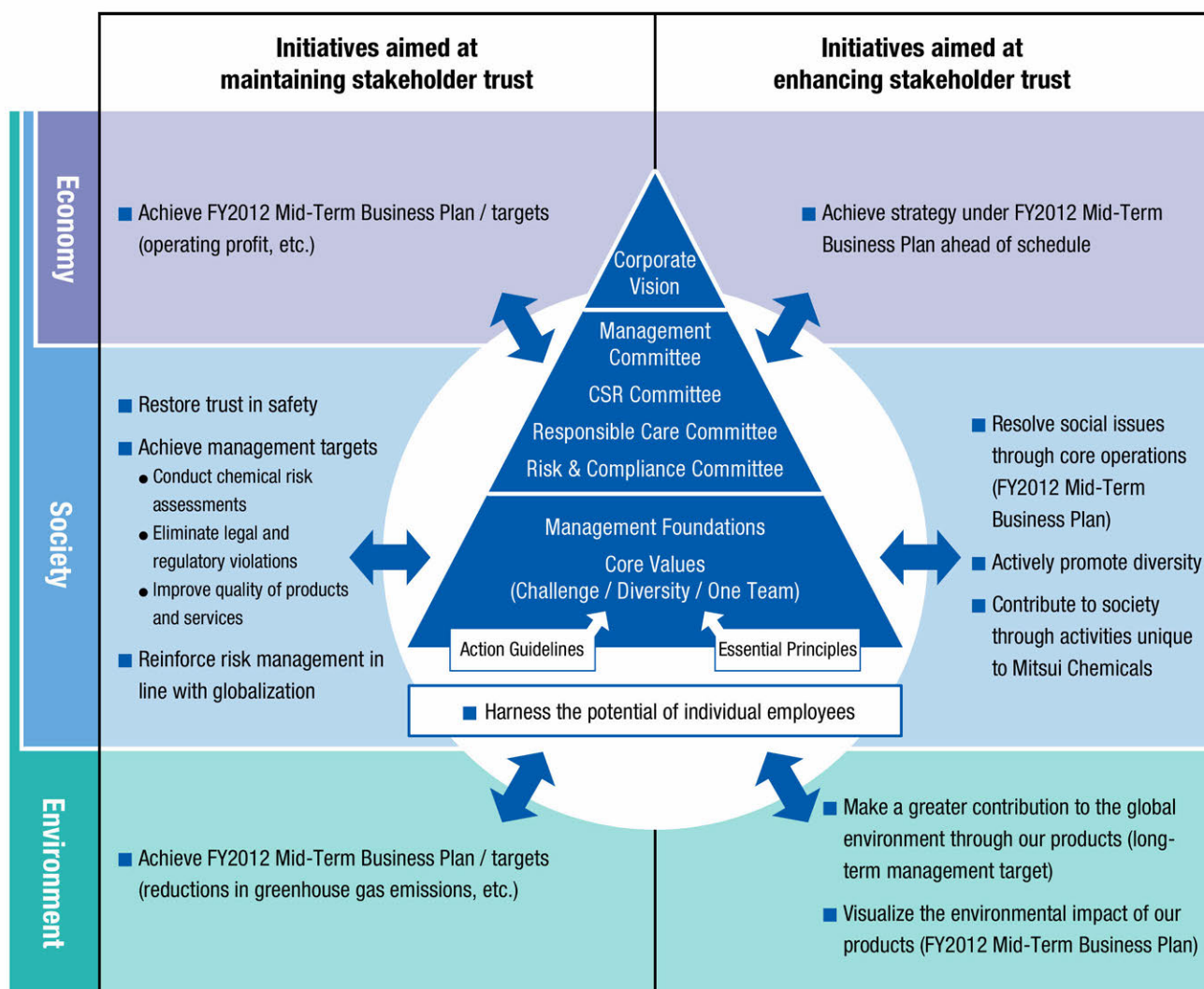
To achieve that, we need to create a "good and trustworthy company" that inspires pride and motivation in every one of its employees. The most important thing we can do is to keep thinking all the time, so that we can continue to act accordingly and take on new challenges.

We implement a wide range of initiatives with the aim of establishing the Mitsui Chemicals Group as a "good and trustworthy company." In fiscal 2008, we made a clear commitment to "three-axis management," focusing on the economy, society and the environment. That is the cornerstone of our initiatives here at the Mitsui Chemicals Group.

