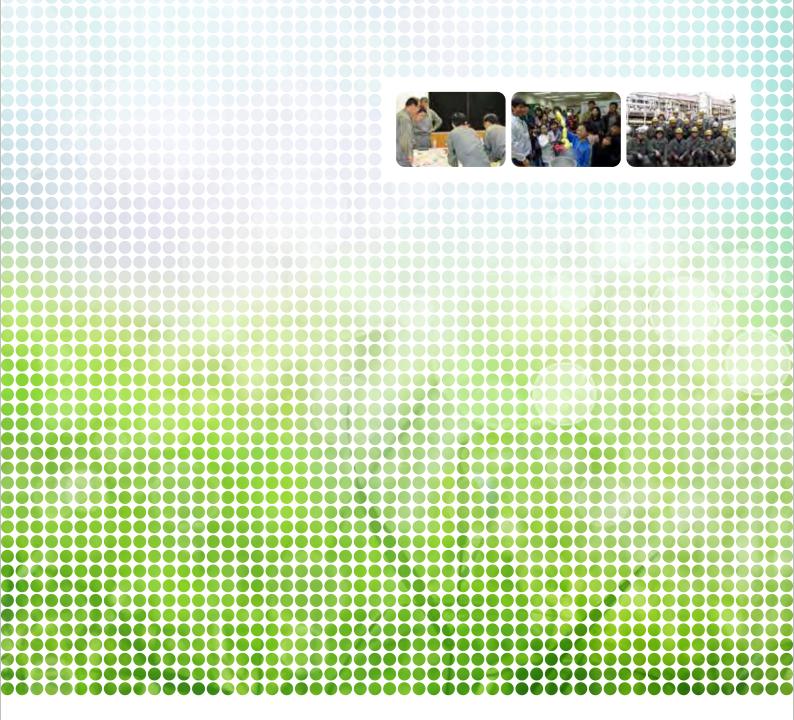


# CSR Report 2013 Corporate Social Responsibility Report

PDF ver.





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#### Editorial Policy

[Mitsubishi Chemical issues the Mitsubishi Chemical CSR Report with the aim of reporting to all stakeholders on the initiatives being undertaken to achieve KAITEKI as a member of the Mitsubishi Chemical Holdings Group.

The pages of the CSR Report 2013 are arranged based on Sustainability, Health and Comfort, the criteria by which we judge our business activities aimed at achieving KAITEKI, as well as the Management of SUSTAIN-ABILITY (MOS) indexes that visualize the progress of these initiatives

In the three sections for Management Structure, Responsible Care Activities (safety and disaster prevention, occupational health and safety, environmental conservation, quality assurance and chemical products management) and Together with Stakeholders, measures that form the foundation to support innovative technologies and products are also featured.

#### CSR Report

To disclose the CSR information to a greater number of stakeholders while at the same time considering the environment, we have changed the reporting method since fiscal 2010 from printed reports to website-based publication.
The website offers CSR Report 2013 (PDF version so the entire CSR

information can be downloaded) and the CSR Report 2013 Data Section that compiles detailed data on safety, environment and society.

#### Reporting period

Fiscal 2012 (April 2012 to March 2013)

Part of the contents also relates to fiscal 2013

#### Scope covered in the Report

The scope covered in the Report is Mitsubishi Chemical Corporation and domestic and overseas Group companies. However, the scope for compilng performance data related to RC activities is limited to Mitsubishi Chemical (including Group companies located on the same premises of Mitsubishi Chemical production bases) and those companies implementing Mitsubishi Chemical Group RC Activities that are subsidiaries of Mitsubishi Chemical as stipulated by the Japanese Companies Act (domestic). The scope of social skills data includes employees of Mitsubishi Chemical Corporation (including employees transferred to Group companies).

#### Referenced guidelines

-Ministry of the Environment: Environmental Reporting Guidelines 2007 -Ministry of the Environment: Environmental Accounting Guidelines 2005

#### Issuance

September 2013

Previous issuance: September 2012; next issuance: September 2014 (planned)

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#### Disclaimer

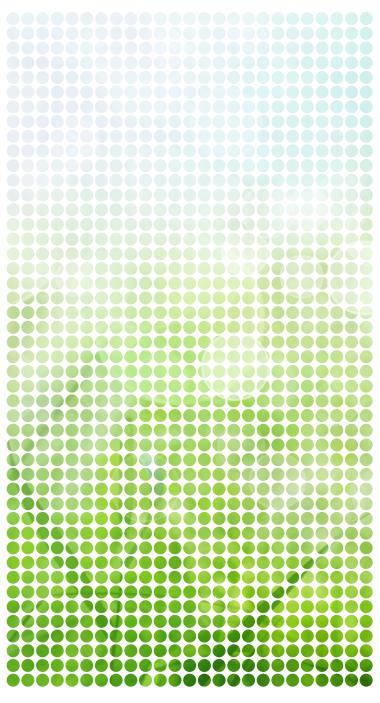
This report contains not only past and present facts about the Mitsubishi Chemical Group, but also forecasts related to social situations, business plans, policies and estimates of their outcomes. These forecasts and estimates are assumptions or judgments based on the information available at the time of statement. As such, there are possibilities that the future social situations and outcomes of business activities could differ from the forecasts and estimates











## Message from the CEO

Mitsubishi Chemical positions Sustainability [Green] Health and Comfort as the decision criteria for its corporate activities and works diligently to realize *KAITEKI* with chemistry

Hiroaki Ishizuka

Representative Director, Member of the Board,

President and Chief Executive Officer

Mitsubishi Chemical Corporation



In response to such wide-ranging global scale issues as climate change, environmental concerns, population growth and an aging society coupled with an uneven supply of energy, food and water resources, humankind in the 21st century recognizes its obligation to draw on its collective wisdom and lay out a roadmap for a better future.

As a core operating company of the Mitsubishi Chemical Holdings Corporation (MCHC) Group, Mitsubishi Chemical Corporation (MCC) has positioned Sustainability "Green" (the environment and resources), Health and Comfort as the decision criteria for its corporate activities and is pushing forward initiatives in each of the performance products, industrial materials and health care domains based on its molecular and function design technologies that have been nurtured over many years and epitomize the power of chemistry. In this manner, we are endeavoring to help bring the *KAITEKI* concept to fruition, or put another way, to help resolve each of the aforementioned social issues and contribute to the sustained growth and development of people, society and the planet.

KAITEKI signifies state of sustainability, materializing comfort for people, comfort for society and comfort for the Earth. We will act accordingly.

#### Business development aimed at the realization of KAITEKI

The MCC Group engages in a variety of activities in order to develop its operations. In this manner, we are working to fulfill our social responsibilities by bringing the *KAITEKI* concept to fruition.

Under its current medium—term management plan, APTSIS 15, which covers the period from April 2011 to March 2016, MCC has identified sustainable resources, organic photovoltaic (OPV) modules/materials, white LED lighting/materials, organic photo semiconductors and lithium—ion battery materials as growth—driver businesses. Each of these businesses is consistent with the activities undertaken by the Company in the Sustainability, Health and Comfort fields and is expected to contribute significantly to MCC's efforts to solve a host of social issues. In each of these businesses, particular emphasis will also be placed on further honing key material and technological capabilities, core strengths of the MCC Group. At the same time, we will channel our energies toward quickly securing stable profits in each business while undertaking proper and timely investments and entering into alliances with best—fit partners. Details of several products belonging to each business are provided in this report. We encourage readers to turn to the appropriate sections at their leisure.

Looking at existing and mature products including polyolefins, performance polymers, food ingredients, specialty chemicals, carbon fibers and composites as well as diagnostic devices and support for new pharmaceutical development, which continue to enjoy extensive use across a broad spectrum of industries, we are working to better differentiate our lineup while enhancing competitiveness by placing increased weight on promoting high performance and value—added development and bolstering collaborative ties both within and outside the MCHC Group.

Recognizing that efforts to fulfill our corporate social responsibility is also one aspect of ensuring sustained development, we have endeavored to shift to a more agile structure that is unaffected by complex and dramatic changes in the external environment. To this end, we are focusing on launching the aforementioned growth-drive businesses while at the same time restructuring existing businesses. As one example, we have essentially completed progressive steps to reorganize derivatives undertaken by the petrochemicals business, a task that began in fiscal 2008. Currently, we are in the final stages of restructuring our ethylene center in Japan and with a strong sense of leadership are committed to achieving our objectives in this field.

# Manufacturing that is based on safety and reliability is the bedrock of any company as a going concern

The MCC Group places the utmost importance on manufacturing that is based on safety and reliability in its efforts to fulfill its corporate social responsibility through corporate activities geared toward realizing *KAITEKI*.

Since the fire at our Kashima Plant in 2007, which led to the loss of several precious lives, we have taken steps to further raise awareness and adhere strictly to a policy that places an absolute premium on safety through to the present day. To this end, we have engaged in education focusing on areas that help improve employee mindsets and conducted simulation-based training that is designed to heighten our ability to predict danger. Moreover, we have taken steps to verify and share a variety of accident and incident data within the Group. Despite these endeavors, a series of major incidents has continued to plague the chemical industry in recent years. As a result, and in my position as Chief Executive Officer, I am again renewing my commitment to place every emphasis on safety, making a powerful statement regarding the importance of thoroughgoing compliance and ensuring that all employees are fully aware of their obligations.

Moving forward, the MCC Group will continue to promote safety and compliance as its most important values. With this in mind, we will allocate sufficient resources to the field of industrial safety. This will include human resource development as well as capital investment in an effort to maintain and improve our ability to ensure security and safety.

#### Creating an environment in which employees can make the most of their capabilities

Our employees are both the cornerstone and wellspring for our abilities to pursue sustained development and to bring the *KAITEKI* concept to fruition worldwide. Based on this understanding, the MCC Group is working to create a workplace environment and foster culture that enables each and every employee to go about their duties with excitement and energy. In a bid to support our employees to continuously develop and grow, we are promoting the hiring and application of a diverse range of personnel, upgrading and expanding our education and training systems and promoting work life balance.

Recognizing its purpose and mission within the international community, the MCC Group will work diligently with all stakeholders including employees to build a brighter and more prosperous future.

As we work toward achieving our established goals, we kindly request the continued support and understanding of all stakeholders.

## The Mitsubishi Chemical Group's Corporate Social Responsibility

The Mitsubishi Chemical Group aims to achieve *KAITEKI* as a member of the Mitsubishi Chemical Holdings Group.

The Mitsubishi Chemical Holdings Group's basic approach to social responsibilities

# We will contribute to achieving *KAITEKI* based on three decision criteria for our corporate activities: Sustainability(Green), Health, and Comfort.

In view of the MCHC Group's philosophy "Good Chemistry for Tomorrow – Creating better relationships among people, society, and our planet," we believe that we have a responsibility to put *KAITEKI* into practice, by disseminating the idea of *KAITEKI* value widely across society, through our corporate activities based on the three decision criteria of Sustainability (Green), Health, and Comfort.

To achieve that, we will commit to maintaining and reinforcing basic corporate activities in areas that are essential to enhancing *KAITEKI* value. Based on the Mitsubishi Chemical Holdings Group Charter of Corporate Behavior, we will also promote and reinforce business and other practice activities in such areas as awareness and responsibility, accountability and transparency, legal compliance, valuing stakeholders and respecting human rights, employment and labor, and fair business practices while aiming to contribute to the sustainable development of society.

#### Our aspirations here at the MCHC Group



KAITEKI means a state of true sustainability, and also represents comfort for people, comfort for society, and comfort for the Earth. MCHC promotes KAITEKI as worthy aspiration for companies all over the world in the 21st century.

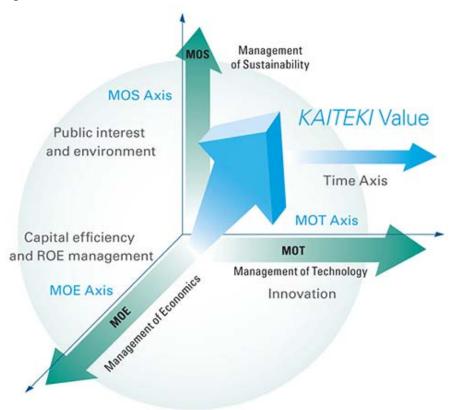
# Achieving KAITEKI at the Mitsubishi Chemical Group

#### MOS indexes of the MCHC Group

The MCHC Group has adopted an approach called "KAITEKI management" in a bid to bring the KAITEKI concept to fruition. KAITEKI management is made up of three parts, namely the traditional Management of Economics (MOE) and Management of Technology (MOT) axes, which emphasize efforts to improve economic value, a key performance barometer, and to generate innovation, respectively, and the Management of Sustainability (MOS) axis, which aims to enhance sustainability for people, society, and the planet. Rounding out this management approach, different time frames are applied. Ultimately, KAITEKI management involves efforts aimed at enhancing corporate value by balancing these three axes over the additional factor of time.

Taking the aforementioned into consideration, we are promoting KAITEKI management in an effort to increase profitability and earnings and secure sustained development while helping to solve a variety of environmental and social issues.

#### MCHC's KAITEKI Management



Working to bring the *KAITEKI* concept to fruition, we put in place MOS indexes to better visualize management aimed at enhancing sustainability for people, society, and the planet. We aim to increase *KAITEKI* value by setting targets based on these indexes and implement action plans accordingly. From the three perspectives of Sustainability "Green" (the environment and resources), Health, and Comfort, positioned as the MCHC Group's decision criteria for its corporate activities, MOS indexes are highly regarded by the Group as a whole and comprised of activity items that contribute to sustainability. For these MOS indexes, we set targets to achieve by 2015 and monitor the progress we make toward the achievement of *KAITEKI* as the ultimate goal. Monitoring MOS indexes is undertaken once a vear.

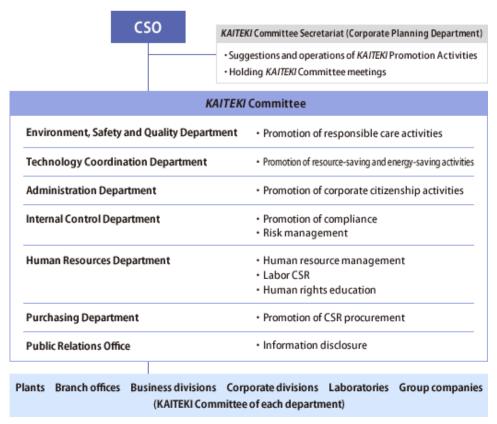
As its initiative for achieving *KAITEKI*, the Mitsubishi Chemical Group will continue working to achieve its targets by fiscal 2015 regarding the MOS indexes of the MCHC Group. We position these activities, which are aimed at achieving *KAITEKI*, as part of our corporate social responsibility (CSR) activities.

	S-1 Contribute to reducing environmental impact through products and services
	S-1-1 Reduce environmental impact by 30% from fiscal 2005 levels
	S-1-2 Generate reduction of CO <sub>2</sub> emissions by 3.5 megatons through products
	S-2 Take actions against the depletion of natural resources and implement energy-saving initiatives
Sustainability	S-2-1 Procure reusable materials equivalent to 10,000 t/y of heavy oil
(Green) Index	S-2-2 Reduce cumulative rare metal usage by 1,200 tons through improving processes and innovating products
APPROXIMATE TO A	S-2-3 Generate resources and power savings of ¥8.8 billion
	S-2-4 Provide 900 million tons of reusable water through our products
	S-3 Contribute to solving social and environmental issues through supply chain management
	S-3-1 Achieve 80% of purchased items surveyed for toxic substances
	S-3-2 Achieve 90% purchasing of raw materials and packaging according to CSR guidelines
	H-1 Contribute to medical treatment
	H-1 Increase the index performance derived by the degree of difficulty to treat diseases multiplied by the number of administered patients by 50% (compared with fiscal 2009)
	H-2 Contribute to improvements of QOL
Health Index	H-2 Increase contribution to QOL improvements by 70% (compared with fiscal 2009)
	H-3 Contribute to early detection and prevention of diseases
	H-3-1 Increase the index of vaccine treatment by 17% (compared with fiscal 2009)
	H-3-2 Increase the number of people taking diagnostic tests by 26% (compared with fiscal 2009)
	C-1 Deliver products (development and manufacturing) for comfortable lifestyle
	C-1-1 Increase sales of comfort-oriented products by ¥400 billion (compared with fiscal 2010)
	C-1-2 Increase the new product ratio from 16% to 30%
	C-2 Improve stakeholder satisfaction
	C-2-1 Improve third-party corporate assessments
Comfort	C-2-2 Improve employee-related indexes
Index	C-2-3 Conduct questionnaire and improve customer satisfaction
	C-3 Earn recognition of corporate trust
	C-3-1 Reduce safety accidents
	C-3-2 Reduce environmental accidents
	C-3-3 Reduce product claims
	C-3-3 Reduce product claims C-3-4 Reduce the lost time injuries frequency rate
Objective to	C-3-3 Reduce product claims

#### Organization for promoting KAITEKI

At the Mitsubishi Chemical Group, we created the role of Chief SUSTAINABILITY Officer (CSO) in 2011 as a measure for building an organizational structure aimed at achieving *KAITEKI*. We have also set up under CSO a MCC's *KAITEKI* Committee that consists of members of key business divisions and corporate divisions (Environment, Safety and Quality Department, Technology Coordination Department, Human Resources Department, Public Relations Department, Administration Department, Internal Control Department, Purchasing Department). The *KAITEKI* Committee deliberates and makes decisions on the policies of activities for making progress toward the ultimate goal of achieving *KAITEKI* through cooperation within the overall Mitsubishi Chemical Group (*KAITEKI* Promotion Activities). The *KAITEKI* Committee meeting is held once a month. In fiscal 2012, Committee meetings were held on 12 occasions. An expanded *KAITEKI* Committee meeting including officers responsible for promoting *KAITEKI* at plants was also held.

#### Organization for KAITEKI Promotion Activities



#### KAITEKI Promotion Activities in fiscal 2012

Achieving *KAITEKI* is enabled through all business activities. We believe that our ultimate goal is to create a corporate culture that encourages each employee to think about what can be achieved for *KAITEKI* and plan, implement, and examine actions for achieving it.

KAITEKI Promotion Activities implemented by the Mitsubishi Chemical Group in fiscal 2011 were the formulation of MOS indexes by the KAITEKI Penetration Caravan and each department, which sought to encourage the use of KAITEKI Management and MOS indexes as the first step toward the ultimate goal.

Carrying forward this policy, steps were taken to monitor the MOS indexes of each department and area in fiscal 2012. In this manner, progress regarding the promotion of *KAITEKI* was confirmed. This monitoring encompassed the MOS indexes of eight plants, three branch offices, five business divisions, four corporate divisions, and 12 affiliates. Moreover, an expanded *KAITEKI* Committee meeting, which included the committees of each department and area, was held with consideration given to measure that would help raise awareness and understanding among all employees.

# Targets, Results, and Assessments for Fiscal 2012

The Mitsubishi Chemical Holdings Group aims to achieve *KAITEKI*, or a truly sustainable society. For this purpose, the Mitsubishi Chemical Corporation (MCC) Group defines its targets for individual fiscal years, and the results of our efforts are incorporated into the challenges and targets for the following fiscal year. Through this process, the MCC Group manages the progress toward its goals.

Click here for a full download of the tables (PDF:124KB)

#### Targets, Results, and Assessments for Fiscal 2012 (1)

Priority Challenges for Fiscal 2012	Targets for Fiscal 2012	Results in Fiscal 2012	Assessment	Link
Promoting <i>KAITEKI</i>				
Disseminating and promoting <i>KAITEKI</i>	Expand the <i>KAITEKI</i> promotion system to plants and Group companies.	<ul> <li>Held KAITEKI Promotion         Committee meetings once per month, for a total of 12 times during fiscal 2012.     </li> <li>Held one extended KAITEKI         Promotion Committee meeting, with participants including KAITEKI promotion officers from MCC plants.     </li> </ul>	***	Find out more
MOS Indexes	Expand <i>KAITEKI</i> promotion initiatives to plants and Group companies, and disseminate them to all employees.	Confirmed progress achieved in promoting the <i>KAITEKI</i> concept, through monitoring of MOS Indexes of eight Group plants, three branch offices, five divisions, four common departments and twelve affiliated companies.	***	Find out more

Risk Management				
Addressing serious risks	Continue to implement countermeasures for the priority risks below:  · Natural disasters  · Country risks  · Information security  · Business continuity plan	<ul> <li>Selected essential products that are to be developed on a priority basis in line with the business continuity plan (BCP).</li> <li>Reduced the number of items transported that contain dangerous or hazardous substances.</li> <li>Performed audits pertaining to data systems of overseas Group companies.</li> </ul>	***	Find out more
	Create a framework for promoting internal control to Group companies in Asia.	Fortified networks for addressing country risks inherent with overseas business expansion.	**	Find out more
Creating a business continuity plan (BCP)	Consider acquiring ISO22301 certification. Create and implement procedures to transfer head office functions.	<ul> <li>Developed and supervised use of manuals specifically geared toward ensuring ongoing head office functionality should disaster strike.</li> <li>Conducted a drill simulating relocation of head office functions (January 2013).</li> </ul>	***	Find out more
Compliance				
Increasing compliance awareness and auditing and monitoring	Organize compliance training.  In general, appoint all group managers and section managers as compliance promotion officers to reinforce the functions of those in managerial positions.	Carried out training for compliance promotion officers and compliance promotion leaders, including those with Group companies.  Improved online compliance training programs offered to the entire workforce.  Carried out training for overseas employees in Chinese and English, in collaboration with MCHC (provided to 35 Group companies and about 430 managers).	***	Find out more
	Continue different kinds of monitoring for compliance.  · Continue on compliance perception survey in Japan and overseas (Fixed-point observation).	Conducted compliance perception survey.  Japan: Conducted surveys of Group company employees, yielding roughly 25,500 responses.  Overseas: Conducted surveys of Group company employees in Chinese, Indonesian and English, yielding roughly 2,360 responses.	***	Find out more

Process Safety a	nd Disaster Prevention			
Preventing facility-related accidents	Maintain the status of zero serious facility-related accidents.	■Achieved the target of no serious facility-related accidents.	***	Find out more
	Continue to review and improve measures to prevent recurrence of accidents and serious troubles.	Continued to review past measures in order to develop more convincing and effective measures, and persisted with moves to bolster facility management.	***	Find out more
	Provide process safety education.	■Provided education to mid-level employees in Group companies as well.	***	Find out more
Occupational Safe	ety and Health			
Preventing occupational accidents	<ul> <li>Achieve zero serious</li> <li>occupational accidents</li> <li>(requiring stopping operations for four or more days).</li> <li>Don't allow the lost time injury frequency go above 0.1.</li> </ul>	Serious occupational accidents: 9 accidents, missed the target.  Lost time injury frequency: 0.22.	*	Find out more
	Prevent action-related accidents. (Increase awareness for front-line professionals).	■ Raised awareness of responsible behaviors, carried out basic behavioral training, provided education on laws, regulations and compliance, and offered case study-based education focusing on human conduct.  ■ Continued to share examples of near misses and minor occupational accidents within the Group.	***	Find out more
Managing occupational health	Introduce level-specific mental health education.	■ Held workshops at individual plants. ■ Took steps to build workplace mechanisms where employees are able to readily seek consultation.	***	Find out more

#### Targets, Results, and Assessments for Fiscal 2012 (2)

Priority Challenges for Fiscal 2012	Targets for Fiscal 2012	Results in Fiscal 2012	Assessment	Link	
Environmental Safety					
Preventing environmental accidents and problems	Continue to achieve zero environmental accidents.	■Had no environmental accidents, met the target.	***	Find out more	
Reducing chemical emissions	Continue to steadily reduce emissions, including those for non-PRTR substances.	■ Reduced PRTR substance emissions by 60 tons from fiscal 2011 levels. ■ Reduced VOC emissions by 63% from the fiscal 2000 level.	***	Find out more	
Reducing landfill disposal	Implement a plan toward zero emissions.	Achieved a better landfill disposal rate than in fiscal 2011, but generated emissions of 1.6% thereby falling short of the zero emissions target.	*	Find out more	
Global warming countermeasures	Continue implementing energy conservation measures in the production process.	<ul> <li>Attained a non-consolidated unit energy consumption index of 89.6, an improvement of some 5% from the preceding fiscal year.</li> <li>Reduced greenhouse gas emissions by 23% from fiscal 2005 on a Groupwide basis.</li> <li>Curtailed energy use for the equivalent of roughly 30 thousand tons of CO2, achieved through efforts that included bringing about more effective heat recovery in factory manufacturing processes, optimizing conditions for operating energy—intensive equipment and curbing heat loss from heating furnaces.</li> </ul>	***	Find out more	
	Reduce unit energy consumption in transit by 5% in five years.	■ Reduced unit energy consumption by 3.7% compared to fiscal 2011, thereby achieving our target of at least the 1% improvement (MCC).	***	Find out more	

Chemical Management				
Complying with international regulations on chemicals	Continue to comply with REACH and other chemical regulations and keep strengthening control measures.	■ Completed official registration of all substances with EU import volumes of up to 1,000 metric tons per year (as of May 31, 2013). ■ Continued with study on the contents of substances of very high concern (SVHC) in products exported to the EU.	***	Find out more
	Continue to strengthen risk assessments and information distribution.	<ul> <li>Prepared labels and safety data sheets (SDS) for all hazardous chemical products.</li> <li>Worked toward creating a database designed to properly track new chemical substance applications and notifications in respective countries.</li> <li>Disclosed risk assessments and safety summary sheets in succession in the GPS initiative.</li> </ul>	***	Find out more
Quality Assurance				'
Offering safe and secure products	Continue to improve the reliability of quality data. Continue to enhance means of tracking information on substances subject to control that are contained in individual products.	■ Modified the quality control system and worked toward introducing it to respective manufacturing plants. ■ Established guidelines for dealing with conflict minerals.	***	Find out more

#### Targets, Results, and Assessments for Fiscal 2012 (3)

Priority Challenges for Fiscal 2012	Targets for Fiscal 2012	Results in Fiscal 2012	Assessment	Link	
Complying with the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors					
Complying with the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors	Continue to hold internal workshops and encourage employees to attend outside lectures.     Continue to audit purchasing departments at plants.	<ul> <li>Held internal workshops</li> <li>and encourage employees</li> <li>to attend outside lectures.</li> <li>Audited purchasing</li> <li>departments at plants.</li> </ul>	***	Find out more	
CSR Procurement					
CSR procurement	Boost CSR activities together with business partners based on the results of CSR surveys.	Conducted CSR survey of 132 business partners.	***	Find out more	
Human Resources Develop	ment				
Cultivating the next generation of management	Continue efforts to cultivate the next generation of management through the General Course at Mitsubishi Chemical Holdings Business College.	Continued efforts to cultivate the next generation of management through the General Course at Mitsubishi Chemical Holdings Business College.	***	Find out more	
Cultivating global human resources	Consider and implement a global human resource development scheme.	Continued to run an entry-level global personnel development program. Continued to run the Overseas Business Challenge Program.	***	Find out more	
Offering opportunities to take up challenges and increase awareness	Continue to implement programs for open recruitment, in-house free agents, in-house internships, and career counseling.	Continued to implement programs for open recruitment, in-house free agents, in-house internships, and career counseling.	***	Find out more	

Developing the Organization and Its	Culture			
Helping various human resources	Continue to help female workers exhibit their strengths.	<ul> <li>Increased the ratio of female managers by 0.4 percentage points to 5.3%.</li> <li>Drafted and implemented measures for advancement of women in the workplace through forming project teams.</li> </ul>	***	Find out more
show their strengths	Continue to recruit foreign nationals as employees.	Hired six new graduates of foreign nationality.	***	Find out more
	Continue to help people with disabilities exhibit their skills.	Continued to attain the statutory rate for disability employment.	***	Find out more
Supporting a Worklife Balance				
Promoting reduction of total working hours	Continue efforts to reduce overtime and holiday work.	Average overtime work hours for general employees: 20.6 hrs. (down 0.2 hrs. from the preceding fiscal year.)  Paid leave taken: regular daytime workers, 70%; shift workers, 90%.	**	Find out more
Human Rights Measures			'	
	Reconfirm and understand buraku issues, eliminate prejudice, and continue overseas training.	■Held 556 group training sessions at different locations,		
Educating and raising awareness of human rights	Continue efforts to prevent sexual harassment, abuse of authority, and other forms of harassment at workplaces.	including overseas plants, with attendance at 11,611 amounting to 42% of all Group employees.	***	Find out more
	Continue to put emphasis on establishing training on human rights and other such issues at overseas Group companies.	training (E-training) on human rights to 17,072 employees.		

Identifying Problems				
Running of employee survey	Continue efforts to conduct employee survey and incorporate such findings into various management measures.	Conducted surveys of 25,498 employees, accounting for 90% of the Groupwide workforce, including those stationed overseas.  Drew on the findings of fiscal 2011 surveys in pursuing initiatives that included operational streamlining.	***	Find out more
Labor-management Relations				
Building productive labor- management relations	Continue efforts to maintain and improve labor-management relations and increase the depth of labor-management communications.	Continued efforts to facilitate communications between management and workers through biannual management and labor committee meetings.	***	Find out more
Corporate Citizenship Activities				
Engage in corporate citizenship activities in the areas of cultivating future generations, communicating with local communities, and providing support for disaster control	Look into possible initiatives to pursue in the areas of cultivating future generations, communicating with local communities, and providing support for disaster control.	Organized scientific experiment events at respective plants to support the cultivation of future human resources in science and technology. Sponsored the Mitsubishi Chemical Junior Designer Award. Worked with NPOs and held events as part of our program to assist with reconstruction of the Tohoku region.	***	Find out more

Top > Special Feature



Mitsubishi Chemical Group Products That Help Bring the KAITEKI Concept to Fruition



Based on its broad technology platform nurtured over many years in the field of chemistry, the MCC Group has positioned Sustainability "Green" (the environment and resources), Health and Comfort as the decision criteria for its corporate activities in a bid to bring the KAITEKI concept to fruition.

With the overarching goal of promoting the sustained development of society, the MCC Group is drawing on three decision criteria to develop high-performance technologies and products while contributing to society across a wide range of fields.



About KAITEKI

#### In the environmental field



- Transparent engineering plastic made from plant materials
- Biodegradable plastic that naturally decomposes by microorganisms in the soil
- Lithium ion rechargeable battery equipment that contributes to the proliferation of eco cars

#### In the medical field



- Chromatographic resins for biopharmaceutical purification
- Performance polymer exhibiting excellent potential in the medical field

### In the energy field



- Materials for photovoltaic systems that exhibit outstanding heat resistance
- Printed thin-film organic photovoltaics (OPV) a groundbreaking technology for solar cells
- Needle coke that contributes to the recycle of industrial materials

#### In everyday life



- Resin-based synthetic paper that opens up new possibilities
- Organic light emitting diode (OLED) lighting panels that emit light from the entire panel
- Rubber reinforcement materials that enhance driving performance
- Sugar ester food-grade emulsifier contributes to the world's food supply

Special Feature

### Mitsubishi Chemical Group Products That Help Bring the KAITEKI Concept to Fruition

#### In the environmental field

The MCC Group is working diligently to develop a wide range of technologies in the environmental field. Areas of activity include biodegradable plastics made from plants and batteries for use in eco cars. In addition to efforts aimed at solving a variety of issues including resource depletion and the disposal of waste, the Group is endeavoring to fulfill its mission by helping to realize a new carbon society.



Sustainability[Green] DURABIO™, a transparent engineering plastic made from plant materials

### Helping to realize a new carbon society through the development of innovative materials made from plants

DURABIO™ is a transparent engineering plastic\* that is made from plant materials, which are a sustainable resource. Newly developed by MCC, this new material combines the lightweight and workability properties of plastics with the transparency and optical features of glass.

Drawbacks associated with existing plastics made from plant-derived materials include their sensitivity to heat. Problems concerning workability, durability and impact resistance also limit the potential of conventional products. Leveraging its proprietary technologies of molecular configuration design, catalytic, and other technologies, MCC has developed a transparent plastic material that exhibits outstanding optical (low birefringence and high transparency) properties as well as great strength. This new material barely yellows after long-term exposure to ultra-violet rays. DURABIO™ will have a wide range of applications in such areas as the transparent components used in solar cell panels. Taking full advantage of its potential to deliver bright color tones, this new product is also anticipated to see wideranging outdoor use.

Construction of a large-scale DURABIO™ facility was completed at the Company's Kurosaki Plant (Kita-Kyushu City), with steps taken to commence full-fledged production. Plans are in place to produce 20,000 tons annually in 2015.

\*Engineering plastic: In addition to its use in mobile phones, computers and other electronic equipment, as an optical and energy-related material as well as an alternative material to high-performance glass, engineering plastics are being applied across a wide range of industries encompassing automobiles, aircraft, solar cells, and medical equipment.

b DURABIO □ □



DURABIO™ is a polymer that is made from isosorbide, which is derived from saccharides, a plant-based material.



DURABIO™ used in the manufacture of sunglasses (Yamamoto Kogaku Co., Ltd.)

#### A plastic that is essential to daily life while realizing environmental protection

GS Pla™ is a biodegradable plastic that naturally decomposes into water and carbon dioxide by microorganisms in the soil. MCC has been marketing GS Pla™ since 2003.

Many biodegradable plastics require a special composting facility. In contrast, GS Pla™ only needs to be buried in the ground. In addition to this defining feature, GS Pla™ is distinguished by its ability to be easily processed and used for a variety of plastic molding methods. Furthermore, GS Pla™ can be combined with other biodegradable resins that have other characteristics to create more functional compound resins. Moving away from its biodegradable properties, recent steps have been taken to focus on developing applications that harness the product's other features. Building on its excellent compatibility with natural fibers, MCC has initiated application development activities in such fields as construction materials and automobiles.

While GS Pla™ has been manufactured from petroleum-based materials, efforts have been channeled toward a switch to plant-based materials. To this end, MCC is pursuing the construction of a plant through its joint-venture company with PTT Public Company Limited in Thailand. Plans are in place to commence full-fledged production from 2015. Looking to the future, technological developments are underway to shift from edible bio-based materials such as sugar and starch to non-edible materials including sugar cane pomace and weeds.



Paper cups adopted by Café Amazon. a coffee chain in Thailand (GS Pla™ inner surface laminate)

Sustainability[Green] Lithium ion rechargeable battery materials that contribute to the adoption of eco cars

#### Single-handed supply of key materials; helping to solve environmental and energy issues

Lithium-ion rechargeable batteries are compact and can achieve high capacity. The demand for batteries as an essential component for mobile devices such as mobile phones and notebook PCs is increasing.

Lithium-ion rechargeable batteries consists of four key materials: cathode, anode, electrolyte, and separator. Utilizing the technology developed over many years, MCC has established an original production process. At the same time, MCC is the only company in the world that can single-handedly supply these four key materials. Through these means, the MCC Group has continued to contribute to the growth and development of the IT world.

In recent years, lithium-ion rechargeable batteries have been adopted widely as highperformance batteries in eco cars like hybrid cars, which have been expanding along with electric cars. Expectations have also arisen toward larger size products for use as residential storage batteries and emergency sources of power. MCC is promoting technology innovation in the field of lithium-ion rechargeable batteries and is helping to solve social issues relating to natural resources, environment, and energy.

Lithium ion rechargeable batteries <a>I</a>



Four key materials (from left: cathode material, anode material, electrolyte, and separator)

Special Feature

### Mitsubishi Chemical Group Products That Help Bring the KAITEKI Concept to Fruition

#### In the medical field

The MCC Group is working to develop its health care-related business across a wide range of areas including clinical testing, diagnostics, and new pharmaceutical development while continuing to engage in basic research into the life sciences. Through these means, we are endeavoring to further raise the quality of life of people everywhere.



Health MabSpeed™ and ChromSpeed™ chromatographic resins for biopharmaceutical purification

#### Contribution for better health via highly efficient biopharmaceutical purification products

A variety of biopharmaceuticals made from the cultivation of cells and microorganisms are being brought to market in line with the development of biotechnologies. Taking into consideration the complexities of production processes that apply organisms that are highly sensitive to change, technologies that deliver precision while maintaining safety and efficacy and help to enhance productivity are of paramount importance.

Drawing on its wealth of experience as well as its high-speed chromatographic ion exchange resin production technologies, MCC has launched new media MabSpeed™ and ChromSpeed™ that enable high speed chromatographic operation with high efficiency and productivity. MCC has constructed a manufacturing facility in Kurosaki (Kita-Kyushu Fukuoka) and commenced production in February 2013.

Biopharmaceuticals are medical drugs including proteins like antibodies. It is expected that biopharmaceuticals will open a door to cutting-edge treatments for a substantial number of illnesses. MCC biopharmaceutical media provides purification of such drugs; therefore, MCC continues to contribute to the health of people everywhere.

- MabSpeed™ <a>□</a>
- ChromSpeed™ <a>□</a>



Biopharmaceutical purification media in bulk and column

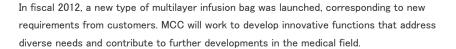


Columns for screenings

#### Providing safe and reliable materials that directly address unmet medical needs

A wide range of medical-use plastics go into the manufacture of medical devices and instruments. MCC has developed a variety of products for use in this field. One such product is ZELAS™, an olefin-based thermoplastic elastomer, which is attracting wide acclaim as a material for use in infusion bags.

Taking into consideration ease of use as well as discharging efficiency, infusion bags are mainstream for the infusion containers used for intravenous drips, and in particular containers with a capacity that exceeds 1 liter. Infusion bags are comprised of multiple layers and most commonly three outer core, intermediate, and inner layers. This reflects the need to meet several criteria including bag making, transparency post sterilization, flexibility, impact resistance, and high cleanliness. ZELAS™ comes in various grades to address the requirements of each layer. It is also a product that facilitates the development of excellent infusion bags that match bag making machines. In particular, ZELAS™ is distinguished by its suitability for multichamber bags. By simplifying optimal control during seal formation using a heat sealing process at the time the film is taped for bag-making, the two solutions that are kept separate prior to use are released via the weak seal portion and allowed to mix. This in turn has led to many commercial uses.

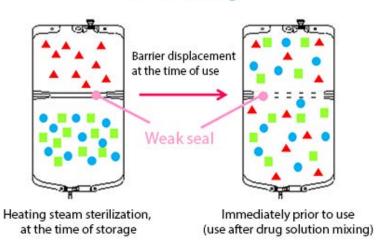




ZELAS™ peritoneal dialysis solution bag

#### ZELAS™ <a>□</a>

#### Plurilocular bag



Top > Special Feature Mitsubishi Chemical Group Products that Help Bring the KAITEKI Concept to Fruition > In the energy field

Special Feature

#### Mitsubishi Chemical Group Products That Help Bring the KAITEKI Concept to Fruition

#### In the energy field

Photovoltaic systems are likely to proliferate as a clean and sustainable energy source amid pressing concerns about global warming. The Mitsubishi Chemical Group contributes to solving energy problems by working to commercialize completely new kinds of solar cells.



Sustainability[Green] LINKLON™ and OLEFISTA™ materials for photovoltaic systems that exhibit outstanding heat resistance

#### Leveraging our comprehensive capabilities to create sustainable energy

Photovoltaic systems have proliferated as a clean and sustainable energy source. Mitsubishi Chemical has developed photovoltaic modules that use silicon-based solar cells. Our gioa brand of photovoltaic systems is sold as complete systems, incorporating power conditioners and other components.