Overview of the CSR initiatives

Based on the principle of three-axis management, we have clearly set out ongoing initiatives aimed at maintaining the trust of our stakeholders and initiatives designed to enhance trust amongst stakeholders as part of our Mid-Term Business Plan. We are committed to working together as a group, with everyone moving in the same direction.

In August 2012, we formulated a set of Core Values (Challenge, Diversity, One Team). The aim of these Core Values is to capture the spirit of everyone working at Mitsui Chemicals Group sites around the world and to act as a unifying force, ensuring that we can all keep on working together as a team.



CSR highlight

Harnessing Mitsui Chemical's strengths for the benefit of society

In fiscal 2013, we set ourselves a number of key CSR challenges. We set out to "create 'strong frontline capabilities' underpinned by independent thought and a challenging spirit, in order to earn more trust from our stakeholders and continuously enhance corporate value." We continue to implement a range of initiatives unique to the Mitsui Chemicals Group, in an effort to promote closer engagement with our stakeholders.

Recovery support following the Great East Japan Earthquake

As part of our ongoing support activities following the Great East Japan Earthquake, we joined forces with Peace Winds Japan, an accredited NPO, to organize a series of "Adventure Class in Wonder-Chemistry" laboratory classes using our products in Minamisanriku (Miyagi prefecture).

One of the employees involved commented, "I feel really motivated about the future now, having met children in the affected area, and seen the positive attitude of local people."

Along the same lines as last year, we once again sent employees out to temporary accommodation to fit heat-shielding film, to help keep room temperatures cool during the summer months.

One participant commented, "the recovery process is still going to take time, but I hope we can keep on providing support in the future, throughout the Mitsui Chemicals Group."



SMPC organizes "One Team One Project" activities in Thailand

Siam Mitsui PTA (SMPC), one of our affiliates in Thailand, runs an in-house initiative called "One Team One Project," aimed at encouraging employees to get involved in CSR activities. This year, SMPC organized a school project that included activities such as repainting and repairing playground equipment.



Supporting rice farming in harmony with wildlife

Mitsui Chemicals Agro, one of our group companies, provides a wide range of groundbreaking products, services and solutions in line with customers' needs. In fact, the company engages in a whole host of activities designed to benefit its customers.

Mitsui Chemicals Agro supplies Dinotefuran (a product developed in-house to be effective against pests that have an adverse effect on rice cultivation whilst having a minimal impact on non-pests) to the National Federation of Agricultural Co-operative Associations (ZEN-NOH), which promotes rice farming in harmony with wildlife, in an effort to preserve the environment and biodiversity. The company has also conducted wildlife surveys using Dinotefuran on rice fields in two locations owned by ZEN-NOH, in conjunction with ZEN-NOH, experts in environmental science and rice buyers. The results confirmed that there were sizeable populations of other species in the rice fields than known pests.



Family Tour

Although we need our employees to play an active role in promoting CSR, it is also important to create a stronger sense of unity. In an effort to get employee's families better acquainted with Mitsui Chemicals, and to get their children to take an interest in chemistry, we organized a Family Tour and an Adventure Class in Wonder-Chemistry laboratory class at our Head Office in March this year, during spring break. The event helped everyone to feel closer to our wide-ranging activities here at Mitsui Chemicals.



Pooling expertise for the future of renewable energy First steps towards testing one of the largest facilities in Japan

In conjunction with Mitsui & Co. and five other companies, Mitsui Chemicals is working on a combined solar and wind power project capable of generating 56 MW in Tahara, Aichi prefecture. Operations are scheduled to commence in October 2014, and we are also looking into organizing an environmental education program at the facility, in partnership with the local authorities.

Aichi prefecture

Mikawa Bay

Tahara city

Atsumi Peninsula

Facility Data

■ Project name

Tahara Solar-Wind™ Joint Project

■ Generating capacity

Solar: 50 MW (modular output, power conditioner output: 35 MW)

Wind: 6 MW

■ Combined output for solar and wind power

Approx. 67,500 MWh/year

(Enough to power approximately 19,000 households, roughly 90% of all households in Tahara)

■ Reduction in CO₂ emissions

Approx. 32,000 t/year

(Equivalent to the volume of CO₂ absorbed by approximately 2.3 million cedar trees)

■ Location

Midorigahama, Tahara, Aichi prefecture

(Land owned by Mitsui Chemicals:

Approx. 800,000 m²)