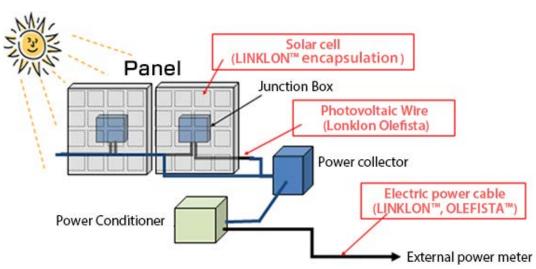
Mitsubishi Chemical developed LINKLON™ and OLEFISTA™, highly durable weather-proof materials that are used in these photovoltaic systems. LINKLON™ is a silane cross-linking polyolefin resin with heat, abrasion and chemical resistance that makes it suitable for use in applications that demand long-term durability, such as electric power cable insulation and solar panel encapsulation. OLEFISTA™ is a halogen-free flame retardant polyolefin resin used in applications that require heat and flame resistance, such as sheathing for electric power cables.



 $\mathsf{OLEFISTA}^{\mathsf{m}}$  is used in sheathing for electric power cables.

Mitsubishi Chemical contributes to the creation of sustainable energy by leveraging the comprehensive capabilities of the Group in the development of core technologies and materials used in photovoltaic systems.

#### Photovoltaic system



- **►** LINKLON™ **□**
- COLEFISTA™ □

#### Helping solve energy problems by commercializing innovative solar cells

Utilizing organic compound technologies, Mitsubishi Chemical is working on the commercialization of organic photovoltaics (OPV), which are printed organic thin-film solar cells that have considerably different properties than traditional solar cells.

The most prevalent kind of solar cell today is polycrystalline silicon, which uses glass substrates so the panels are rigid and heavy, restricting where they can be installed. OPV is manufactured by printed organic semiconducting materials on thin substrates such as plastic film and metal sheets, making them lighter and more flexible. In 2008, Mitsubishi Chemical began in earnest to work on developing OPV and aims to launch OPV products in 2015 after improving their photoelectric conversion efficiency and increasing the size of the modules.

Thin-film flexible OPV can be installed on the bodies of electric vehicles and on the external walls of buildings, making it possible to create electricity through living room windows and other areas with good sunlight. OPV is also well suited for mass production because the manufacturing process is like printing. Since OPV could also theoretically be printed directly onto three-dimensional objects, we believe the product has remarkable potential to hasten the spread of renewable energy.



OPV module

POPV 📮

Sustainability [Green] Needle coke that contributes to the recycle of industrial materials

#### Refines steel scrap with world-first coal-chemical production technologies

Steel is a material that can be used again and again.

Steel is recycled and reused by smelting and refining steel scrap from automobiles and building materials in an electric furnace. Petroleum-based needle coke had mainly been used as a primary raw material in the electrodes of these electric furnaces before Mitsubishi Chemical became the first company in the world to successfully produce coal-based needle coke in 1979.

Coal-based needle coke that Mitsubishi Chemical developed is produced from coal tar which appears during coke production. In recognition of this accomplishment, Mitsubishi Chemical was awarded the 27th Okochi Memorial Production Prize, a prestigious prize to remarkable contributions in production engineering and implementation of sophisticated production technologies in Japan. There are only a few companies around the world that can produce coal-based needle coke. To address growing demand for needle coke, in November 2012 Mitsubishi Chemical established a joint venture with Posco Chemtech for the production and sale of needle coke in South Korea and licensed the technology to the joint venture.

Compared with petroleum-based needle coke, coal-based needle coke features superior durability in high temperatures, smaller thermal expansion coefficient, and slower in rate of consumption. Mitsubishi Chemical will continue to be the leader in this field by changing coal, which has a more stable supply than petroleum, into an advanced material.





Needle coke



Electrodes for electric furnaces

Special Feature

#### Mitsubishi Chemical Group Products That Help Bring the KAITEKI Concept to Fruition

#### In everyday life

The Mitsubishi Chemical Group's products are used in a broad range of applications found in our everyday lives, such as lighting, food, printing paper and automobiles. The Mitsubishi Chemical Group develops a diverse array of technologies for products used in our daily lives in order to provide more comfort, convenience, safety and security in our lifestyles.



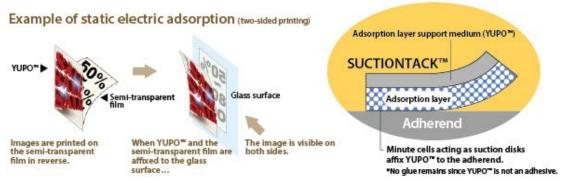
Comfort YUPO™, resin-based synthetic paper that opens up new possibilities

#### Lifestyles are enriched with the development of water-resistant synthetic paper that can also be used outdoors

The resin-based synthetic paper, YUPO™, is ideal for printed materials displayed outdoors. This includes the timetables on platforms at railway stations, the banners displayed at stores, and election campaign posters. Moreover, YUPO™ has a host of applications and can be used for the humidity-sensitive labels of containers and products that require refrigeration. Made primarily from polypropylene (PP) resin, YUPO™ is manufactured and marketed by the Mitsubishi Chemical Corporation Group company, YUPO Corporation, which maintains leading a share of the global market.

Resilient against water, YUPO™ largely retains its strength and shape even when wet. Among a host of additional features, this product is strong against pulling, tearing, and impact and can be used repeatedly. YUPO™ boasts a smooth surface, can be easily processed and worked, and does not easily degrade even when in contact with oils and chemicals. In addition to these outstanding properties, YUPO™ is distinguished by its environmental attributes. Easy to recycle, YUPO™ dissolves into carbon and hydrogen when incinerated.

By developing a variety of products, the Mitsubishi Chemical Group is helping to create convenient and comfortable lifestyles.



YUPO™ SUCTIONTACK™ can be easily applied and removed, making it suitable for a wide variety of applications, including the following.









Store signs

Educational stickers

Warning stickers

Countertop stickers

YUPO™ <a>□

#### World-first technology opens up new possibilities for next-generation lighting

In July 2011, Mitsubishi Chemical and Pioneer Corporation jointly launched mass production of OLED lighting panels with color-mixed lighting, a world first. Sold under the VELVE™ brand name, the OLED lighting panels are made with a vapor deposition process for the lightemitting layer.

OLED lighting is made from a thin organic layer that emits light when current is applied. OLED lighting emits light from the entire surface of the panel, as opposed to LED and fluorescent lighting that emit light from a single point or line. OLED lighting is thus able to create a more natural, non-glaring and softer light. In addition to these lighting characteristics, OLED lighting can be developed into futuristically thin and flexible products, a source of light that will create a brighter world. LED lighting, with its sharp focus on a single point, and OLED lighting, with its softer spread of light over a surface, will be used in various applications in accordance with their unique characteristics.

In June 2013, Mitsubishi Chemical and Pioneer Corporation established MC Pioneer OLED Lighting Corporation (MPOL) as a joint operations company combining their marketing and sales functions for OLED lighting panels. In June 2012, Mitsubishi Chemical and Pioneer Corporation began to jointly develop OLED elements for the light-emitting layer coating in order to reduce production costs for OLED lighting panels, and started operations in autumn 2013 at a pilot production facility with the objective of moving to mass production. We aim to fully commercialize the business in fiscal 2014. MPOL began delivering to customers samples of light-emitting layer coated products in autumn 2013 with the aim of accelerating the development of applications and markets for OLED lighting.



One of the largest OLED panels in the world (Photo: Toshio Kaneko)

VELVE™ <a>□</a>

Comfort DIABLACK™ and DIAPOL™, rubber reinforcement materials that enhance driving performance

### Continuously improves driving performance, the comfort and safety of automobiles, and contributes to tire recycling

Carbon black is used as a rubber reinforcement material in automobile tires and is a key material that accounts for one-fourth of a tire's weight. Carbon black, a fine particle of carbon and is produced in a furnace while controlling its various properties through the incomplete combustion of carbon black oil. Mitsubishi Chemical's DIABLACK™, carbon black for rubber, is made in a fully integrated production system beginning with the raw material, carbon black oil, made in the Sakaide, Mizushima, and Kashima plants.

While aiming to improve quality in terms of safety and working environmental performance, Mitsubishi Chemical is proactively developing products with special functionality. Over the past few years, due to stronger demand from the market, Mitsubishi Chemical has been increasing production volume of specialty carbon black for high-performance tires.

Our DIAPOL™, carbon black dispersed styrene-butadiene rubber (SBR) masterbatch produced in wet process, has also been highly evaluated by our customers. In one of the application, DIAPOL™ is used in the retreading of large size tires and is contributing to a recycling society.



▶ DIAPOL™



Carbon black

# Supporting lifestyles abundant in food by developing safe food supplements

Sugar ester is an emulsifier for food made from plant-derived fatty acids and sucrose. It is used in a wide variety of processed foods, such as canned coffee and other beverages, whipped cream and other dairy products, and cake, chocolate and other sweets. Sugar ester helps food taste better and improves convenience.

The Mitsubishi Chemical Group has produced and sold RYOTO™ sugar ester food-grade emulsifier around the world for more than 40 years through its subsidiary Mitsubishi-Kagaku Foods Corporation. By thoroughly ensuring safety in its product development and production, Mitsubishi Chemical has won the leading share of the world market. We contribute to the world's food supply as RYOTO  $^{\text{\tiny{TM}}}$  is broadly used in foods around the world.





RYOTO™ sugar ester is used in foods like these.

RYOTO™ sugar ester <a>I</a>

# **Management Structure**



#### **Basic Concept**

As a member of the Mitsubishi Chemical Holdings Group, the Mitsubishi Chemical Group follows the basic guidelines for management of the Group determined by Mitsubishi Chemical Holdings Corporation (MCHC), and shares the management guidelines and management strategies of the Group determined by MCHC. Mitsubishi Chemical Corporation also upholds the Group policies and rules determined by MCHC to ensure that it fulfills its corporate social responsibility in areas such as Internal Controls, Risk Management, and Compliance (compliance with laws and Charter of Corporate Behavior), and actively pursues management initiatives to enhance corporate value as a core operating company of the MCHC Group.

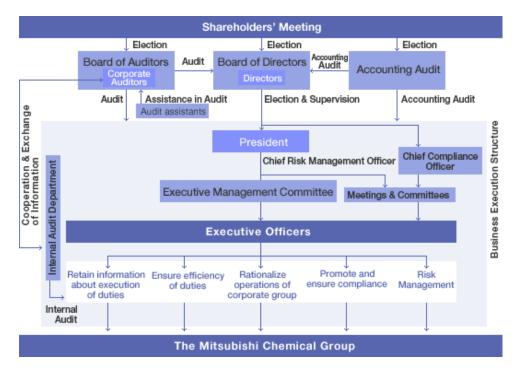
To MCHC Management Plan page <a>I</a>

### Management Structure Corporate Governance

The Mitsubishi Chemical Group's top priorities for corporate governance are to ensure fast and efficient decision-making and business execution, clarify management responsibilities, ensure compliance, and strengthen risk management.

Mitsubishi Chemical Corporation (MCC) operates a basic corporate governance structure consisting of the Board of Directors, the Executive Management Committee, Corporate Auditors, and the Board of Auditors. The Company has rationalized managerial decision—making and execution, separating the executive and management functions through adoption of the executive officer system, and making provision in internal rules for deliberative and decision—making bodies such as the Board of Directors and the authority attached to various positions.

Corporate Governance Structure of the Mitsubishi Chemical Group (as of July 1, 2013)



#### **Board of Directors**

As a general rule, the Board of Directors meets once a month. The Board makes decisions on important managerial matters and basic matters concerning Group management, as well as auditing the execution of duties by Directors, in accordance with the Regulations of the Board of Directors and other relevant regulations. The seven directors (five of whom concurrently serve as executive officers) form a management structure that can adapt quickly to a changing environment and, to further clarify the managerial responsibilities and role of each Director, the term of office for a Director is one year. Candidates for Director are selected by the Board of Directors from among those human resources with the right skills and qualities to realize the management philosophy of the Mitsubishi Chemical Group and fulfill its social responsibility, are proposed at the Shareholders' Meeting, and are elected through a shareholders' resolution.

#### **Executive Management Committee**

The Executive Management Committee assists the President in making decisions, deliberating important matters concerning business execution such as the investment and financing of MCC and the Mitsubishi Chemical Group. Any important managerial matters deliberated by the Executive Management Committee are executed pursuant to a resolution of the Board of Directors.

As a general rule, the Executive Management Committee meets twice a month. The committee is comprised of the President, Directors, Executive Officers responsible for divisions and departments, and Corporate Auditors.

#### Corporate Auditors and Board of Auditors

MCC has Corporate Auditors and a Board of Auditors to audit and supervise its activities. Besides attending meetings of the Board of Directors and other important meetings and committees, the Corporate Auditors verify information contained in reports from Directors and other relevant parties, investigate the status of the Company's business and property, and audit the execution of duties by Directors. As a general rule, the Board of Auditors meets once a month to discuss and pass resolutions on important matters concerning audits based on audit guidelines. As of the end of June 2013, MCC has four Corporate Auditors, including two external auditors. The Accounting Auditor and Audit Office cooperate closely when performing audits, exchanging opinions on their respective audit processes and audit results.

#### Meetings, etc.

The Company has a number of committees and meetings, including the Compliance Promotion Committee, the Risk Management Committee and the RC Promotion Meeting. Important matters are referred or reported to the Board of Directors or the Executive Management Committee.

MCC also has local labor unions at its head office (includes branches and branch offices) and each of its offices, and these local labor unions form the Mitsubishi Chemical Labor Union Federation. Twice a year, the Company holds a central management conference for labor and management, giving both sides the opportunity to discuss management issues. Management headed by the President, union members led by the Labor Federation Chairman, and the representatives of each local labor union attend the conference and share their opinions candidly and honestly.

## Management Structure Internal Controls

#### Basic Policy and Status of System Introduction

Mitsubishi Chemical Corporation (MCC) strives to strengthen and thoroughly implement its internal control system based on the basic policies decided by the Board of Directors. The Board of Directors inspects the implementation status of these basic policies at the end of every fiscal term and revises any specifics of the policies as needed.

Under APTSIS15, the new five-year mid-term management plan which started in April 2011, Mitsubishi Chemical Holdings Corporation (MCHC) is promoting the development of strategies for priority areas in global operations, targeting an overseas sales ratio of at least 45%. As part of this, MCHC established wholly owned subsidiaries, setting up Mitsubishi Chemical Holdings America, Inc. in the United States in November 2010, Mitsubishi Chemical Holdings (Beijing) Co., Ltd. in China in January 2011, and Mitsubishi Chemical Holdings Europe GmbH in Europe in November 2012. In this manner, every effort is being made to build risk management and compliance structures, and to develop and strengthen integrated management structures for each area that encompasses a broad range of activities, including the management, supervision and guidance of internal audit structures.

Through MCHC's subsidiaries in each area, MCC is committed to further bolstering its internal control initiatives taking into consideration the local conditions of each Group company.

Taking into account the results of past evaluations of internal control system implementation and operating status, the Company will continue to conduct these evaluations with the aim of making them more efficient and effective. In addition, by improving internal control systems and standardizing procedures, we will seek to raise procedural efficiency and promote rationalization.

# Management Structure Risk Management

#### Policy

#### **Basic Policy**

In May 2006, the Mitsubishi Chemical Group (MCC Group) implemented the Mitsubishi Chemical Group Risk Management Policy based on the Mitsubishi Chemical Holdings Corporation (MCHC) Group Risk Management Basic Policy. The purpose of this policy is to prevent major risks associated with business activities and to minimize damage should such risks materialize, so that the MCC Group can fulfill its social responsibility and bolster its corporate value.

#### Policy

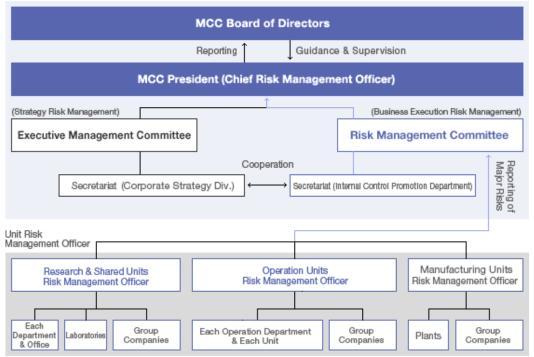
#### Risk Management Structures

The MCC Group has built a risk management structure headed by the President as Chief Risk Management Officer. The Chief Risk Management Officer is responsible for developing the Mitsubishi Chemical Group Risk Management System and ensuring that it operates and manages risk effectively, thereby helping maintain and enhance the corporate value of the entire MCC Group. Meanwhile, Executive Officers in charge of research, manufacturing, sales, technology and other units develop and operate the risk management systems of their assigned units or MCC Group companies, and provide them with guidance and supervision on risk management.

The Risk Management Committee, established to assist the Chief Risk Management Officer, in principle meets once a year. The Risk Management Committee, comprising the Chief Risk Management Officer, executives responsible for unit risk management and Corporate Auditors, deliberates important matters relating to the development and operation of the Mitsubishi Chemical Group Risk Management System, management targets for major risks, risk control measures, and other matters related to risk management. The Risk Management Committee also reports progress in these activities to MCC Board of Directors and MCHC Chief Risk Management Officer on a regular hasis

The Risk Management Committee also monitors the development and operation of risk management systems at each MCC Group company and shares with other Group companies any information concerning critical risks that it identifies. At the same time, uniform measures are being undertaken to eliminate or reduce risk.

#### Risk Management Structure of the MCC Group



Mitsubishi Chemical: MCC

#### Policy

#### Identification of Major Risk

At least once a year, each of Mitsubishi Chemical Corporation (MCC)'s units and MCC Group companies identify and assess the risks they are facing and introduce risk control measure plans as a part of efforts to carry out risk management in a definitive manner.

Risks are identified in three categories – external risks from sources like natural disasters, market trends and the legal and regulatory environment; business process risks from sources such as production, financing, and marketing activities; and internal risks from sources like governance and human resource factors. Each risk is then assessed in terms of its impact—for example, economic loss, human loss, or loss of public trust—and its frequency of occurrence. An order of priority is determined for each risk, and countermeasures for each risk are studied

In addition, steps have been taken to consider important risks extracted from a top management perspective as well as other risks that are deemed to require attention in light of social conditions, and to clarify risks that have a major impact on the MCC Group as they become evident from fiscal 2010. The details of these risks as well as countermeasures are being confirmed and verified by the Risk Management Committee.

Among those risks that were identified, we placed particular emphasis on putting in place business continuity plans (BCPs) for important products, taking steps to prevent major compliance violations, while addressing risks relating to overseas business expansion, the transport of hazardous materials, and information management throughout fiscal 2012. Moreover, we channeled our energies toward building risk management networks in Asia while collaborating with the MCHC and engaging in such activities as the selection of important products for which BCPs should be put in place on a priority basis. Furthermore, the status of implementation was reported to the Management Committee of MCHC.

In fiscal 2013, we will continue to strengthen our internal control promotion systems in connection with overseas Group companies. We will also take steps to minimize risks on a priority basis encompassing such areas as efforts to put in place BCPs, secure the safety and security of manufacturing and transportation, and strengthen information security while pushing forward and further entrenching the MCC Group's risk management system.

# Policy

# Formulating and Putting into Effect a Business Continuity Management Systems (BCMS)

MCC took steps to formulate a Business Continuity Plan (BCP) to minimize the impact on its customers and business partners while ensuring ongoing business and a quick restoration of operations in the event of a major incident.

In fiscal 2007, we began formulating our BCPs through the selection of model products from product groups whose production would be threatened by the impact of a major earthquake in Japan's Tokai or Tonankai regions. In fiscal 2008, responding to the international standardization of BCP and demands from customers, BCPs formulation guidelines were created, establishing basic ideas on the MCC Group's requirements for BCP preparation.

In addition, we also drew up a manual of countermeasures to minimize damage in the event of an earthquake with its epicenter in the Tokyo metropolitan area or a new influenza pandemic, and formulated BCPs to enable departments to continue important operations during such a crisis. Based on the lessons we learned from the Great East Japan Earthquake in March 2011 about systems to confirm employees' safety and to enable communication, we are overhauling our BCPs. As part of this, we undertook a review of our BCPs. This included providing for alternative arrangements for all essential head office functions so that we can continue appropriate operations in the event that our head office suffers extensive damage from an earthquake with its epicenter in the Tokyo metropolitan area or Nankai Trough as is predicted.

In fiscal 2012, we considered measures that draw on ISO 22301 issued in May 2012 and drew up specific manuals regarding the transfer of control of head office functions. In January 2013, we conducted drills predicated on this transfer of head office function control and pushed forward steps to build a structure and systems that would enable us to fulfill our responsibilities with respect to the supply of important products to businesses and related parties thereby maintaining core social function in the event that our head office is damaged.

Looking ahead, we will put in place BCPs for individual and specific important products. We will also strengthen and operate BCMSs that will allow proper management.

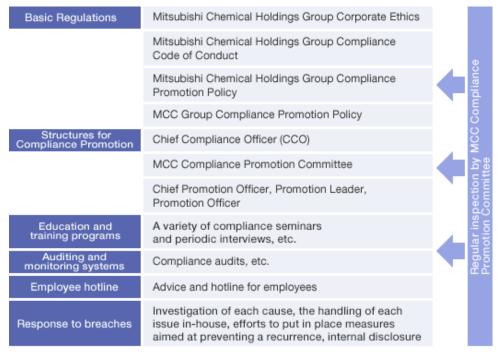
# Management Structure Compliance

Recognizing "Compliance" (compliance with laws and corporate ethics) as fundamental to business survival, the MCC Group is working to strengthen compliance as a top priority management issue.

Accordingly, the MCC Group has in place a Compliance Promotion Program that comprises among other things basic regulations concerning compliance, structures for compliance promotion, education and training programs, auditing and monitoring structures as well as an employee consultation and reporting hotline. Based on this program, the MCC Group works to ensure appropriate operations and management.

Our goal is to live up to the expectations of our stakeholders by maintaining a strong sense of corporate social responsibility, ensuring strict compliance in our day-to-day operations, and providing valuable goods and services to society.

#### Compliance Promotion Program



Mitsubishi Chemical Corporation: MCC

#### Fostering compliance awareness

We continue to conduct a variety of training and education activities in order to further instill an awareness toward compliance throughout the Company.



A seminar in China

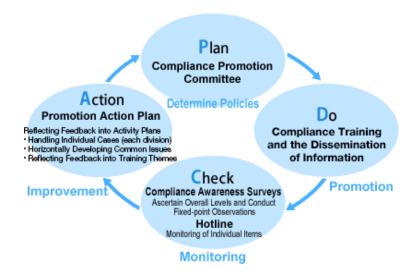
In fiscal 2012, we took steps to upgrade and bolster various training programs in accordance with guidelines determined by the Compliance Promotion Committee. We also conducted training for compliance promotion officers including Group companies as well as compliance promotion leaders. In addition to group discussions and other initiatives that allow participants to take ownership in the development and conduct of compliance programs, we placed particular attention on compliance and online training for the benefit of all employees. From an

overseas perspective, steps were taken to coordinate with MCHC. Local training in Chinese and English was undertaken while working closely with the compliance promotion officers of Group companies in China, Taiwan, Singapore, Thailand, Indonesia, and India.

Approximately 430 managerial-level employees attended training sessions from a total of 35 companies.

Also to check the development of a compliance culture, we conducted our seventh compliance perception survey among employees of MCC and domestic Group companies, receiving responses from some 25,500 employees. Similarly, we conducted our fourth compliance perception survey among employees of overseas Group companies, using questionnaires prepared in Chinese, Indonesian, and English, and received replies from some 2,360 employees. A detailed analysis was undertaken of the results of surveys and questionnaires. This analysis is fedback to all appropriate parties and details reflect in training program themes going forward in a bid to deepen understanding. Looking at the results of compliance perception survey conducted in fiscal 2012, we were able to uncover that efforts to create a working environment that allows employees to speak freely were insufficient. Accordingly, we are taking ongoing steps to further strengthen our efforts in this area.

#### The PDCA Flow



# Management Structure Basic Regulations

The Mitsubishi Chemical Group works to promote compliance based on compliance regulations shared by members of the Mitsubishi Chemical Holdings Group, such as the Mitsubishi Chemical Holdings Group Charter of Corporate Behavior and the Mitsubishi Chemical Holdings Group Compliance Code of Conduct.

Overseas, the Mitsubishi Chemical Group is ensuring and strengthening compliance by translating into local languages (including English, Chinese, Indonesian and Thai) the Mitsubishi Chemical Holdings Group Charter of Corporate Behavior—which serves as basic regulations shared Groupwide—and codes of conduct compatible with individual countries' laws and social norms.

#### Mitsubishi Chemical Holdings Group Charter of Corporate Behavior

Based on our Group philosophy, "Good Chemistry for Tomorrow—Creating better relationships among people, society, and our planet.", we shall contribute to the realization of KAITEKI through our corporate activities. The term KAITEKI signifies achieving true sustainability where we create comfort for people as well as for society and the Earth.

To this end, we shall act based on the concept of MOS (Management of Sustainability) with sound ethics and good common sense in every aspect of our corporate activities as outlined below, to ensure sustained development as a corporate group that engenders society's trust.

#### Awareness and Responsibility

We shall contribute to the realization of KAITEKI through our business with a keen sense of corporate social responsibility, based on the fundamental understanding that the foundation of our corporate activities is society's trust and confidence in us.

#### Accountability and Transparency

We shall, recognizing the importance of accountability in corporate activities, preserve transparency in such activities, disclose information appropriately, and always maintain a stance of openness, both internally and externally.

#### Legal Compliance and Fairness, Equitability, and Integrity

We shall comply with laws and international standards and shall hold ourselves to the highest ethical conduct at all times. In addition, we shall always adopt an attitude of fairness, equitability, and integrity towards customers, business partners, shareholders, government agencies, local communities, and other stakeholders. This attitude shall also apply to our dealings with each other.

#### Valuing Stakeholders

We shall respect and communicate closely with all stakeholders including customers, suppliers, shareholders, business partners, government agencies, local communities, and employees, and consider the outcomes of such communication in our corporate activities.

#### Respecting Human Rights

We shall respect the dignity and rights of all people, and shall not discriminate against people unfairly on the basis of race, sex, religion or other protected status. We shall also expect our suppliers and other contractors to refrain from any infringement of human dignity and rights or discriminatory practices.

#### **Employment and Labor**

We shall not engage in any form of forced, compulsory, or child labor, and shall require our suppliers and other contractors to adhere to the same standards. Mitsubishi Chemical Holdings Group managers at all levels shall respect human diversity and create working environments where employees can exercise their abilities to the utmost in safe and healthy settings, in order to make optimal use of human resources. Managers shall build sound relations with employees through close dialogue, and shall respect employees' rights, including freedom of association and the right to collective bargaining.

#### **Environment and Safety**

We shall strive to reduce environmental impact and protect the environment and ecosystems in our operations, in addition to supplying environmentally friendly products and services. Recognizing that the health and safety of our employees and communities in which we do business form the foundation for the very existence of our company and that we have a corporate social responsibility to assure the health and safety of others, we shall continue to ensure safe business activities.

#### Fair Business Practices

We shall conduct business fairly and sincerely, adhering to ethical principles and refraining from unfair trade practices and any form of bribery or corruption, to contribute to sound social and economic development through fair competition in the market. We shall refuse to work with any group, organization or individual engaged in unlawful activities, and under no circumstances shall we have any relations with anti-social influences.

#### **Customer Satisfaction**

We shall constantly strive to satisfy our customers by keeping the promises made in contracts with them, doing our utmost to ensure the safety and quality of the products and services we supply, and engaging in dialogue and R&D.

#### Information Management

We shall, in the course of our corporate activities, maintain appropriate records and make reports as required by law and regulation. We shall manage information carefully to prevent leakage of confidential data relating to customers, business partners, or our own business.

#### Science and Technology

We shall advance R&D by bringing together outstanding researchers from Japan and overseas, and contribute to the realization of KAITEKI through innovation. We shall recognize the importance of our own and others' intellectual property rights and respect such rights.

#### Community Involvement

We shall contribute broadly to society through our businesses. In addition, we shall respond to the desires and expectations of local communities by enhancing our understanding of their cultures and customs and acting as a good corporate citizen.

#### **Shared Standards**

Mitsubishi Chemical Holdings Group managers shall recognize their responsibility to embody the spirit of this charter and shall ensure that employees are fully aware of its content. We shall expect our suppliers and other business partners to share all the standards set out in this charter, including but not limited to standards relating to human rights, employment, and labor.

### <Appendix>

- 1. This charter shall apply to all members of the following companies:
  - (1) Mitsubishi Chemical Holdings Corporation
  - (2) Mitsubishi Chemical Holdings Corporation subsidiaries (the juridical person, the management of which is controlled, or, the majority of all votes in which are owned, directly or indirectly, by Mitsubishi Chemical Holdings Corporation)
  - (3) Companies where Mitsubishi Chemical Holdings Corporation is otherwise deemed to directly or indirectly take a leadership role on the grounds of its shareholding ratio, involvement in personnel management, etc.
- This charter shall be revised or repealed by resolution of the Mitsubishi Chemical Holdings Corporation board of directors. Note, however, that minor changes may be decided by the president of Mitsubishi Chemical Holdings Corporation.

### Mitsubishi Chemical Holdings Group Compliance Code of Conduct

At the MCHC Group, the meaning of the word "Compliance" goes much further than simply complying with laws and regulations. It means compliance with social rules and norms in a broad sense, including Charter of Corporate Behavior. We must develop a strong sense of corporate social responsibility, comply rigorously with social rules and regulations and live up to the expectations of our stakeholders, including customers, suppliers, vendors, consumers, investors such as shareholders, business partners, employees and local communities.

#### Chapter 1: Awareness and Responsibility

#### 1-1: Awareness of Social Responsibility

Recognizing corporate social responsibility, we will strive to win public trust by contributing to the affluence and comfort of society by offering socially beneficial goods and services based upon the expertise and technologies we have developed in various fields of endeavors, including chemistry.

#### 1-2: Responsible Care for the Environment

We will commit ourselves to the protection of the environment and endeavor to reduce environmental burden in the course of all our business activities, including promotion of resource and energy conservation, waste reduction, reuse and recycling, as well as environmental conservation and development of its technologies.

#### 1-3: Responsible Care for Safety

Recognizing safety assurance as a corporate social responsibility, we will place top priority on safety in the course of all our business activities, which include ensuring the safety of all our products and services, including adequate handling of chemical substances, as well as operational safety.

#### Chapter 2: Fairness, Equitability and Integrity

#### 2-1: Respect for the Dignity and Rights of Individuals

We will respect individual human rights and character. We will abstain from any conduct that undermines individual dignity, such as discrimination against others on the basis of race, ethnicity, national origin, religion, gender, disability, disease and social status; we will also avoid language and behavior that offends others, such as sexual harassment. We will also adhere to internationally recognized norms, eschew forced labor in all of its forms, and support the effective abolition of child labor.

#### 2-2: Creating a Motivational Workplace

We will strive to create a motivational workplace that provides job satisfaction to Group members through the nurturing of respect for diverse personalities and values, the creation of a free and open-minded working environment in which individual employees can manifest their best qualities, and the fostering of mutual trust through fair and equitable personnel treatment.

#### 2-3: Customer Relations

We will listen to the voices of our customers and take a pro-customer approach so that we will be able to respond with utmost sincerity and offer safe and high-quality products and services.

#### 2-4: Partnership/Vendor Relations

Based on the basic understanding that all business partners and vendors are our partners in conducting business, we will endeavor to foster mutual trust through fair and equitable transactions.

#### 2-5: Ethical Business and Government Relations

We will abstain from illicit political donations, illegal incentives and bribe-giving to politicians and public servants, and strive to maintain healthy and transparent relations with political and governmental organizations at all times.

#### 2-6: Severing Ties with Anti-Social Influences

We will take a firm stand against anti-social influences that disrupt social order and threaten sound activities, and never involve ourselves in malfeasance or anti-social conduct. We will not provide any favors, including financial, to anti-social influences, under any circumstances whatsoever.

#### Chapter 3: Strict Compliance

#### 3-1: Compliance with Laws and Regulations

We will conduct business by adhering to high ethical standards and sound common sense, and comply with all relevant laws and regulations in and outside of Japan, socially-recognized rules and standards, agreements and promises we have entered into with our customers, vendors, business partners and local communities, as well as our corporate rules and manuals.

#### In particular:

- i We will comply with relevant administrative laws and regulations applicable to our businesses and perform procedures required by such, including obtaining official approval and licenses and notification; and reporting properly and in complete detail.
- ii We will comply with the Antimonopoly Act\* and other relevant laws and regulations, abstain from illegal conduct such as forming cartels, engaging in bid-rigging and abusing one's dominant bargaining position, and participate in fair and free competition in the marketplace.
- iii We will comply with the Unfair Competition Prevention Law\* and other relevant laws and regulations, and shall not pursue our commercial interest by improper means such as illicit acquisition of others' trade secrets, or acts that may be detrimental to others' commercial interests.
- iv We will comply with the Subcontract Act\* and other relevant laws and regulations and abstain from engaging in conduct that may be detrimental to subcontractors' interests, such as delays in payment.
- v We will comply with the Foreign Exchange and Foreign Trade LawAct\* and other relevant laws and regulations, and properly handle the import/export of raw materials, products, and other items. We will also abstain from exporting products and technologies that may destabilize international peace and security.
- vi In addition to laws and regulations pertaining to accounting procedures and taxes, we will abide by generally accepted accounting standards as we implement proper accounting procedures, ensure the reliability of our financial reports, and make appropriate tax payments.
- vii We will comply with the Labour Standard Law\* and other relevant laws and regulations, and strive to maintain pleasant working conditions including occupational safety and health.
- viii We will not engage in fraudulent transactions prohibited under the Financial Instruments and Exchange Act\* and other relevant laws and regulations, including the trading of stocks and corporate bonds by taking advantage of undisclosed information one has come to know in the course of one's work.
- ix We will correctly record business transactions and activities, including the signing of contracts, and properly manage and maintain the records in accordance with relevant laws and regulations as well as relevant internal rules

Note: The names of individual laws referred to in this Chapter are those then effective in Japan and, therefore, please replace them with corresponding laws and regulations of your country.

#### 3-2: Protection of Intellectual Property

We will endeavor to develop innovative technologies, products and services, and obtain intellectual property rights and commercialize them. In this process, we shall not infringe upon the intellectual property owned by other parties, including patents, utility models, designs, trademarks and copyrights.

#### 3-3: Protection of Personal Data

We will strictly control personal data pertaining to employees, customers and other stakeholders that we may have access to in the performance of our duties. Unless personal consent is secured, we will not disclose or leak any personal data to third parties or other employees who have no need to acquire the information in terms of business, and, at the same time, will not use it for purposes other than the original intent.

#### 3-4: Confidentiality

Strict control must be maintained over trade secrets and other confidential information belonging to the company or to third parties (including customer information and technical know-how) that one might obtain in the performance of one's business duties. Without the express permission of the proper authorities, such confidential information must never be disclosed or leaked to third parties or to internal staff who have no legitimate need for it, and must never be used for purposes other than the original intent.

#### Chapter 4: Prudence

#### 4-1: Prudent Conduct

In our relationships with customers, vendors and other business partners, we will not engage in misleading acts such as offering or receiving business entertainment and gifts that go beyond business norms or exceed the bounds of limits acceptable to the industry.

#### 4-2: Appropriate Use of Corporate Assets

Corporate assets and expenses, both tangible and intangible, must be used properly to achieve corporate business objectives and must not be used for personal purposes.

#### 4-3: Appropriate Use of Information Systems

Pursuant to relevant internal rules, corporate networks and operation software will be used only for business operations authorized by the company. Wrongful acts such as hacking into the information system, damaging, falsifying or altering data, or making unauthorized use of computer software, are not permitted.

#### 4-4: Preventing Conflict of Interest

We shall not exploit our official positions and authority or information we may have access to in the performance of our duties to engage in acts that benefit ourselves or third parties, nor shall we involve ourselves in activities that may compete against our corporate businesses, without corporate permission.

#### 4-5: Prohibition of Political/Religious Activities at the Workplace

We will not engage in political or religious activities at the workplace, including solicitation on behalf of political or religious groups or requests for votes, without corporate authorization.

#### 4-6: Discontinuance of Empty Formalities

Except for those within the acceptable business norms, in-house and inter-Group gift-giving and exchange of gifts and items should be shunned in view of abolishing empty formalities.

### Chapter 5: Transparency and Openness

# 5-1: Co-existence with Local Communities

We will strive to deepen our understanding of the cultures and customs of the countries and communities in which we operate our businesses, respect their social norms, and harmoniously co-exist with local communities as good corporate citizens through participating in activities that contribute to society.

#### 5-2: Appropriate Disclosure of Information

As a corporate group open to society, we will maintain the transparency of our activities and appropriately disclose relevant information to promote public understanding of our activities. Pursuant to relevant laws and regulations, we will also accurately and adequately disclose financial data and information pertaining to the state of our business activities to shareholders and investors.

#### 5-3: Open Workplace

We will maintain an open environment at the workplace where members feel comfortable about discussing anything. If, at the workplace, one learns of acts committed that violate laws and regulations or transgress this Code of Conduct, or the possibility of such acts, one must not conceal or neglect it but report it to the Company for a solution through the management or other systems, such as the Compliance Hot Line.

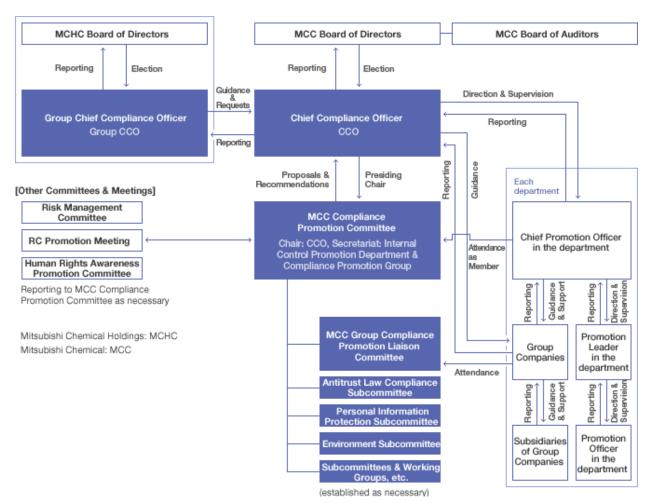
# Management Structure Promotional Structures

The Board of Directors of Mitsubishi Chemical Corporation (MCC) appoints the Chief Compliance Officer (CCO) for the Mitsubishi Chemical Group (MCC Group). The CCO has the authority to direct and supervise MCC departments and Group companies in matters relating to compliance, and chairs the Compliance Promotion Committee. The CCO also reports to the Mitsubishi Chemical Holdings Corporation's (MCHC) CCO and Board of Directors on the status of compliance and important issues faced by the MCC Group.

The Compliance Promotion Committee deliberates on matters such as the basic policy for development and operation of the MCC Group's Compliance Promotion Program and the performance of the program. It also makes necessary proposals and recommendations to the CCO. Chief promotion officers, promotion leaders, and promotion officers who are responsible for promoting compliance in each department on a daily basis are also appointed. Their foremost mission is to ensure and promote compliance in their own departments.

To promote compliance in MCC Group companies outside Japan, we are striving to develop and strengthen our overseas compliance promotion structures and enhance related training programs in collaboration with Mitsubishi Chemical Holdings America Inc. (in the U.S.), Mitsubishi Chemical Europe GmbH. (in Europe), and Mitsubishi Chemical Holdings (Beijing) Co., Ltd. (in CHINA), and group companies designated as promotion leaders by MCHC (in Asia excluding CHINA).