■ Construction

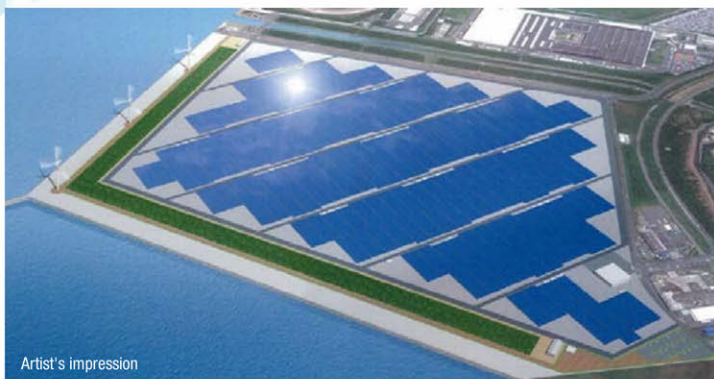
Start: November 2012

Operational: October 2014 (scheduled)

Making the most of natural conditions, with some of the longest hours of daylight and average wind speeds in the country

Almost all of the Atsumi Peninsula falls within the city limits of Tahara in Aichi prefecture. Bordering Mikawa Bay, industrial land along the peninsula is home to numerous plants operated by major auto manufacturers and their affiliates. We had actually acquired an adjacent area of industrial land ourselves, but it had remained unused due to changes in our business plans.

The area in question is 800,000 m², roughly 17 times the size of Tokyo Dome or 15 times the size of Nagoya Dome. We are now using that land to install a 50 MW solar power facility (panel output from 215,000 panels) and a 6 MW wind power facility. The entire output of both facilities will then be sold on to Chubu Electric Power.



Artist's impression

Solar panels installed on the vast 800,000 m² site



Tahara is one of the top locations in the country in terms of hours of daylight and average wind speeds. With around 2,200 hours of daylight every year and average annual wind speeds of approximately 6-7 m/s (Midorigahama, Tahara), it boasts some of the best figures in Japan.

This means that the planned solar power facility will have an estimated annual operating rate of 12%, which is enough power to meet the needs of 90% of households in Tahara (around 19,000 households). The wind power facility meanwhile is expected to have an annual operating rate of 30%.

"This is the first time in Japan that solar and wind power facilities generating power on a mega scale have been combined like this," explains Executive Officer and General Manager of the Environment & Energy Business Division Shin Fukuda, who is overseeing the project on behalf of Mitsui Chemicals. "Tahara City has also welcomed the development of the power industry in the area, as it ties in with its own 'Eco Garden City' project."

A joint project between seven companies, funded through syndicated loans

The solar and wind power project in Tahara is about more than just utilizing unused land. Another advantage is that it will serve as a comprehensive testing facility for technology and operations relating to solar and wind power.

We already market a number of related products within the Mitsui Chemicals Group, including SOLAR EVA™ solar cell encapsulant sheets, solar cell adhesives, and LUCANT™ lubricant additives, which are also suited for use with wind power. We are also working to develop a number of other materials with applications in the field of renewable energy.

Each of the companies participating in the joint project—Mitsui & Co., Ltd., Toagosei Co., Ltd., C-TECH Corporation, Toshiba Corporation, Toray Industries, Inc., and Mitsui Engineering

and Shipbuilding Co., Ltd.—has its own proven track record and expertise, in areas such as planning and operating solar power facilities, developing materials, commercializing solar panels and installing facilities.

The project is going to cost a total of ¥18 billion. In addition to investment from each of the participating companies, the project is being funded by syndicated loans, chiefly from the Development Bank of Japan. It has also received subsidies from Aichi Prefectural Government, under its "Subsidy Program to Support R&D for the Creation of New Aichi," and from Tahara City, as part of a corporate relocation incentive scheme.

From funding all the way through to technical development and operations, this project has always been about pooling a wide range of expertise within the field of solar power. Tests at the facilities are scheduled to get underway in June 2014, with operations due to go fully online in October that year. The facilities are designed to be operational for a period of 20 years from that point onwards.

"Having such a long operating period means that we can be assured of turning the project into a profitable business, but it will also enable us to share the various problems we encounter along the way, and their solutions, between the participating companies. That will enhance levels of expertise across the board and hopefully enable us to keep on harnessing natural energy" (Fukuda).

Plans to develop an environmental education program at the local level

Rising 250 m above sea level with sweeping views over Mikawa Bay and the Pacific, Mount Zao is located roughly four kilometers from the south side of the solar and wind power facilities. The summit is currently used by local people as a picnic area. As well as rest facilities, there is also a lookout platform, to the side of which is a 300 kW wind power facility. It is intended



Shin Fukuda

Executive Officer
General Manager, Environment & Energy Business Division
Doctor of Engineering

to symbolize "low environmental impact urban development harnessing natural resources."

In the near future, Mount Zao will have views over solar and wind power facilities with a total output of 180 MW, looking out over other solar power projects as well as our own.

Tahara City is keen to get other power-related companies on board too, as well as Mitsui Chemicals. "There is increasing momentum behind plans to develop and run an environmental education program," explains Fukuda. "I assume that such a program would include the views from Mount Zao, observation of the surrounding natural environment and guided tours to solar power facilities."

As well as developing materials for the solar power industry, here at Mitsui Chemicals we are also running a project aimed at extracting gas from untapped urban resources. The process of developing these and other environmental technologies could potentially be extended to a whole host of other technologies that have previously relied on fossil fuels. "If we lead the way in terms of technical innovation, we can hopefully do our bit to ensure energy security for the entire country, not least through solar power," says Fukuda.

Visualizing products' contribution to society and the environment

In an effort to achieve our corporate mission, we have adopted a system of three-axis management, focusing on economic, social and environmental considerations. We implement a range of initiatives aimed at helping to create a sustainable society.

Reinforcing the foundations of chemical management

As a chemical manufacturer, it is absolutely fundamental that we ensure the safety of all Mitsui Chemicals products if we want to remain in business. We have positioned comprehensive chemical management as one of our top priorities under our current Mid-Term Business Plan, which has been in place since fiscal 2012. We have also set out a Chemical Management Strategy and are constantly working to reinforce the foundations of chemical management.

The term "chemical management" covers every aspect of risk management, including gathering information, evaluating risks, assessing environmental impact and minimizing risks. That applies throughout a product's life cycle, from development, manufacturing, shipping, usage and processing through to the end user, disposal and treatment. The first step is to establish a practical, integrated information management system. We also take every opportunity to engage in communication, through activities such as providing customers with assessment results along with safety data sheets (SDS)^{*1}, publishing data

via our website (<http://www.mitsui-chem.com/ps/>), and providing the government with information on hazardous materials. We believe that disclosing a wide range of information through communication with stakeholders is a crucial means of managing the risks associated with chemicals throughout their life cycle.

Establishing "m-SI" as a new environmental impact index unique to the Mitsui Chemicals Group

We are also working to "visualize" the contribution that our products make to society and the environment throughout their life cycle. When we manufacture a product, and that product is used, it contributes to the environment. To actually visualize that contribution, we have established the Mitsui Sustainability Index, or m-SI for short. We use m-SI as a measure, to enable us to assess environmental impact in 11 different categories, including reduction in greenhouse gas emissions and prevention of environmental contamination. For instance, we assessed the contribution that our NOx (nitrogen oxide) reducing agent AdBlueTM^{*2} makes to society and the environment based on

m-SI, and also carried out a quantitative life cycle assessment (LCA)^{*3}. As a result, we found that AdBlueTM helps to reduce NOx by 36,000 tons annually based on domestic sales, and shared that information with our customers.

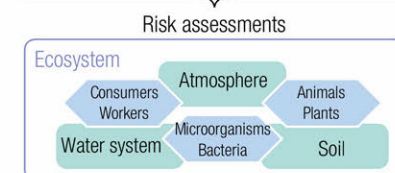
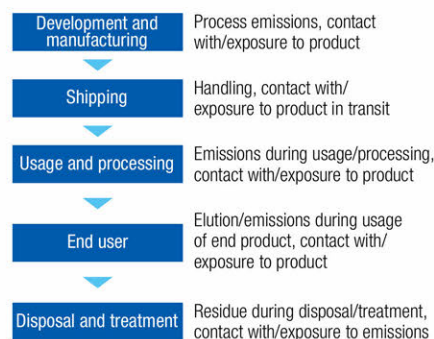
We intend to assess more products in the future, and supply new products that make an even greater contribution to society and the environment, so that we, as a chemical manufacturer, can continue to make a difference to society and the environment through our products.

^{*1}: Safety data sheets (SDS) are issued by companies when shipping a chemical or other such substance to another company. They contain information such as the name of the substance, the name of the supplier, hazard and toxicity levels, and details of safety measures and emergency procedures.

^{*2}: AdBlueTM is a registered trademark of the German Association of the Automotive Industry (VDA).