#### Compliance Promotional Structures of the Mitsubishi Chemical Group



# Chief Compliance Officer (CCO)

The CCO is elected by a resolution of MCC's Board of Directors, and must report to the Board of Directors and the CCO of MCHC.

# Mitsubishi Chemical Compliance Promotion Committee

The Compliance Promotion Committee deliberates on matters such as the basic policy for the Compliance Promotion Program, the performance of the program, action taken in the event of a compliance violation, as well as the preparation, amendment and abolition of regulations. It also makes proposals and recommendations to the CCO.

# Chief Promotion Officers, Promotion Leaders, Promotion Officers

Every department of MCC has the chief compliance promotion officer, the compliance promotion leader, and the compliance promotion officer. Their job is to ensure and promote compliance within their respective departments by upgrading compliance promotion structures.

# Management Structure Supervision & Reporting

# **Auditing & Monitoring Structures**

Mitsubishi Chemical Corporation (MCC) gains an understanding of the status of compliance at individual workplaces by conducting an annual Control Self Assessment (CSA), targeting each of MCC's departments, offices, branches, branch offices, and Group companies.

The Mitsubishi Chemical Group has also been conducting a Compliance Perception Survey among employees of MCC and domestic Group companies since fiscal 2006, and a Compliance Perception Survey among employees of overseas Group companies since fiscal 2009, to gain an insight into their actual compliance culture, employees' awareness and views of compliance, and the development of compliance

# Employees' Hotline

In fiscal 2002, the Mitsubishi Chemical Group established an employees' hotline, providing employees with a way to contact the Internal Control Promotion Department or an outside lawyer to seek advice or report possible compliance violations. The Group has since been working to ensure that the hotline is operated properly and employees know about it.

Anyone seeking advice or reporting a possible compliance violation is assured that the information they provide will be treated confidentially, they will not be subjected to disadvantageous treatment, and their privacy and human rights will be protected. An investigative team led by the Internal Control Promotion Department General Manager act upon the information provided. Any problems identified are dealt with and resolved promptly under the direction of the Chief Compliance Officer (CCO). In fiscal 2012, the hotline received 45 reports and inquiries, of which 8 were personnel-related, 25 were working environment-related, 4 were legislation-related and 8 related to other matters.

MCC is committed to making the hotline user-friendly, using a toll free hotline number and surveying people who have used the hotline to check that they have been properly protected.

### Response to Compliance Violations

In the event of a compliance violation, an appropriate initial response is made to rectify or otherwise deal with the situation. In addition, an investigation to determine the cause of the violation is carried out and efforts to prevent a recurrence are made. Any employee who has committed a compliance violation is dealt with as necessary, possibly with disciplinary action in accordance with the Employee Work Regulations or other relevant regulations of the Group company to which the employee belongs. If it is deemed necessary to prevent a recurrence of the compliance violation, the CCO may disclose facts of cases and details of the disciplinary action within the Group, on condition that privacy and human rights are taken into consideration.

Management Structure

# **Intellectual Property Management**

# Intellectual Property Protection and Prevention of Infringements

Mitsubishi Chemical Corporation (MCC) will endeavor to develop innovative technologies, products and services and obtain intellectual property rights and commercialize them. In this process, we are taking steps to avoid infringing on intellectual property owned by other parties, including patents, utility models, designs, trademarks and copyrights, while legally protecting MCC's intellectual property.

🏲 To Intellectual Property page. 📮

# **Responsible Care (RC) Activities**



# Policy

# **Basic Approach**

In our role as a chemical corporation group with established business bases within Japan and abroad and supplying diverse materials, products and systems to a wide range of industries, stably supplying products and ensuring their quality and safety, offering safe and hygienic work environments and promoting businesses with lower environmental load are among our most important social responsibilities.

Based on this philosophy, the Mitsubishi Chemical Group has participated in Responsible Care (RC) activities, which are self-initiated activities by the chemical industry for ensuring environmental conservation, health, and safety, since the foundation of the Japan Responsible Care Council in 1995. The five mainstay activities are process safety and disaster prevention, occupational safety and health, environmental preservation, quality assurance and chemical safety. By conducting activities that conform to the Mitsubishi Chemical Group RC Promotion Policy, we aim to build relations based on trust with the public and help in developing a sustainable society.

### Mitsubishi Chemical Group RC Promotion Policy

- 1. Environment and safety are core focuses of our business activities Find out more
- 2. Committed to customer confidence and quality assurance Find out more
- 3. Targeting zero accidents and workplace injuries Find out more
- 4. Working to minimize waste and harmful chemical substance emissions Find out more
- 5. Working to conserve resources and energy Find out more
- 6. Developing technologies and products that contribute to the environment and safety Find out more
- 7. Working to strengthen our public reputation Find out more

### Mitsubishi Chemical Group companies promoting RC Activities

- © denotes subsidiaries of Mitsubishi Chemical as stipulated by the Japanese Companies Act, for which Group performance data are collected and published on the Social Responsibility page
- O denotes (overseas) subsidiaries of Mitsubishi Chemical as stipulated by the Japanese Companies Act, for which Group performance data are collected on the Social Responsibility page

Unmarked companies indicate those outside the scope of Group performance data collection on the Social Responsibility page.

\* To further ensure promotion of Responsible Care (RC) activities, among domestic and overseas Mitsubishi Chemical Group companies, principally companies with operating divisions that handle chemical products participate as Mitsubishi Chemical Group companies promoting RC Activities.

#### Performance products domain

- **OMRC** Polysaccharide Co., Ltd.
- **Shinryo** Corporation
- OChuo Rika Kogyo Corporation
- ONippon Kasei Chemical Co., Ltd
- ONippon Synthetic Chemical Industry Co., Ltd.
- Mitsubishi Chemical Analytech Co., Ltd.
- ⊚Mitsubishi-Kagaku Foods Corporation
- OMitsubishi Kagaku Media Co., Ltd.
- OChangshu MC Ionic Solutions CN Co., Ltd.
- OMC Ionic Solutions UK, Ltd.
- OMC Ionic Solutions US, Inc.
- OMitsubishi Chemical Infonics Pte Ltd.
- OMitsubishi Kagaku Imaging Corporation
- OQingdao Anode Kasei Co., Ltd.
- OTai Young Chemical Co., Ltd.
- OTai Young High Tech Co., Ltd.
- **OResindion SRI**

#### Healthcare domain

- **Mitsubishi Chemical Medience Corporation**

#### Industrial materials domain

- ©Echizen Polymer Co., Ltd.

Kashima-Kita Joint Electric Power Corporation

Kashima Motor Co., Ltd.

Kawasaki Kasei Chemicals Ltd.

OKansai Coke and Chemicals Co., Ltd.

J-Plus Co., Ltd.

TM Air Co., Ltd.

⊚Japan Polychem Corporation

Japan Unipet Co., Ltd.

Mitsubishi Engineering-Plastics Corporation

Yupo Corporation

- **©RHOMBIC CORPORATION**
- OAPCO (Suzhou) Co., Ltd.

OBeijing Ju-Ling-Yan Plastic Co., Ltd.

OMCC Advanced Polymers (Ningbo) Co., Ltd.

OMitsubishi Chemical India Private Ltd.

OPt. Mitsubishi Chemical Indonesia

OMitsubishi Chemical Performance Polymers, Inc.

OMitsubishi Chemical Polimeros de Desempenho Ltda.

ONingbo Mitsubishi Chemical Co., Ltd.

Sam Nam Petrochemical Co., Ltd.

Sam Yang Kasei Co., Ltd.

OSunprene (Thailand) Co., Ltd.

#### Others

- **Mitsubishi** Chemical Engineering Corporation
- **Mitsubishi** Chemical Group Science and Technology

Research Center, Inc.

- Mitsubishi Chemical High-Technica Corporation
- Mitsubishi Chemical Logistics Corporation

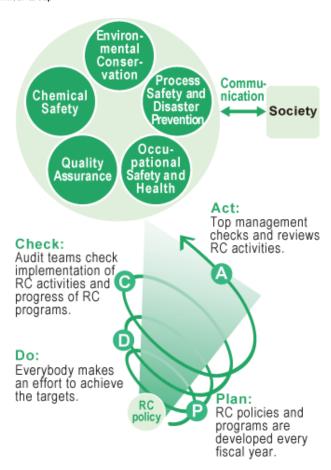
# Responsible Care Activities RC Management

# Policy

# Responsible Care (RC) activity promotion organization

The annual Mitsubishi Chemical RC Promotion Committee is chaired by an executive officer in charge of environmental safety and quality assurance, with those attending meetings including heads of manufacturing, research, operations and common divisions. The committee examines outcomes of initiatives pursued on the basis of the current fiscal year Responsible Care action plans for Mitsubishi Chemical Corporation (MCC) and its Group companies, deliberates on the plan for the next fiscal year, and makes decisions in regard to relevant proposals for inclusion in the Executive Management Committee agenda. After that, an Executive Management Committee meeting is held to examine and finalize Responsible Care action plans on the meeting agenda that have been drawn up for MCC and its Group companies. The meeting is chaired by the MCC president with executive officers in charge of manufacturing, research, operations and common divisions also in attendance. Finally, on the basis of Responsible Care action plan content finalized by the Executive Management Committee, respective MCC divisions and Group companies draw up their own action plans for engaging in Responsible Care initiatives, tailored to their operational specifics, industries and business segments.

This framework for promoting Responsible Care practices is used by MCC and its Group companies in their efforts to check that Plan-Do-Check-Act (PDCA) cycle procedures are applied to Responsible Care initiatives, and in ensuring that improvements are implemented as needed.



RC promotion organization at Mitsubishi Chemical and the Mitsubishi Chemical Group



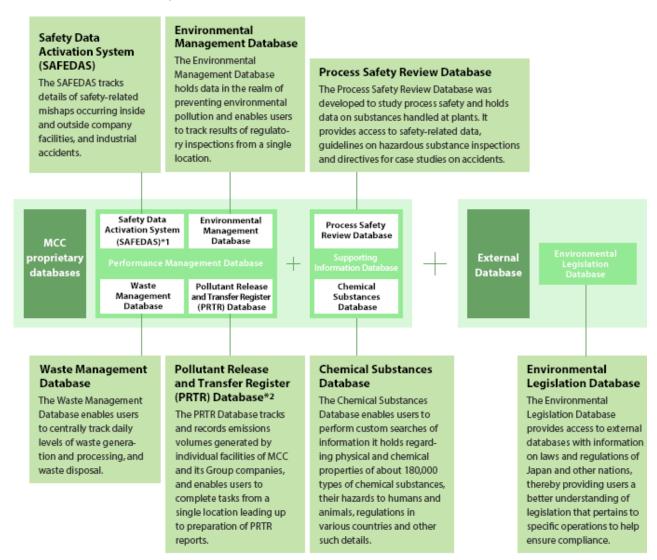


# **Developing databases**

# for environmental conservation, safety and security

Mitsubishi Chemical configures the Environmental Protection and Safety Database as a system to support RC activities. Information related to RC is shared and managed using a database at each stage from product development to manufacturing.

#### Environmental Protection and Safety Database



- \*1 The Safety Data Activation System (SAFEDAS) provides access to information pertaining to security and safety.
- \*2 Pollutant Release and Transfer Registers (PRTRs) are systems designed to provide notification on releases and transfers of chemical substances. They offer a mechanism for ascertaining, aggregating and disclosing data on sources of hazardous chemical substances, volumes released into the environment, and details on such substances contained in waste materials removed from facilities.

# Policy RC audit

MCC management follows progress made with Responsible Care initiatives implemented by MCC and its Group companies. This entails performing audits that take a hard look at Responsible Care practices of respective manufacturing and research facilities, geared toward their ongoing improvement.

In fiscal 2012, Responsible Care audits were conducted at six MCC business locations and two research facilities. The auditors provided guidance for further improvements on the basis of audit findings confirming progress made toward addressing issues identified in audits the prior fiscal year, and verifying moves toward achieving objectives set forth in fiscal year Responsible Care action plans and implementation of operational safety controls. The auditors also found no instances of legal violation upon review of compliance with environmental laws and regulations by the plants and research facilities inspected.

Audits were also conducted at 14 business sites of Group companies, 11 in Japan and three overseas, confirming that every one of those entities is pursuing specific strategies to promote Responsible Care practices and ensure full regulatory compliance.

Through these audit activities, the MCC Group is making progress in improving safety levels.

# Responsible Care Activities Process Safety and Disaster Prevention

Policy

# Promoting priority measures for zero facility-related accidents

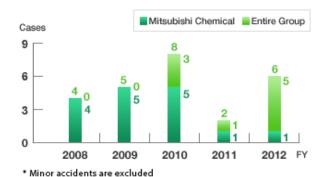
**MOS Indexes** 

C-3: Recognition of corporate trust > Find out more

Fully aware that safety must lie at the core of management, MCC pursues process safety and disaster prevention initiatives as one of its five Responsible Care mainstay activities undertaken on the basis of our Corporate Philosophy, "Good Chemistry for Tomorrow." In fiscal 2012, we engaged in process safety and disaster prevention efforts redressing weakness of respective workplace, under our goal targeting zero serious facility—related accidents, in turn premised on our overriding policy of prompting safety—first awareness with respect to process and occupational safety, as set forth in the APTSIS 15 medium—term management plan. In this regard, we encouraged employees in all of our workplaces to voluntarily engage in distinctive yet effective efforts in the realm of process safety and disaster prevention, involving three—pronged initiatives toward such ends as: 1. Developing effective and persuasive measures to prevent the recurrence of accidents and serious problems, 2. Taking proactive actions to prevent the occurrence of accidents and serious problems, and 3. Enhancing awareness as professional managers and operators.

We pursued initiatives tailored to specific characteristics of individual workplaces to develop effective and persuasive measures to prevent the recurrence of accidents and serious problems, which involved determining both whether or not preventative measures taken were effective, and whether or not past measures taken to prevent accidents had remained effective without erosion of that efficacy. Moreover, we took positive steps toward taking proactive actions to prevent occurrence of accidents and serious troubles. These efforts were geared toward individual workplace specifics involving, for instance, initiatives to minimize risk exposure, and furthermore entailed properly conducting safety assessments before changing equipment or updating operating requirements. Meanwhile, follow-up measures are also taken on the basis of Responsible Care audits performed to check implementation of such initiatives. In fiscal 2012, these activities enabled MCC to keep the number of accidents and serious problems in check. Nevertheless, we intend to stick to the task of preventing initial and repeated incidents, particularly in view of a recent accidents occurring at Group companies stemming from improper equipment operation.

#### Number of facility-related accidents





# Increasing the safety of processes, facilities, and work procedures by developing SA and SR activities

When starting to manufacture new products or improve existing processes, the Mitsubishi Chemical Group conducts safety assessments (SA) on manufacturing methods and processes at each stage of development, construction, and operation. We also perform Safety Reviews (SR) of facilities and work procedures that use processes already in place.

Our SR entails reconfirmation, additional scrutiny and further assessment of process safety, whereby we meticulously inspect processes while ensuring priority is given both to creating opportunities for those involved to exchange views on the basis of their diverse perspectives and to confirm the technological validity of such processes. Launched back in 2003, SR program enables us to boost safety levels through a process that involves comprehensive, systematic and ongoing evaluation of potential risk factors, under the direction of SR Instructors<sup>1</sup> stationed at our plants and factories.

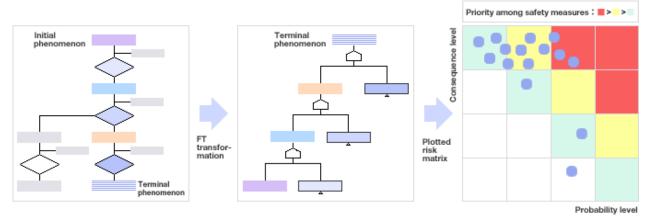
One of the evaluation methods used is HAZchart analysis, developed jointly by MCC and Mitsubishi Research Institute, Inc. This is an evaluation method that enables process designers and those in charge to use at worksites and make decisions based on quantitative findings. It facilitates processes from accident scenario formulation to a quantitative evaluation, allows worst-case scenarios to be easily assumed, enables common factors and phenomena to be easily handled, and offers a host of other features. By using supporting software, anyone can easily conduct safety evaluations.

HAZchart analysis is used at MCC in times of large-scale reform or establishment of plants with potential risks such as fire, explosion or leakage of toxic substances, and also at times of process SR at existing plants. In addition we are more effectively facilitating dialog in safety review settings now that we have begun using a significantly upgraded software package designed to support such initiatives.

In fiscal 2012, we began offering employees opportunities to learn HAZchart analysis through an on-the-job training (OJT) program offered at our respective plants. The objective of the OJT program is to encourage a more active approach to daily SA and SR efforts, while also increasing proficiency of our offices in performing such tasks and providing ongoing educational opportunities for engineers and technicians who are pivotal to the safety evaluation process. Looking forward, we intend to further introduce this program to companies throughout the entire MCC Group.

1 SR instructors: Senior staff and engineers with ample knowledge and experience in processes and safety measures assume this role. Instructors take part in SR for all plants conducted at the establishment they are in charge of. They identify and extract risks and utilizing risk analysis methods they conduct objective risk assessment in order to support efforts to reduce risk.

#### Flow of HAZchart analysis



Preparation of accident scenario using HAZchart > Transformation to FT<sup>2</sup> to calculate the occurrence probability > Results are plotted on the risk matrix for evaluation, based on which safety measures are formulated

2 Fault tree (FT): Also referred to as a failure tree diagram, this is used for analyzing the causal relationship concerning accidents in systems and calculating occurrence probability.



# Boosting plant reliability upgrading

### and disseminating fire- and explosion-prevention technologies

The Mitsubishi Chemical Group has established the Safety Engineering and Environmental Integrity Group within the Mitsubishi Chemical Group Science and Technology Research Center for enhancing existing technologies and measures related to safety.

The group works to upgrade technologies for risk forecast of chemical substances, verification and process risk evaluation in order to prevent fire, and explosion and leakage of harmful substances, in each phase from research and development (R&D) to manufacturing, transport, use and disposal of the product. At the same time, a safety technology database is being developed at the group and disseminated among all Mitsubishi Chemical Group companies.

The latest safety technologies and information are being used for enhancing plant reliability in R&D, and in Safety Assessment and Safety Review when a new plant is constructed or existing facilities are modified. In the event of an accident or major problem, the Safety Engineering and Environmental Integrity Group takes a scientific approach to investigating the causes of the incident and proposes measures to prevent potential recurrence.

In 2009, we began offering process safety education to middle-tier workers at each of our plants. Since that time, the program has been expanded to employees of MCC Group companies, delivering subject matter pertaining to safety evaluations involving substances handled on a daily basis, plant operations and other such assessment areas. We intend to continue offering the program with the aim of building on the capabilities of our workforce.

We have also been taking steps to train employees as chemical process safety engineers (CPSE) with the aim of building a workforce that understands rules and principles behind hazards inherent with chemical substances and chemical reactions, and also so that such employees can properly conduct Safety Assessments and Safety Reviews, and furthermore provide guidance to others in that process. With the aim of better developing employees' technical proficiency in this respect, we have them take part in small–group seminars where they learn about techniques that would otherwise be difficult to understand through self–study alone. While such opportunities are already being offered at certain plants, we plan to expand the program to all of our plants in the latter half of fiscal 2013.

#### **Activities and Achievements**

# Accident-prevention drills focusing on logistics safety

Along with Mitsubishi Chemical Logistics Corporation, Mitsubishi Chemical also works to prevent accidents in logistics processes. Accident prevention drills are conducted at least once a year at major logistics centers, assuming various logistics accidents. Issues revealed through the drills are addressed promptly in order to make improvements, thereby establishing organizations that can smoothly handle emergency situations.