^{*3}: Life cycle assessment (LCA) is a method of quantitatively assessing the environmental impact of a product at every stage of its life cycle, from development to manufacturing, shipping, usage and disposal.

Risks throughout a product's life cycle



Staff comments

"Visualizing" products' contribution

As one of the foundations of chemical management here at Mitsui Chemicals, we introduced a fully functional integrated information management system in April 2013. Members of the companywide project team had to overcome countless hurdles, but we nonetheless managed to launch the system according to plan.

By the time our products reach the consumer, they have often been changed or processed into something else by our customers. We also disclose a range of information on the environmental impact of our products throughout their life cycle as part of our stakeholder risk communication activities. In an effort to "visualize" the contribution that our products and technologies make to society and the environment meanwhile, we have introduced the m-SI index and commissioned a third party review, in the interests of fairness. We are nonetheless determined to continue to supply products that make a greater contribution to society and the environment.



Kaori Matsue
General Manager, Chemicals
Safety Department
Safety & Environment Division

Stakeholder message



Norihiro Itsubo

Professor, Faculty of Environmental Studies, Tokyo City University
Doctor of Engineering

As we try to create a sustainable society, there is growing demand for companies to make an active contribution too, as key members of society. If that contribution relies on effective and innovative ways of reducing environmental impact, then it is essential that companies have verification methods that are transparent and highly repeatable. Mitsui Chemicals has been working to develop its own unique verification system called m-SI, designed to comprehensively evaluate product capabilities. The company deserves a great deal of credit for taking the bold step of applying this method to a wide range of products in combination with life cycle assessments (LCA), another evaluation method that quantitatively assesses products over their entire life cycle.

While environmental footprint trials are getting underway in Europe, companies in Japan are actively developing methods of evaluating environmental impact on a global scale. More and more advanced environmental evaluation methods look set to be developed in the future too, at an increasingly fast pace. I hope that Mitsui Chemicals will continue to keep an eye on trends such as these, flexibly reassess evaluation methods and translate its findings into quick decisions, as it continues to lead the way forward for industries in this sector.

Helping to visualize social and environmental contributions

Taking good care of Mitsui Chemicals employees

Development Bank of Japan presents Mitsui Chemicals with special award under its DBJ Health Management Rating System



The Development Bank of Japan (DBJ) has awarded Mitsui Chemicals the highest rank under its DBJ Health Management Rating System. Having been recognized for showing a truly outstanding commitment to the health of our employees, and were presented with a special award as a model company on April 25, 2013. As a result of this rating, we have received ¥17 billion in funding under the health management syndicated loan* scheme arranged by DBJ.

The funding scheme is designed so that DBJ assesses companies showing an outstanding commitment to the health of their employees and determines loan terms accordingly.

We have always believed that healthy employees make for a healthy

company. Based on that philosophy, we have continued to focus on improving employee health as one of our clear management priorities. This award is in recognition for our efforts to combat metabolic syndrome and activities such as conducting companywide stress surveys and implementing improvement measures based on the results.

The following points in particular were acknowledged.

- ① Assigning responsibility and authority for employee health to industrial physicians acting in the role of line manager, in an effort to implement health-related measures more effectively
- ② Providing extensive educational opportunities based on the above framework and implementing a wide range of employee health activities in a systematic and energetic manner, in an effort to raise levels of health awareness
- ③ Publishing information on the above initiatives, including their targets and assessment of progress towards the targets

We will continue to actively promote a healthy work-life balance in the future, to create a harmonious environment in which employees find their work rewarding and are happy in their private lives, and remain committed to organizing activities to improve the health of all group employees.

* Syndicated loan: Method of funding whereby multiple financial institutions join forces to provide financing based on the same terms, in accordance with a single loan agreement



Industrial physician

Continuing to expand activities aimed at promoting employee health

Seitaro Dohi

General Manager
Health Management Dept., HR & Employee Relations Div.

It is a great honor to have received this special award in the Health Management Rating scheme. It is particularly gratifying to receive recognition based on such a well thought-out rating and assessment index.

Rather than merely promoting "employee health," our priorities and policies are fully understood and authorized by management, as part of our occupational health activities. This enables us to create fully functioning mechanisms spearheaded by industrial physicians and health care sections. We also implement the PDCA cycle on a companywide basis, in order to visualize the results of our activities and identify new priorities. We help employees to set their own objectives and

targets too, through medical examinations, as well as providing information and health guidance, so that we can clearly measure the results. I think it's important to have mechanisms like that in place.

The number of days off due to illness has been on the decline since fiscal 2009, as has time off due to mental health issues. We also combine special medical check-ups and cancer screening with regular medical examinations. By helping to detect cancer earlier, this is gradually reducing the number of days off due to cancer care too.

We are determined to keep on improving initiatives in the future, including health-related activities that will enable employees to get more actively involved.

Message from DBJ

Enhancing corporate value through human capital



Keisuke Takegahara

General Manager, Environmental Initiative & Corporate Social Responsibility Support Dept.
Development Bank of Japan

A new framework in an integrated reporting is scheduled to be unveiled later in 2013. The reporting outlines six broad concepts for corporate capital, one of which is "human capital." Mitsui Chemicals is implementing some outstanding initiatives in the field of employee health, which is one way to create value through human capital. I hope that the company's initiatives will demonstrate how well rounded, robust human capital can be translated into enhanced corporate value or a source of competitiveness.

Tackling Social and Environmental Issues through the Mitsui Chemicals Group's Business and Main Products

Outlining the Mitsui Chemicals Group's role, products and business activities in different sectors

Packaging Materials

Drinks bottles, packaging for food products, detergents, cosmetics and pharmaceuticals

- Mitsui PET™
- Polyethylene (Evalue™), etc.
- Polypropylene (Prime Polypro™)



Prime Polypro™ is used for a wide range of purposes, including single-serving jelly pots and sealable films.



Mitsui PET™ is used in containers such as drinks bottles. Evalue™ films offer outstanding rigidity and strength, and are used for purposes such as high performance packaging for food and everyday items.

Basic Chemicals

Raw materials for polyester fibers

- Purified terephthalic acid (PTA)

Polycarbonate resins

- Phenols

PTA is the raw material used to make polyester fibers, which in turn are used in various types of clothing.



Industrial and lifestyle materials for a more convenient and stable life

Our global supply network provides wide-ranging support for social infrastructure and people's everyday lives.

Examples: Clothing, food, housing materials, etc.

Everyday and household films

Preserving film for fresh food

- Spash™



In addition to preserving fresh food to keep it fresh, Spash™ can also be used to prevent fruit, vegetables and flowers from wilting or losing their color.

Fast biodegradable film

- Palseal™ CB



Palseal™ CB garbage bags are designed to biodegrade quickly inside garbage disposal units.

Comfort and functional materials for a safe and full life

We provide growth industries with highly functional products and help to enrich people's lives.

Examples: High-grade materials, electronic and IT materials, automotive materials, etc.

Semiconductor process materials

Wafer back-grinding protective tape

- ICROS™ TAPE

Dust-proof photomask covers

- Mitsui Pellicle™

Etching/cleaning gas

- Nitrogen trifluoride



ICROS™ TAPE is designed to protect the surface of wafers from backgrinding during wafer processing as part of the semiconductor manufacturing process.

Useful everyday coating materials

Hydrophilic coatings

- NOSTRA™

Applying NOSTRA™ to a base material such as plastic or glass makes the material highly resistant to staining, fogging, abrasion and static, and enables it to dry quickly. It also helps to save energy and reduce environmental impact.



Disposable diapers and everyday items

Nonwoven fabric

- SYNTEX™

Breathable film

- ESPOIR™

Shape-holding materials

- TEKNOROTE™



ESPOIR™ nonwoven films are used to make disposable diapers, thanks to their outstanding breathability.

Antibacterial films and sheets

Hygienic films and sheets with copper alloy coated surfaces

- COPPERSTOPPER™

Applying COPPERSTOPPER™ to a product gives it antibacterial and odor eliminating properties. It is expected to prove particularly useful in areas such as sanitation.



Lightweight automotive materials

Adhesive polyolefins

- ADMER™



In combination with barrier resins, ADMER™ polyolefins help to prevent leaks from fuel tanks and reduce the weight of tanks themselves.

Olefin copolymers

- TAFMER™



TAFMER™ improves the shock resistance of automotive plastics so that they can be used in place of metals to help make vehicles lighter.

Thermoplastic elastomer

- MILASTOMER™



MILASTOMER™ is used for interior automotive materials (door rims, interior panels, etc.) in order to help make vehicles lighter.