Firefighting drill involving a simulated marine vessel fire

**Future Initiatives** 

# Strengthening earthquake countermeasures

Despite having been dealt a blow by the Great East Japan Earthquake of March 2011 and the ensuing tsunami, operators at the Mitsubishi Chemical Kashima Plant were able to execute safe shutdown of the entire plant thanks to safety measures already in place and earthquake—safety features designed into the facility. As such, the Kashima Plant was able to safely weather the tragedy without any industrial accidents, substance leakages or other such facility—related incidents.

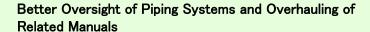
All MCC plants are drawing on experiences and lessons learned from the 2011 earthquake in coming up with disaster preparedness strategies tailored to site-specific circumstances and respective risk assessment findings.

Our approach to earthquake preparedness in order of priority involves:

- 1.) ensuring that buildings are designed to withstand earthquakes, with human life being a top priority,
- 2.) achieving operational safety and averting environmental accidents by ensuring safe plant shutdown, and
- 3.) maintaining plans for operational recovery, with the primary aim of supplying communities with essential products.

MCC persists with its commitment going forward of pursuing measures that align with Japan's policies and courses of action with regard to earthquakes, tsunamis and ground liquefaction.

# Front Runner



Tomonori Yamaguchi

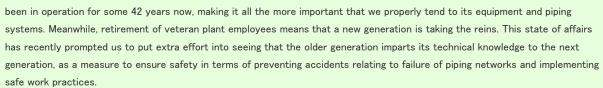
Group Manager,

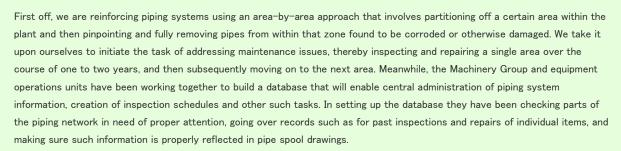
Technology Division, Manufacturing Department I

Mizushima Plant, Mitsubishi Chemical Corporation

#### Facilities Management and Safety Assurance Involving All Employees

The ethylene production unit at the Mitsubishi Chemical Mizushima Plant has





Given decreasing numbers of undesirable incidents in recent years compared to long ago, our younger employees have been drawing on the technical knowledge of our senior employees in efforts entailing crafting of comprehensive standard operating procedures and updating operating procedure documentation and checklists. Moreover, we have been drawing on these materials to implement robust risk forecasting and basic workplace practices, with particular emphasis given to discussions involving the entire workforce on methodologies for forecasting potential risks. Now, even when engaged in relatively minor tasks individual employees are to complete a risk assessment worksheet (referred to as a KY or kiken yochi worksheet), and otherwise use risk forecasting practices in terms of assessing threats to the safety of employees and hazards to the environment, while maintaining shop floor and control room communication.

### Open Workplace Atmosphere Helps Ensure Worker Safety

We have ample safety rules and established practices in place, yet these merely set the groundwork for ensuring personal safety. As such, all of our employees before embarking on tasks must furthermore make sure that they assess risks in a manner that enables them to perform their work on the basis of operational plans that ensure safe and consistent practices. Given such requirements, it is very important that we continually work day in and day out toward improving the workplace environment by creating a more open workplace atmosphere and enabling employees to exchange views objectively.



# MCC Initiatives to Promote Operational Safety and Disaster Prevention

The chemical industry experienced a succession of serious operational accidents over 2011 to 2012, and in December 2007 a major fire broke out in the Kashima Plant of MCC, resulting in the tragic deaths of four individuals. Since that time, in hopes of ensuring that such a disaster never happens again at any MCC facility, we have been working tirelessly on initiatives geared toward both preventing recurrence of similar incidents and furthermore averting all type of accidents. We are also training employees to ensure that our workforce will be prepared should a mishap occur, and are also operating emergency response mechanisms.

#### Initiatives of the Yokkaichi Plant

As one initiative to prevent any operational accidents, the Yokkaichi Plant has for some time been focusing its energies on reassessing chemical process safety.

Notably, a recent string of major accidents occurring at other companies in the industry, some of which have involved chemical processes triggering runaway reactions, has caused management of the Yokkaichi Plant to intensify cross-organizational efforts to prevent similar tragedies from occurring at the facility by drawing on these examples.



Training (cource) for chemical process safety engineers conducted by visiting instructor

Last year, in-house engineers, scientists and other company experts

took part in 22 review sessions held immediately after incidents involving other companies in the industry. Those in attendance were tasked with determining whether or not the Yokkaichi Plant has sufficient precautions in place to prevent similar incidents at the facility, and also engaged in follow-up investigations on such matters.

The review and investigation efforts were extensive, delving beyond chemical processes to also encompass various other relevant aspects such as plant facilities and operational controls, and confirmed an absence of issues to address in terms of current production processes and other operational aspects of the plant. Even given these positive findings, management has been working to improve facilities and upgrade equipment operating requirements with the aim of achieving further gains in plant safety.

Whereas efforts in this regard toward reassessing levels of safety had previously been spearheaded by specialist organizational units from throughout the plant, we have since been accelerating the pace of reviews while achieving higher levels of assessment precision by also enlisting the involvement of Chemical Process Safety Engineers (CPSE), who embarked on CPSE training back in 2009. These individuals are now able to apply their knowledge to the safety reassessment process, given that in the course of their studies they learned techniques for evaluating thermal stability as well as measures to prevent spontaneous combustion, electrostatic discharge and dust particle explosions. Up to this point, some 20 employees have trained to become CPSEs, and we intend to have such experts assigned in all plant departments three years down the road.

Also, because MCC uses the HAZchart analysis method to quantitatively assess levels of potential risk, we have improved our approach to training in this regard so that we will have access to a greater number of technicians and engineers able to perform such analysis. More specifically, whereas employees previously took part in classroom-based education on the technique, we have since shifted to a mode of on-site training where employees learn by performing actual HAZchart analysis with respect to the processes of respective company facilities.

We have been regularly building on the HAZchart analysis technique in order to pinpoint and better manage a more comprehensive range of potential risks at the Yokkaichi Plant.

# Initiatives of the Kashima Plant

As illustrated in the accompanying image profiling efforts of the Kashima Plant, we hope to ensure that the Kashima facility remains strong as a basis for giving rise to a bright future for our operations, with a healthy manufacturing base that delivers safe and consistent production. As such, we aim to prevail by working toward boosting plant profitability and reforming our organizational structure, in an era where demand for ethylene stands at five million tons. Again in view of our hopes of a bright future for Kashima, we have been working hard to create a safe plant environment since the December 2007 Kashima Plant fire through ongoing efforts to develop a culture of safety throughout the plant.



Comprehensive overview of Kashima Plant initiatives

Our efforts to hasten a culture of safety among the plant workforce has involved encouraging our people to take initiative, based on the premise that those who are self-driven give rise to greater plant safety through their ability to sense dangerous situations, eliminate the source, and fully analyze the cause. As a result of our efforts, we have successfully put mechanisms in place that underpin plant safety.

Since the middle of last year, our section managers also held a series of business retreats where the plant's new business plan for fiscal 2013 and beyond was drawn up, after those attending the retreat first took a close look at our efforts thus far. The plan, which is to be implemented at the start of the fiscal year, aims to put the finishing touches on achieving a true culture of safety in a manner that incorporates conventional mechanisms for taking action at its core, based on management's leadership by example and dialog that prompts mutual understanding between management and factory floor employees.

On the basis of our objective of bringing about a strong Kashima facility with a bright future, we constantly work to verify results of safety inspections, with a vow never to forget the December 2007 Kashima Plant fire, which hastened us to overhaul our workplace culture.







Managers taking part in training sessions

# Initiatives of the Kurosaki Plant

The Kurosaki Plant runs annual disaster prevention and response drills designed for contingencies that include accidents, substance spills and marine disasters involving hazardous substances or high-pressure gas. The drills are conducted on a routine basis under the premise that doing so is essential to ensure a swift response in the unfortunate event of an accident. Before conducting the drills, we approach the Kitakyushu Yahatanishi Fire Station, Maritime Safety Agency and other such entities to ask that they also take part.





Drill on April 17, 2013 held jointly with the Kitakyushu Yahatanishi Fire Station, simulating a potential leakage and fire involving hazardous substances

### Initiatives of the Sakaide Plant

The Sakaide Plant performs exercises using tabletop disaster-response situation maps<sup>3</sup> and also conducts field drills<sup>4</sup> with the Maritime Disaster Prevention Center through its Maritime Disaster Safety Service (MDSS) in harbor areas used by the plant in conjunction with other area companies. Plant management swiftly rectifies any issues or failures uncovered over the course of the drills and is also working to create rapid response mechanisms.

- 3. The exercises centered on tabletop disaster-response situation maps are performed to pinpoint any potential problem areas that could arise in response to a maritime spill of hazardous and noxious substances (HNS).
- 4. Field drills are conducted with the aim of developing the capabilities of individuals who deal with maritime disaster issues in plant facilities by providing them with essential and practical experience in that regard.



Some of the roughly 40 individuals from two companies engaging in field drills



Group engaging in situation-map exercises geared toward preventing spread of contamination, facilitating communication and other such tasks

# Responsible Care Activities Occupational Safety

Policy

# Initiatives to Raise Safety Awareness

**MOS Indexes** 

C-3: Recognition of corporate trust > Find out more

In fiscal 2012, the Mitsubishi Chemical (MCC) Group promoted safety activities under a policy of safety-first awareness as set forth in the APTSIS 15 mid-term management plan. For instance, in terms of one target of awareness enhancement as proffessional managers and operators, our activities included raising awareness of acting responsibly, conducting basic operational training, providing education on legal and compliance issues and conducting training on past cases with a focus on people's behavior.

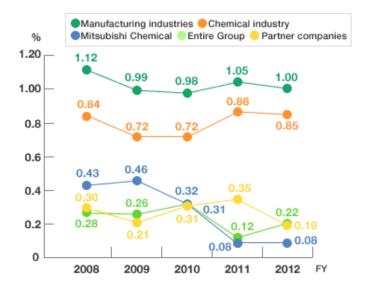
As a result, in fiscal 2012 the MCC Group was unfortunately unable to achieve its target of a maximum of 0.1 loss time injury frequency 1. The figure was 0.08 for Mitsubishi Chemical alone and 0.22 for the entire Group.

Of the loss time injury accidents occurring in the past five years, 58% were so-called behavioral accidents such as being caught and entangled, falls and drops, and 20% were chemical and thermal injuries distinctive in chemical plants. These two categories account for about 78% of all loss time injury accidents. These results indicate a lack of risk prediction in basic operations and behavior, as well as lack of communication when confirming instructions and conveying messages. The situation is believed to have resulted from a decline in practical abilities at worksites caused by the decreasing number of experienced workers.

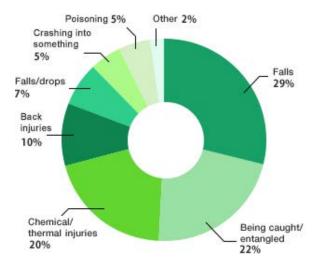
Given this situation, we have improved near—miss activities to enable workers to protect themselves effectively. Verification and sharing of accident information are also being promoted within the MCC Group to use past examples effectively. Minor labor accident examples are being shared within the MCC Group along with important near—miss examples, so as to obtain accident information before the situation reaches a serious state, and to eradicate accidents at their initial stages.

1 Loss time injury frequency: The number of casualties caused by loss time injury accidents that took place per 1 million total working hours

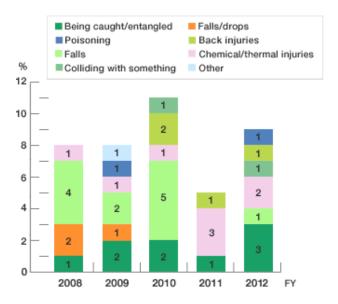
#### Loss time injury frequency (Mitsubishi Chemical Group)



# Categories of loss time injury accidents (total for FY2008-2012; Mitsubishi Chemical Group)



### Categories of loss time injury accidents (Mitsubishi Chemical Group)



# Front Runner



# Advancing Dynamic Safety Activities Every Day

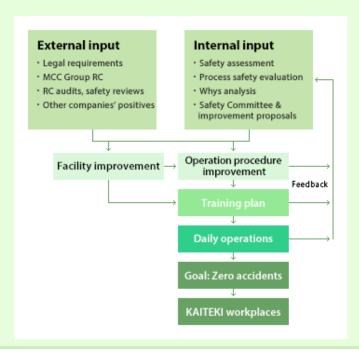
Michael H. Radom

Director-Safety, Environment, Engineering, & Quality Assurance Mitsubishi Kagaku Imaging Corporation

Located in Chesapeake, Virginia, U.S.A, Mitsubishi Kagaku Imaging Corporation manufactures toners used in laser printers and copiers. Our top priority is to maintain a safe and healthy workplace that is free of accidents, injuries and illness. Adhering to the idea that there are no unpreventable accidents, we aim to completely eliminate accidents in cooperation with the Company and all employees.



To achieve this aim, we are advancing dynamic safety activities every day based on our experience, revised regulations and production optimization. We are also enhancing education and hands-on training to improve employees' change management abilities.



# Responsible Care Activities Occupational Health

### Policy

# Management of Chemicals in the Working Environment

Mitsubishi Chemical handles numerous chemical substances, including specified chemical substances and organic solvents.

To protect the health of employees who handle these substances, we not only carry out working environment measurement<sup>1</sup> in accordance with legal ordinances and various guidelines, but also voluntary monitoring and exposure (amount of chemical substances with which an individual comes into contact) measurements to suit the conditions in which chemical substances are handled. These actions are part of our ongoing efforts to manage the working environment. Our efforts to manage employee health also include conducting the special medical examination as well as workplace inspections performed by occupational health physicians and other occupational health experts.

1 Working environment measurement: conducted for clarifying the amount of harmful factors existing in the working environment, and to what extent people working in the environment are exposed to them

#### **Activities and Achievements**

# Activities to Foster Emotional and Physical Health

Mitsubishi Chemical actively pursues activities for mental and physical health.

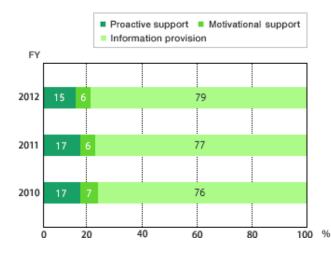
We implement measures to foster mental health on a tiered basis that includes self-care (taking measures to prevent or reduce one's own stress) and care provided by line managers (who are given training on how to deal with subordinates suffering from mental disorders). The necessary training is given at each plant, while promoting a system where employees can feel free to consult with experts.

For physical health, we offer specific health guidance<sup>2</sup> in response to a request by Mitsubishi Chemical Health Insurance Union, as a follow-up to the standard health examination that businesses are mandated to conduct. We also actively promote activities such as walking campaigns and anti-smoking campaigns.

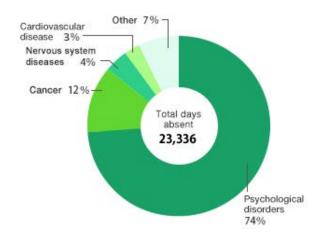
The details of counseling and results of health examination are managed carefully, taking the privacy of each employee into consideration.

2 Specific health guidance: examination and health guidance for preventing lifestyle-oriented diseases, with a focus on preventing and eliminating metabolic syndrome among the insured and their dependents aged 40 to below 75.





### Number of illness-related workday absences (Mitsubishi Chemical 2012)



# Front Runner



# **Introducing EAP Services**

Mitsubishi Chemical

Occupational Health Center, Human Resources Dept., Head Office

Although Mitsubishi Chemical already makes available in-house mental health counseling to employees, services based on the Employee Assistance Program (EAP) were introduced Companywide in April 2013 to increase counseling accessibility and, in turn, treat problems at an early stage.



(From left) Occupational health physician Dr. Kanbara, and occupational health nurses Kobayashi and Inoue

EAP services involve mental health counseling undertaken by counselors certified by outside specialist agencies. The details of counseling sessions are strictly confidential. When deemed necessary, employees are referred to outside medical institutions. With counseling services also available to employee families, we have developed a system that is more comprehensive than ever before.

Counseling is available via telephone, email, or in person. Taking advantage of these services at an early stage can help employees solve any problems they may have, which will positively affect the quality of their professional careers.

# Responsible Care Activities Environmental Management

Policy

Initiatives to reduce the environmental load in all processes of business activities

**MOS Indexes** 

S-1: Contribution to reduce the environmental impact through products and services

C-3: Recognition of corporate trust > Find out more

The Mitsubishi Chemical Group is proactively working to create a recycling-oriented society and protect the global environment. We strive to reduce the environmental load in all processes in our business activities by pursuing resource and energy conservation, reducing waste, and encouraging reuse and recycling, as well as conserving the environment and developing technologies for these purposes. In addition to preventing contamination associated with our business activities for the air, water, soil, and other natural features, we seek solutions to environmental issues on a global scale. Our efforts include measures to deal with global warming and resource depletion, preservation of biodiversity and development of environmentally friendly products and services. As a result, we recorded zero environmental accidents in 2012.

# Responsible Care Activities Preventing Air, Water and Soil Pollution

**Activities and Achievements** 

Initiatives for Reducing Environmental Impact on Air and Water Quality

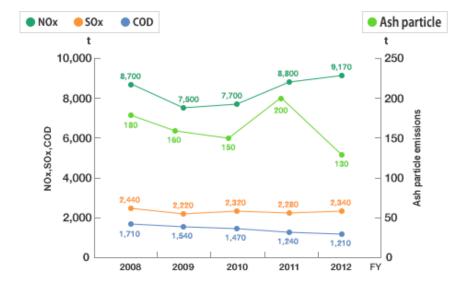
#### **MOS Indexes**

- S-1: Contribution to reduce the environmental impact through products and services
- > Find out more

At the Mitsubishi Chemical Group, we handle a wide range of chemical substances, and consume large quantities of fossil fuels that are sources of nitrogen oxide (NOx), sulfur oxide (SOx), and other pollutants. We have therefore taken action to address the environmental issues. By installing emission gas and drainage treatment facilities, we have slashed the environmental load on the atmosphere and public water bodies.

During fiscal 2012, such initiatives as changing coal boiler fuels and improving the operation of incinerator enabled us to reduce the emissions of ash particles by 70 tons compared with the fiscal 2011 level. On the other hand, emissions of NOx from exhaust gases are increasing as we restarted power generating facilities at the Joetsu Center of Mitsubishi Chemical High-Technica Corporation in fiscal 2011 to overcome the power shortage attributed to the Great East Japan Earthquake. However, we are continuing operations with an eye to minimizing these emissions.

#### Reducing Environmental Impact on Air and Water Quality



**Activities and Achievements** 

# Purifying and monitoring soil and groundwater

All Mitsubishi Chemical production bases conduct voluntary surveys on soil and groundwater pollution. Production facilities where the surveys have revealed pollution provide notification pursuant to local ordinances or voluntarily, and continue purification and monitoring measures as instructed by the prefectural or city government. To date, seven of our plants have reported the survey results to local governments: in Kashima, Sakaide Yokkaichi, Mizushima, Naoetsu, Kurosaki and Tsukuba. Each of these plants continues to implement appropriate measures as instructed by the local government. We confirmed the existence of soil pollution at the Yokkaichi and Kurosaki plants in fiscal 2012. This has already been removed from the Yokkaichi Plant, and steps are underway to do the same at the Kurosaki Plant.

# Responsible Care Activities Preventing Global Warming

#### **Activities and Achievements**

### Energy conservation initiatives at different locations

#### **MOS Indexes**

- S-1: Contribution to reduce the environmental impact through products and services
- S-2: Practice energy saving & reduction of depletion resources > Find out more

Mitsubishi Chemical will proceed with activities aimed at promoting energy conservation and reducing greenhouse gases based on Mitsubishi Chemical Holding`s target of "reducing greenhouse gas emissions more than 17% compared with fiscal 2005 levels by fiscal 2015" in its APTSIS 15 mid-term management plan. On the energy conservation front, Mitsubishi Chemical is also involved in ongoing efforts with respect to the non-binding targets set forth in the Act on the Rational Use of Energy (Energy-saving Act) of "reducing unit energy consumption by an average of 1% or more annually, seen from a medium- to long-term perspective."