Materials for eco-friendly vehicles

Lithium ion battery components

- MiReT™ (electrolytes)
- CHEMPEARL™ (electrode binder)

Biomass chemicals

Biopolyurethane

- ECONICOL™



ECONICOL™ is a polyurethane (biopolyol) made from plant-based materials and is used in products, such as furniture, bedding and car seat cushions.

New energy and environmental materials for a more environmentally friendly life

We do our bit to help solve key issues facing mankind, by providing environmental solutions in new growth markets for instance.

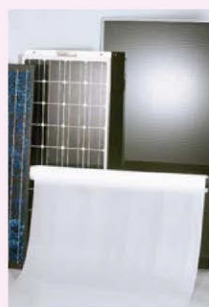
Examples: Solar power, biomass, etc.

Solar power components

Solar cells

- SOLAR EVA™
- Monosilane

High durability SOLAR EVA™ plastic sheets are used to encapsulate the entire base of each solar cell, in order to protect the cell.



Health and high quality materials for a comfortable, high quality life

We create high quality products in order to contribute to area such as healthcare, elderly care, agriculture and catalysis science in new and different ways.

Examples: Healthcare, catalysts, agrochemicals, etc.

Dental materials

Resin cements for dental adhesives

- Super-Bond™

Thanks to their outstanding adhesive performance and biocompatibility, Super-Bond™ has been highly acclaimed by dentists and are widely used for patients all over the world.



Lens materials

High refractive index optical lenses

- MR™ series



The MR™ series consists of raw materials for high quality optical plastic lenses, combining a high refractive index with superior shock resistance. MR™ materials enable optical lenses to be light yet strong.

Agrochemicals

Environmentally friendly crop protection

- ANIKI™ emulsion pesticide
- FRUITSAVER™ (fungicide)



FRUITSAVER™ is an agricultural fungicide made from the active ingredient penthiopyrad. It is effective at preventing major diseases in fruit trees.

Great-tasting, late-flowering, high-yield hybrid rice

- Mitsuikari 2003 and 2005



Mitsuikari 2003 and 2005 are late-flowering, high-yield strains of rice that taste great.

The Mitsui Chemicals Group's Global Operations

We continue to expand our global operations here at the Mitsui Chemicals Group in an effort to improve and enrich people's lives the world over.

1 China

EPT joint venture established

In May 2012, we established Shanghai Sinopec Mitsui Chemicals Elastomers Co., Ltd. (SSME), a joint venture funded by Mitsui Chemicals and China Petroleum & Chemical Corp. (Sinopec), in order to manufacture and sell ethylene propylene terpolymer (EPT).

China's burgeoning auto industry and growing infrastructure are likely to significantly drive up demand for EPT in the future. The new company will therefore be looking to tap into growing demand within the Chinese EPT market as quickly as possible.



The official signing ceremony

2 Korea

Shares acquired in glasses lens material manufacturer

In March 2013, we acquired shares in KOC Solution (KOC), a South Korean company that manufactures and sells monomers for use in plastic glasses lenses, and established it as a new subsidiary.

We have positioned glasses lens monomers as one of "five world-leading businesses" under our fiscal 2012 Mid-Term Business Plan. As such, we are committed to expanding operations and establishing a competitive advantage on a global scale.

Having acquired shares in KOC and established it as a subsidiary, we intend to expand our range of products in the future and develop a stronger presence in the global market, as a world leader in plastic glasses lens materials.



The official signing ceremony

3 Thailand

Joint venture and new plant established for high performance packaging films

In April 2012, Mitsui Chemicals Tohcello, a wholly owned subsidiary of Mitsui Chemicals, teamed up with SCG Chemicals (Thailand) to establish a joint venture, with the aim of manufacturing T.U.X.™ high performance packaging film. Construction is also underway on a new plant.

T.U.X.™ is mainly used as a packaging film for food products. It is a high strength, thin film that offers outstanding sealability and transparency. With that in mind, we are trying to establish a presence in the consumer and distribution markets in Asia, with an emphasis on food safety and reliability.

We have established this new joint venture, called Siam Tohcello, as part of the ongoing expansion of our functional film and sheet operations, which is listed as one of the basic strategies under our fiscal 2012 Mid-Term Business Plan.

4 Vietnam

Nghi Son refinery and petrochemical complex

Since establishing Nghi Son Refinery & Petrochemical Limited Liability Company (NSRP) as a joint venture with established strategic partner Idemitsu Kosan Co., Ltd., Kuwait Petroleum International and Petro Vietnam, we have been working on a project to build a refinery and petrochemical complex in the Nghi Son economic zone, in Vietnam's Thanh Hóa province.