Towards meeting these targets, we are systematically identifying and assessing energy-saving initiatives and the formulation of related plans, which are currently underway at all Mitsubishi Chemical facilities, beginning with five plants with significant energy consumption rates, Kashima, Mizushima, Yokkaichi, Kurosaki and Sakaide. Despite the high degree of technical difficulty, we investigated and undertook a major energy conservation project involving the participation of specialist engineers. In fiscal 2012, this project led to improved heat collection through process reforms as well as optimized operating conditions of facilities that consume major amounts of energy and a reduction in the thermal loss of heating furnaces. As a result, we reduced energy usage equivalent to around 30,000 tons of CO2.

#### **Activities and Achievements**

# Reduction in energy consumption and greenhouse gas emissions in fiscal 2011

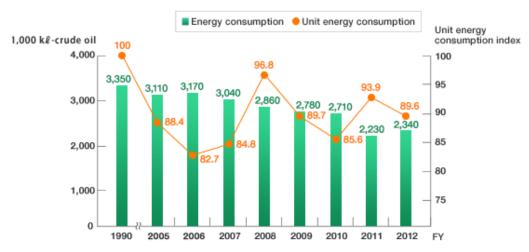
#### MOS Indexes

- S-1: Contribution to reduce the environmental impact through products and services
- S-2: Practice energy saving & reduction of depletion resources > Find out more

In fiscal 2012, energy consumption and greenhouse gas emissions increased compared with previous fiscal year levels due to the alleviation of long-term plant stoppages following the 2011 disaster and decreased production due to the economic slowdown. However, the degree of increase was minimal due mainly to suspended operations at large energy consumpting plants. In terms of unit energy consumption the unit energy consumption index stood at 89.6 compared with fiscal 1990, a 5% improvement over the previous fiscal year. However, due to an inability to correct poorly balanced overall operations accompanying plant stoppages, the figure did not reach the record high unit energy consumption index value of 82.7 recorded in fiscal 2006. Further, Groupwide greenhouse gas emissions marked a 23% drop compared with fiscal 2005.

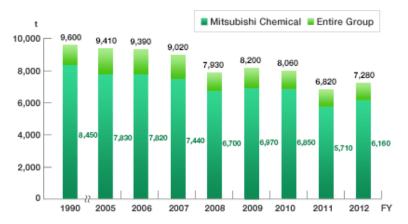
The Mitsubishi Chemical Group will continue striving to reduce greenhouse gas emissions by the entire Group and develop and manufacture products that help conserve energy, thereby contributing to society's overall reduction of total greenhouse gas emissions.

### Energy consumption (Mitsubishi Chemical)



\*The data above is based on the periodic report from MCC. The data of Group companies is not included.

#### Greenhouse gas emissions



\*For greenhouse gas emissions, as the result of a detailed examination on the inclusion of heat-trapped gases not subject to reporting under the law in addition to reporting values stipulated in the Act on promotion of Global Warming Countermeasures, figures not included at Group companies were found, and in the FY2012 version of the graph, retroactive corrections have been made to add these figures to past data.

#### **Activities and Achievements**

# Measures to Improve Unit Energy Consumption in Transportation

#### MOS Indexes

S-1: Contribution to reduce the environmental impact through products and services

S-2: Practice energy saving & reduction of depletion resources > Find out more

Mitsubishi Chemical submits actual energy consumption amounts, energy consumption reduction plans and other reports to the Ministry of Economy, Trade and Industry each year, as a specified consigner<sup>1</sup> stipulated by the amended Act on the Rational Use of Energy that went into force in April 2006. For achieving the Act's target of reducing unit energy consumption by an average of 1% or more annually, seen from a medium- to long-term perspective, Mitsubishi Chemical has sought efficient energy usage together with logistics contractor Mitsubishi Chemical Logistics Corporation. Attempts are also being made to reduce CO<sub>2</sub> emissions.

Mitsubishi Chemical has boosted the efficiency of coastal shipping vessels engaged in domestic sea transport and vehicles used for land transport by increasing lots (shipping lot volumes). Also, "friend" fins<sup>2</sup> are attached to coastal shipping vessels, and about 300 transport vehicles are equipped with on-vehicle terminals that support eco-friendly driving, in addition to eco-friendly tires.

In addition to these initiatives, in fiscal 2012 Mitsubishi Chemical also installed contra-rotating propellers<sup>3</sup> on coastal shipping vessels and continued the switch to export ports located closer to its production plants, an initiative commenced in the previous fiscal year. As a result, unit energy consumption decreased by 3.7% year on year, achieving the target of "reducing unit energy consumption by 1% or more annually." Despite a 5.2% year-on-year rise in shipping volume, CO<sub>2</sub> emissions increased by only 1.2% year on year.

In fiscal 2013, Mitsubishi Chemical will continue the initiatives it has pursued to date and endeavor to reduce fuel consumption and CO<sub>2</sub> emissions.

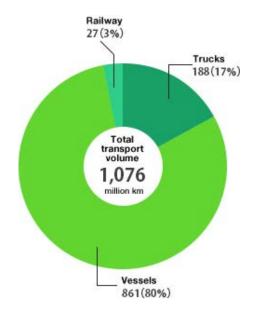
- 1. Specified consigner: Business entity that transports 30 million tons-km of cargo in its possession each year.
- 2. "Friend" fin: A tactic for obtaining large thrust force by attaching several fins to the stern in front of the propellers, thereby regulating the water flow to the propeller. The propeller's propulsive efficiency is improved by the water flow-regulating function, enabling navigation with fewer rotations per minute at the same speed. This method helps conserve energy and reduce CO<sub>2</sub> emissions.
- 3. Contra-rotating propellers: Two sets of propellers attached to each other that rotate in opposite directions. Energy lost by the front propeller is collected by the rear propeller, improving overall propulsion efficiency.

#### Actual reduction in unit energy consumption (Mitsubishi Chemical)

FY		2008	2009	2010	2011	2012
Energy consumption	GJ	908,307	953,157	830,706	716,823	725,407
Fuel consumption (converted to crude oil)	K٤	23,434	24,591	21,432	18,494	18,716
Transport weight	Million tons	3.9	3.9	3.7	3.7	3.7
Transport volume	Million tons-km	1,196	1,239	1,188	1,023	1,076
		%reduction 139	%reduction 1.2	%increase		
CO <sub>2</sub> emissions	t-CO <sub>2</sub>	62,500	65,800	57,200	49,500	50,100
Unit energy consumption	K&/million tons-km	1.3 19.59	%increase 19.85 (17.92)	%increase 0.2 18.04	%increase 3.79 18.07	6reduction 17.40

Figures enclosed in parentheses for fiscal 2009 and figures from fiscal 2010 onwards are specific consumption units excluding the transportation of unladen vessels.

### Breakdown of transport volumes by transport mode in fiscal 2012 (Mitsubishi Chemical)



# Responsible Care Activities Reducing Overall Chemical Substance Discharge

**Activities and Achievements** 

Initiatives for reducing overall PRTR<sup>1</sup> discharge

**MOS Indexes** 

S-1: Contribution to reduce the environmental impact through products and services

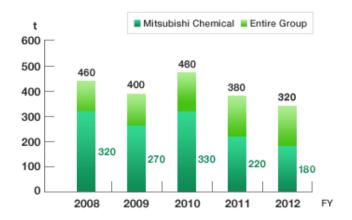
> Find out more

The Mitsubishi Chemical Group annually announces the discharged amounts and transferred amounts of the 462 substances regulated by the Specific Chemical Substances Act.<sup>2</sup> The discharge in fiscal 2012 was 320 tons, down 60 tons from fiscal 2011. This was primarily attributable to the decrease in the rate of operations on the downside, but on the upside, our efforts to reduce atmospheric emissions through facility improvements also contributed to this result.

We will continue to make efforts to reduce the discharge of substances, mainly VOC discharge.<sup>3</sup>

- Pollution Release and Transfer Register (PRTR): A notification system for the released and transferred amount of chemical substances. This is a system for clarifying, aggregating, and publicizing the data on the quantity of hazardous chemical substances released into the environment from each source, or the quantity taken outside facilities as a part of waste.
- 2. Specific Chemical Substances Act: The official title is the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. The Act was introduced in 1999, with the aim of improving voluntary management of chemical substances by businesses by clarifying the discharged amount of specific chemical substances into the environment and having the businesses provide information, thereby preventing obstacles to environmental conservation.
- 3. Volatile organic compound (VOC): Typical substances include toluene and xylene. These compounds became subject to regulation by the amended Air Pollution Control Act of 2006, as source substances of photochemical oxidants (photochemical smog).

### Discharge of PRTR-regulated substances



# Initiatives for reducing VOC discharge

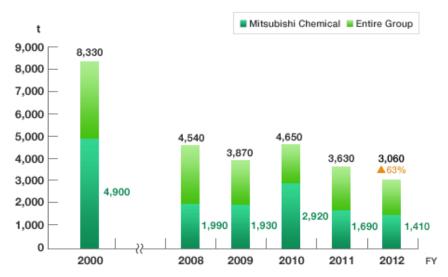
#### **MOS Indexes**

S-1: Contribution to reduce the environmental impact through products and services

> Find out more

The Mitsubishi Chemical Group is actively pursuing a range of measures, targeting a 50% or above reduction in VOC discharge compared with fiscal 2000 levels. In fiscal 2012, VOC discharge was reduced by 570 tons year on year, or 63% from fiscal 2000 levels, mainly because of improvements in processes, enhanced daily management and a decrease in the rate of operations. We will continue to maintain a reduction ratio of at least 50% compared with fiscal 2000 levels.

#### Volatile organic compound (VOC) discharge



<sup>\*</sup>The negative figure for fiscal 2012 indicates a reduction ratio from fiscal 2000.

<sup>\*</sup>The discharge increased in fiscal 2010 because the large-scale, regular repair work resulted in halting the supply of products to users and halting facilities that remove VOC, which caused part of the VOC stored in tanks to be released into the atmosphere.

# Responsible Care Activities Waste Reduction and Recycling

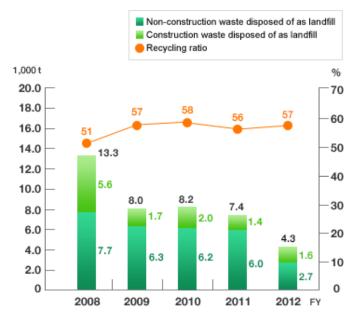
#### **Activities and Achievements**

# Initiatives for attaining zero emissions

To help build a recycling-based society, the Mitsubishi Chemical Group has stepped up recycling of assorted industrial waste with a target of zero emissions. The landfill ratio improved year on year to 1.6% in fiscal 2012. However, this means we could not attain zero emissions. Industrial waste primarily disposed of in landfills is composed of such materials as construction waste accompanying facility maintenance and dismantling as well as sludge (incinerator ash) produced by incinerator furnaces.

We will continue to aim for zero emissions by increasing the recycling ratio through sorted collection of construction waste—something we will undertake thoroughly—and by continuing to make efforts to recycle sludge.

- 1. Zero emissions: The Mitsubishi Chemical Group defines zero emissions as keeping the volume of industrial waste ultimately disposed of as landfill to a maximum of 1% of the total industrial waste generated (landfill disposal ratio of 1% or less)
- Volume of industrial waste ultimately disposed of as landfill and recycling ratio (Mitsubishi Chemical Group)



#### Front Runner



#### Achieving Zero Emissions at the Yokkaichi Plant

Toshinori Ichikawa

Group Manager

Air Environment Group

**Environment Division** 

Environment and Safety Department

Yokkaichi Plant

Mitsubishi Chemical Corporation



The Responsible Care Award ceremony

In order to achieve the Companywide initiative of zero emissions—the volume of industrial waste ultimately disposed of as landfill to a maximum of 1% of the total

industrial waste generated the Yokkaichi Plant (1) recycled industrial waste sent directly to landfills; (2) recycled residue after intermediate processing; and (3) recycled heat insulation materials (including those containing asbestos). As a result, we reduced the volume of landfill waste from 2,899 tons in fiscal 2006 to 168 tons (landfill disposal ratio: 0.91%) in fiscal 2011, thereby attaining zero emissions. In fiscal 2012, we began recycling in April all residue remaining after intermediate processing, further reducing landfill waste volume to 1.9 tons (landfill disposal ratio: 0.01%). Looking ahead, we will promote further recycling initiatives to maintain zero emissions.

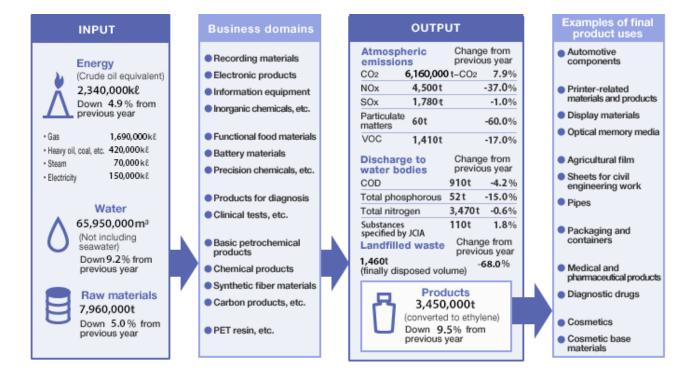
(Mr. Ichikawa and three other employees were presented with the Japan Chemical Industry Association (JCIA) Responsible Care Award in May 2013 for their notable contribution to waste reduction.)

#### Responsible Care Activities Material Flow

#### **Activities and Achievements**

#### Continuously identifying and measuring material flows

To effectively reduce the environmental load, the Mitsubishi Chemical Group strives to identify material flows (the quantity of resource input and the environmental load generated from that). Below is a summary of the input (the amount of energy, water and raw materials put in) and output (production amounts of products, the amount of discharged waste and other emissions), by business domain and final product use.



## Responsible Care Activities Environmental Accounting

**Activities and Achievements** 

#### Investments and expenses for the environment

MCC tallies its investment and expenses for environmental conservation on the basis of guidelines set by Japan's Ministry of the Environment.

In fiscal 2012, we invested 1.5 billion yen in initiatives such as integrating activated sludge, improving wastewater management and reducing industrial waste. This amounted to 1.3 billion yen less than the fiscal 2011 figure, a result of having reached the end of some large capital investment projects such as for improving and consolidating drain outlets, augmenting dust collection systems and upgrading refrigeration equipment.

Meanwhile, expenses in this regard amounted to 26 billion yen for outlays such as those involving operation and maintenance of pollution prevention equipment and for proper disposal of waste materials.

	Environmental conser	vation costs	20	2011 2012					
Cate	egory	Main initiatives	Investment amount	Expenses	Investment amount	Expenses			
Environmental conservation costs for suppressing environmental load	1. Pollution prevention costs	Prevention of Air pollution Particulate matter reduction and dust collection system upgrades Prevention of water pollution Activated sludge integration, wastewater management improvement, etc.	2,570	15,772	831	14,991			
generated in business areas due to production and service activities	Global     environmental     conservation costs	CO2 emissions reduction, operational improvement, etc.	0	736	20	751			
	3. Resource recycling costs	Industrial waste reduction, proper waste disposal, resource conservation, energy conservation, etc.	230	5,386	483	4,409			
Environmental conse		Operation of unit addressing environmental conservation ISO 14001 compliance and renewal national exams, environmental education, etc.	0	1,164	0	985			
Environmental conse	ervation costs in R&D	R&D for increased productivity, etc.	0	3,774	0	3,905			
Environmental conse		Installation and upkeep of factory green spaces	38	439	35	399			
Costs for dealing wit damage	h environmental	Cleanup of contaminated soil, etc.	9	7	145	9			
Other environmental	conservation costs	SOx surcharges	518	0	463				
	Total		2,847	27,796	1,514	25,912			

## Responsible Care Activities Biodiversity Preservation

**Activities and Achievements** 

Biodiversity preservation through RC activities

**MOS Indexes** 

S-1: Contribution to reduce the environmental impact through products and services

> Find out more

The Mitsubishi Chemical Group has engaged in environmental conservation activities as a part of its Responsible Care (RC) activities. In this capacity, it conducts ecological surveys of the plant and animal life at and around its business sites and works to protect this life. In addition, since fiscal 2010, the Group has also upheld the Nippon Keidanren Declaration on Biodiversity<sup>1</sup> as a member of the Mitsubishi Chemical Holdings Group (MCHC Group). We are striving to reduce the impact on biodiversity from our business activities in an ongoing and self-initiated manner.

At the MCHC Group, action with regard to protecting biodiversity involves fundamental investigations that adhere to the Guidelines for Private Sector Engagement in Biodiversity prepared by Japan's Ministry of the Environment. In fiscal 2010, we investigated such a model at the Mitsubishi Chemical Yokkaichi Plant. We determined the presence or absence of biodiversity preservation activities and the impact of the plant's environmental burden on biodiversity. Through RC and other activities, we have verified initiatives for preserving biodiversity.

Looking ahead, we intend to continue undertaking RC activities from the standpoint of biodiversity conservation.

1. Nippon Keidanren Declaration on Biodiversity: Announced by Nippon Keidanren in March 2009, the Declaration comprises seven main policies including harmony between the natural circulation and business activities and promotion of a resource-recycling style of business administration.

## Responsible Care Activities Quality Assurance

Policy

#### For further stabilization of quality

**MOS Indexes** 

C-3: Recognition of corporate trust > Find out more

As a comprehensive chemical manufacturer supplying a wide array of products to customers in a broad range of industries, Mitsubishi Chemical Corporation (MCC) believes that it is its duty to strive to prevent quality and product liability (PL) issues, while at the same time increasing customer satisfaction by offering safe and secure products.

To perform this duty, MCC has worked to establish in-house organizations for complying with laws and regulations and fulfilling obligations and promises under contracts with customers. With the aim of strengthening compliance as one of our top-priority management issues, in fiscal 2012 we also made progress in reforming the quality inspection data management system throught out MCC. In this way we are working to improve the reliability of quality-related data while stabilizing product quality.

On a global scale, public voices are increasingly demanding that corporations manage chemical substances contained in each of their products throughout the products' entire life cycle, and that they release information on such matters with appropriate transparency.

To adequately respond to these rising demands, since fiscal 2011 MCC has been operating the "Green Information Management System," utilizing the infrastructure of the Joint Article Management Promotion-consortium (JAMP)<sup>1</sup> to provide accurate information on the management of specified chemical substances (management of which is required by law) for each of our products containing such chemicals.

Together with raw materials suppliers and our own corporate customers, we hope to contribute to the creation of a social system capable of managing chemicals throughout the entire supply chain.

In addition, to further enhance customer satisfaction, we listen attentively to our customers' requests, and do our best to respond quickly and in good faith. As part of these efforts, in fiscal 2012 we drew up the Guidelines on Conflict Minerals to enable us to respond promptly and precisely to inquiries from customers.

1. JAMP is an organization that works to promote appropriate management, disclosure, and communication across all industries relating to chemical substances contained in "articles" (parts and final products) throughout the supply chain.

**Activities and Achievements** 

Improvement of product quality inspection and management system

Since fiscal 2010 Mitsubishi Chemical Corporation has positioned the strengthening of compliance as one of its top-priority management issues. As part of its efforts in this regard, at all our production facilities, in test values and analysis data regarding quality, we have commenced the adoption of a policy of (1) confirmation of test value traceability, (2) confirmation of security, and (3) rigorous change control, and the improvement of systems used up to now by strengthening them through the inclusion of these functions. By the end of fiscal 2013, we are scheduled to apply these changes to the whole company.