With the final decision to proceed with investment made in June 2013, construction is underway and is scheduled for completion in 2016.

Based on stable supplies of crude oil from Kuwait, the aim of this project is to tap into rapidly growing demand for petroleum products in Vietnam, whilst also exporting aromatic (paraxylene and benzene) and polypropylene products, worldwide demand for which is expected to continue increasing.



6 USA

Increased capacity for polypropylene automotive materials

In response to growing demand for polypropylene (PP) automotive materials in the US, we are working with subsidiary Prime Polymer to increase PP production capacity by an additional 14,000 tons a year at Advanced Composites. Operations are scheduled to get underway in the fourth quarter of fiscal 2014.

Having set out to expand our PP automotive material operations globally and establish a world-leading competitive edge, as one of the basic strategies under our fiscal 2012 Mid-Term Business Plan, we currently have PP automotive material manufacturing facilities in eight locations (Japan, USA, Mexico, Brazil, Europe, India, Thailand and China). Increasing production capacity will strengthen our leading supply capabilities in the growing North American market and further reinforce our global supply structure.



Advanced Composites



the Americas

5 Singapore

New Evolve™ company and manufacturing facilities established

Prime Polymer, one of our subsidiaries, established a new company in Singapore in October 2012, with the aim of increasing production capacity of Evolve™ metallocene polymers, one of the company's core lines of business. A groundbreaking ceremony for the new manufacturing facilities took place in May 2013.

Evolve™ is exceptionally strong, seals well, reduces odors and is heat-sealable. Properties such as these make it ideal as a high performance sealant material for packaging items such as liquids and powders. With demand from the Asian market

expected to soar, establishing a new company and manufacturing facilities will enable us to strengthen and expand our Evolve™ operations even further.



Groundbreaking ceremony

7 Brazil

New polypropylene automotive materials company established

In May 2012, Mitsui Chemicals subsidiary Prime Polymer acquired a 70% stake in Produmaster Indústria e Comércio (PIC) in Brazil and established Produmaster Advanced Composites Indústria e Comércio de Compostos Plásticos, a new company that will operate under the umbrella of PIC.

Prime Polymer has positioned polypropylene (PP) automotive materials as a "growth industry" in which it is aiming to become a world leader. It is quickly expanding operations across the board, and has identified the South American market in particular as a key strategic priority. Establishing this new company will effectively generate synergy between PIC's business expertise and Prime Polymer's in-house technologies, enabling us to strengthen and expand our PP automotive materials operations even further.

8 Germany

Transfer of dental material business from Heraeus

In June 2013, we took over dental material operations from the group headed up by German company Heraeus.

We are aiming to expand operations and secure growth in the health care materials sector as part of our fiscal 2012 Mid-Term Business Plan, and expect to achieve strong growth in the dental materials sector in particular. As well as extensive knowledge in the field of dental materials, Heraeus also boasts a strong presence in the industry, an established brand, an international sales network and global business expertise.

As we already deal in dental materials via our subsidiary Sun Medical, taking over operations from Heraeus will enable us to speed up the process of expanding our operations globally.



Press conference



Europe

For inquiries, please contact:

CSR Division

Tel: +81-3-6253-2382

Fax: +81-3-6253-4245

<http://www.mitsuichem.com/index.htm>

This publication has been produced and printed using environmentally friendly methods.



This publication has been printed on FSC® certified paper containing wood from appropriately managed forests.




The paper used for pages 3 to 18 of this publication will help to support forest thinning activities and promote the use of thinned wood, in the interests of healthy forests.



This publication has been printed using plant-based vegetable ink free from harmful volatile organic compounds (VOC).




This article is printed using an environment-friendly process qualified as GOLD PLUS status by E3PA. E3PA: Environment Pollution Prevention Printing Association <http://www.e3pa.com>

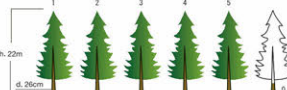


By reusing 7.01 kg of aluminium plate used during the printing process, Mitsui Chemicals has reduced

CO₂ emissions by 71.43 kg.



Japan Smart Energy Co., Ltd. rigorously and impartially inspects and verifies all printing systems before awarding CO₂ reduction certificates.



71.43 kg of CO₂ is equivalent to the amount of CO₂ absorbed by approximately 5.12 50-year-old cedar trees (height 22 m / diameter: 26 cm) over the course of one year.

(Source: Forestry Industry White Paper)