#### **Activities and Achievements**

### Establishment of "Guidelines on Conflict Minerals"

The term "conflict minerals" refers to ores mined in the Democratic Republic of the Congo (DRC) and 10 neighboring countries from which the metals tantalum, tin, gold, and tungsten are extracted. The sale of these ores provides funds that are used to finance fighting between the Congolese National Army and various armed rebel groups, and the purchase of such ores has thus come to be seen as a major ethical and political issue. The Dodd-Frank Wall Street Reform and Consumer Protection Act<sup>2</sup>, passed by the United States Congress in 2010, contained provisions in Article 1502 for cutting off such sources of funds to armed groups, and the OECD has issued detailed due diligence guidance instructions on inspection procedures with respect to such ores.

While the business operations of Mitsubishi Chemical Corporation are not directly targeted by the Dodd-Frank Wall Street Reform and Consumer Protection Act, in fiscal 2012 we drew up the Guidelines on Conflict Minerals to enable us to respond promptly and precisely to inquiries from customers, and commenced enforcement of the Guidelines' provisions from fiscal 2013.

2. The Dodd-Frank Wall Street Reform and Consumer Protection Act, which was signed into federal law by President Barack Obama on July 21, 2010, was intended to facilitate wide-reaching reform to the US financial regulatory environment in response to the late-2000s recession, with the aim of preventing a recurrence of such crises. Article 1502 of the law mandates the reporting of certain minerals exported from the DRC and neighboring countries where armed conflicts continue to occur.

**Responsible Care Activities** 

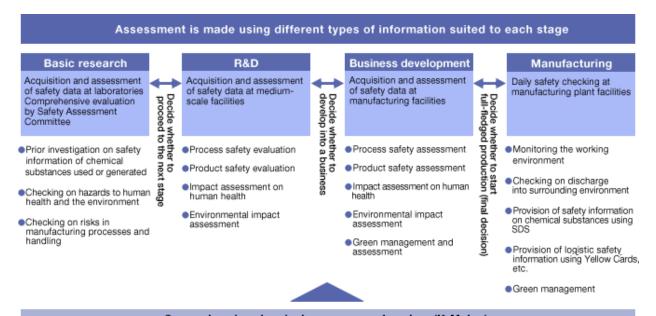
## **Chemicals Management**

Policy

#### Our basic stance on safety chemicals management

The Mitsubishi Chemical Group strives to comprehensively collect and manage information on all the chemicals it handles, not only for chemical products it manufactures but also their raw materials, by-products and waste generated in the manufacturing processes, as well as their recycled products. Based on this information, MCC conducts risk assessment regarding the impacts of chemical substances on people and the environment as well as the safety of manufacturing processes beforehand in strengthening its voluntary management.

Risk assessment process relating to chemical substances, from development through to production



## Comprehensive chemicals management system (K-Mates), database on environment, security, and safety matters, and other data

In addition to data on the safety or toxicity of chemicals, risk assessment requires the management of a huge amount of data relating to the handling of the chemicals involved through all processes from manufacture through use, to disposal, including data on the methods of handling and on the volumes involved. At MCC, we have created a new system, called K-Mates1, which allows the collection and management of all necessary information on chemical substances, and the conduct of integrated risk management based on that data.

1 K-Mates: KAITEKI-integrated system of risk management and technical information supports on chemicals

Policy

#### International strategies for chemicals management

In response to the action target of minimizing adverse effects of chemical substances by 2020 agreed to at the World Summit on Sustainable Development (WSSD – commonly known as the Johannesburg Summit) held in 2002, chemicals management efforts have intensified worldwide in accordance with the international strategy Strategic Approach to International Chemicals Management (SAICM) adopted at the First International Conference on Chemicals Management (ICCM-1) held in 2006.

The International Council of Chemical Associations (ICCA) has promoted Global Product Strategy (GPS) activities for attaining the WSSD target, as the voluntary efforts of industries. GPS activities emphasize risk-based chemicals management throughout supply chains, and disclosure of information of risk management on chemical products.

#### Risk assessment and information networks are necessary for proper chemicals management

#### Global agreements

1992 Agenda 21 (Rio Summit): Proposed risk-based chemicals management

2002 WSSD (Johannesburg Summit): Decided to establish use and manufacturing efforts that by 2020 minimize adverse effects of chemicals utilizing risk management systems

2006 SAICM: Developed the framework of a global scale for the implementation plan of WSSD

## Voluntary activities of industries

2006 ICCA: promoting GPS activities Prepared risk assessment guidance Realized data sharing with IT-Portal

2010 Japan Chemical Industry Association: Promoting Japanese version of GPS Published Japanese version of ICCA guidance Held briefings

#### Subsequent to 2010

Safety summaries published of Global Product Strategy (GPS) activities on the basis of GPS risk assessment guidance of the International Council of Chemical Associations (ICCA) Reports issued on activities at International Conference on Chemicals Management (ICCM) in 2012, 2015, and 2018 Response to laws and regulations in each country and region

2007 Europe: Enforcement of REACH Industries register the result of risk assessment and management methods through REACH-IT

2010 Japan: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. was amended The national government conducts risk assessment Business entities notify uses and quantities of manufacture and import

#### Subsequent to 2010

Enforcement of the South Korean Act on the Registration and Evaluation of Chemicals (K-REACH) in 2015

Increased laws and regulations activities expected in Southeast Asian countries

Management of existing chemicals to be made stricter

#### Activities and Achievements

#### Chemicals management measures by industry

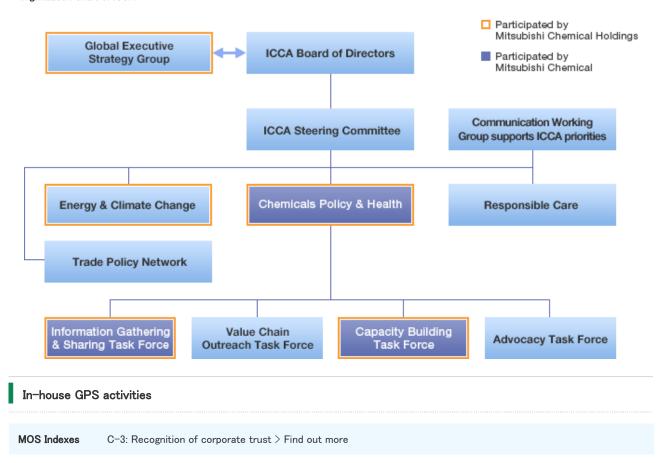
## Contributing to activities of ICCA and Japan Chemical Industry Association, mainly through promotion of GPS activities

The President of Mitsubishi Chemical Holdings assumes a role of setting directions for ICCA, as a member of its CEO group. Mitsubishi Chemical also plays an active role as a member of the leadership group for chemical policy and health that plans and implements skill development programs and lectures, particularly in developing countries and for small- and medium-scale enterprises, geared toward attainment of the WSSD targets.

The Japan Chemical Industry Association (JCIA), a domestic organization, also engages in voluntary activities for strengthening risk-based chemicals management at businesses (Japan Initiative of Product Stewardship: JIPS) and promoting ICCA's GPS activities. Mitsubishi Chemical is also active as a member of the committee for promoting and strengthening JIPS. As part of steps to strengthen JIPS promotion, during fiscal 2012 we called for the publication of safety summaries on the Global Product Strategy (GPS), and as part of our responsibility as a Japanese manufacturer we published over 130 safety summaries on the ICCA's website (ICCA GPS Chemicals Portal).

The ICCA has published a total of roughly 3,000 GPS safety summaries, and at the ICCM3 meeting held in Nairobi in September 2012, reports were made on these as well as on the progress being made in GPS activities.

#### Organization Chart of ICCA



Mitsubishi Chemical began GPS activities voluntarily in 2009. These activities involve risk assessment on chemical substances manufactured by the Company (in amounts of 1 ton or more per annum) and management of them in accordance with the results, as well as publication of the results in safety summaries.

During 2009 and 2011, a trial GPS risk assessment was conducted for seven substances, for example acetone, while standardizing risk assessment methods. Priority (high, medium, low and out of scope) was set regarding the risk assessment on chemical substances contained in each product. The assessment is to be completed by 2015 for substances ranked as high and medium, and by 2017 for those ranked as low, and safety summaries will be published as necessary. As a pioneer of GPS activities in Japan, we published safety summaries on 4 substances in January 2012, after which we conducted risk assessments on 12 substances by the end of 2012 and published the results in safety summaries. Mitsubishi Chemical Group companies also plan to complete GPS risk assessment for the subject substances concerned by 2018.

#### Measures for communicating information on chemical substances contained in products

Mitsubishi Chemical Corporation compiles information on product hazards and toxicity as well as safe handling in the Safety Data Sheet (SDS)<sup>2</sup> that is presented to customers and partially disclosed on its website. We create the SDSs using a system we introduced in 2008. This system automatically creates SDSs by following the format of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)<sup>3</sup>, an international system for indicating hazards and toxicity of chemical substances. We also voluntarily create and distribute GHS-based SDSs of products whose SDSs are not required by law.

We are also a member of the Joint Article Management Promotion-consortium (JAMP)<sup>4</sup> and utilize MSDSplus<sup>5</sup> and AIS<sup>6</sup> developed by the Consortium in efforts to provide data on chemical substances contained in products to all members of the supply chain.

- 2. Safety Data Sheet (SDS): A document for providing information on the properties, hazards and toxicity, safety measures, and emergency responses concerning chemical substances when transferring or providing the chemical substances or products to other business entities.
- Globally Harmonized System of Classification and Labeling of Chemicals (GHS): A globally harmonized system of classification and labeling related to the hazards (hazards and toxicity) of chemicals.
- 4. Joint Article Management Promotion-consortium (JAMP): A cross-industrial organization for appropriate management, disclosure and communication of information on chemical substances contained in components and molded products ("articles") to supply chain members.
- 5. MSDSplus: A common sheet for communicating information on chemical substances contained in products to all entities, from material manufacturers to those of final products.
- 6. Article Information Sheet (AIS): A common sheet for communicating information on chemical substances contained in molded products.

### Policy

#### Dealing with chemicals management regulations

#### Measures in response to laws and regulations in Japan and other countries

All provisions of the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (the "Act") went into force in April 2011, and in line with global trends, the system was switched from the conventional emphasis on hazard to emphasis on risk management.

Since the full enforcement of the amended Act in 2011, reporting has been mandated on the quantity of all chemical substances that are manufactured, imported, and used. Mitsubishi Chemical Corporation identifies the volumes of manufacture, imports, shipments, and uses of the chemical substances subject to yearly reporting, and reports the results to the supervisory authorities each year. At the same time, MCC utilizes the said data in risk management across the entire company.

Regarding the method of communication of hazard and toxicity data on chemical substances based on the GHS, the Japan Industrial Standards (JIS), which have been applied until recently, was reissued as JIS Z 7253:2012 in April 2012, under which standards were laid down for labeling, notices and instruction posted up within the workplace, and Safety Data Sheets (SDS). At the same time, revisions were also made to the ordinance on Industrial Safety and Hygiene and the Law concerning Pollutant Release and Transfer Register, and compliance with these JIS provisions was made legally obligatory.

Regarding the legal obligation of companies to do all in their power to adequately manage all chemical substances possessing hazards and toxicity, in response to laws and regulations relating to GHS, MCC does not limit its efforts to labeling and the preparation of SDS, but also takes a wide range of other measures to communicate necessary information to its employees and thereby ensure safety by means of easy—to-understand notices and instructions posted within the workplace.

Overseas, particularly in Asia, revisions to legislation and the enactment of new legislation is being carried out (or scheduled) in response to rapid economic growth as well as attempts to reach the targets set at the World Summit on Sustainable Development amid rising concern over environmental degradation. At MCC, in the same manner as our response to legislation in Japan, we are working to build up a database that will allow us to effectively manage applications for registration of new chemical substances in each country where we have business operations, and have begun work on centralizing all such data management within the Company. In many cases, functional chemical products whose export from Japan is growing in volume terms are legally categorized as new chemical substances, and before exporting them, we are obliged to apply for registration in accordance with the particular legal requirements of each country. Following export of the chemicals, in some cases we may also be legally required to make reports on the volume of the said chemicals and their intended application. Such a database would enable us to securely manage not only the application procedures, but also the subsequent obligatory reporting.

In addition, to cope with these rapid changes in the legal environment overseas, Mitsubishi Chemical Medience Corporation, a member of the Mitsubishi Chemical Group, has formed partnerships with overseas companies for the purpose of acquiring information about chemical-related legislation in each country as speedily as possible, enabling it to assist other Group companies in the application and registration process.

7. Management done by considering not only hazards but also exposure (the extent of impact on people and the environment given the volume manufactured, volume used, and uses, etc. of chemical substances)

#### Action for REACH regulation

To comply with EU Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) that came into force on June 2007, the Mitsubishi Chemical Group in 2006 established the cross-sectional MCC Group REACH Project. We continue to conduct activities for ensuring compliance with REACH and performance of obligations from the viewpoint of a manufacturer and a processor that exports products to the EU, while thoroughly analyzing each aspect of complicated legal systems and sharing specific measures to address the situation.

To outline of REACH and activities to date

#### Implementation in fiscal 2012

#### 1. Preparing for registration of substances with annual imports into the EU of less than 1,000 tons

For existing substances with annual imports into the EU of 100 tons or more but less than 1,000 tons (deadline for registration: May 31, 2013), we resolved issues and produced the necessary information, while compiling an action plan for their registration through discussions with operational divisions and registered representatives under REACH regulation responsible for individual subject substances. At the same time, we proceeded with specific preparatory measures (involvement in sharing data with registered representatives in Europe, and collection and analysis by operational divisions of data on registered chemicals, etc.), and registration of 80% or more of chemical substances scheduled for registration within fiscal 2012 was completed.

## 2. Surveys on content of substances of very high concern (SVHC) in products exported to EU and response to results of the surveys

In the EU, additional SVHCs<sup>8</sup> are announced twice a year. In 2012, 13 cases of SVHCs were announced on June 18 and 54 cases on December 19, and the total number of SVHCs announced thus far is 138. An importer intending to import into the EU formed products with an SVHC content of 0.1% or higher is obliged to provide users with the content information of the products. Every time an additional SVHC is announced, the Mitsubishi Chemical Group conducts detailed research on the SVHC content of products it exports to EU and provides information to importers or customers as needed.

## 3. Provision of information for ensuring Group companies and only its representatives in Europe are in compliance with laws and regulations

Projects for inspecting compliance with REACH have started throughout the EU, resulting in rising awareness of the importance of information to be managed under REACH. To Group companies in the EU, including Mitsubishi Chemical Europe GmbH, and only representatives appointed by the Mitsubishi Chemical Group, which are directly obliged to comply with REACH, we continually provide the latest information that must be managed legally (including the annual volume of imports of subject substances and information related to registration) as needed.

8. Substance of very high concern (SVHC): SVHC refers to substances that are selected from among those that are carcinogenic, mutagenic, toxic for reproduction, etc. and that need to be subject to high-level control throughout the EU through supply chains. A total of 84 substances are designated as SVHC as of the announcement made on June 18, 2012.

#### Future measures

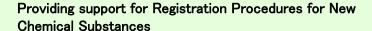
#### Measures to take in fiscal 2013 and onward

We completed registration by the deadline mandated by law (May 31, 2013) of chemical substances imported into Europe in volumes between 100 and 1,000 tons annually. From here on, we plan to ensure legal compliance, particularly regarding management of the volumes of chemical substances imported into Europe.

In addition, we will continue to ensure full compliance in our response to additional SVHC announced and, when necessary, to CLP<sup>9</sup>, under which notification is mandatory even for samples that are small.

9. CLP: Classification, Labeling and Packaging of substances and mixtures

#### Front Runner



Kyonga Pak

Environmental Risk Assessment Center, Registration Support Group Mitsubishi Chemical Medience Corporation

In 2007, the EU introduced the REACH (Registration, Evaluation, Authorisation and restriction of Chemicals), becoming the world's first regional authority to take such action. In response, China, Japan, and the United States also



introduced new chemical substance management systems, and from January 1, 2015 a new system will go into force in South Korea, under the name of K-REACH.

Leveraging its many years of experience in safety inspection and application for registration of chemicals, Mitsubishi Chemical Medience Corporation is providing other Group members with support in application procedures under Japan's Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. as well as corresponding legal systems all around the world, including China, South Korea, Taiwan, the United States, Canada, Australia, the EU, and Switzerland, among many others. Particularly with respect to the "system for simultaneous application for registration and acceptance in a plural number of countries," which allows manufacturers to enter markets more quickly, Medience, in collaboration with various overseas organizations, provides a "one-stop service" covering everything from initial investigation into whether or not a chemical is truly new, to final application.

Fears have been expressed that the new chemical substance management systems being adopted one after another by countries around the world may place heavier burdens on individual companies and even function as barriers to trade, and it is essential for us to fully comprehend each country's system. In practice, however, it is extremely difficult to respond appropriately to these changes in view of language barriers, the difficulty in interpreting legislation, and a lack of clarity in the actual operation of these systems. In fact, chemicals manufacturers have been experiencing a variety of problems during the process leading to completion of registration, and there is a clear need to develop methods of promptly resolving such issues.

The Registration Support Group within the Environmental Risk Assessment Center, where I work, takes a proactive stance on the hiring of specialists with foreign citizenship. I myself have South Korean citizenship, and in my work I principally handle overseas applications, notably in South Korea. By directly contacting the South Korean authorities, we can quickly provide them with highly reliable data, thus achieving satisfactory end-results for many of our customers. When I first started in this job, I had some difficulty in understanding the requests of Japanese companies, which take a very strict stance on legal compliance. Even now, I am often at a loss as to the best way to contact the South Korean authorities or the Company's cooperative overseas organizations, and I receive many inquiries that I don't understand. Nevertheless, I feel great satisfaction in being able to communicate effectively with South Korean organizations, which is only possible because I understand Japanese business practices.

From here on, too, I hope to continue helping my company bridge the gap between different languages and cultures, and to provide support for its efforts to respond to legislation in many foreign countries, which is essential in our deployment of chemical products overseas. At the same time, I aim to take an active role in serving as a bridge between Medience and overseas business partners, not only in relation to support in applications for chemicals registration, but also in the wider business field.

### Responsible Care Activities Outline of REACH Regulation and Our Activities to Date

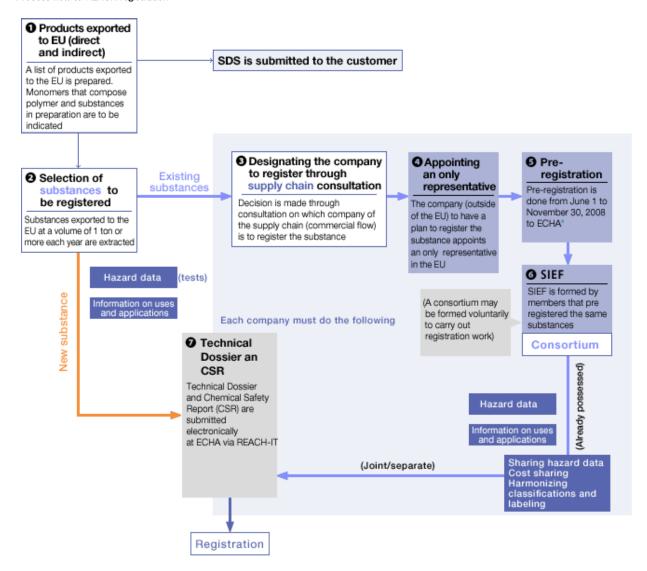
#### What is REACH Regulation?

Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) refers to European regulations that came into force in June 2007 and have been applied since June 2008, ensuring a high level of protection of human health and the environment, while maintaining and strengthening competence in the chemicals industry in the European Union (EU).

REACH mandates that companies manufacturing or importing chemical substances placed on the EU market amounting to one ton or more per year must register those substances in a succession of steps. Meanwhile, different business concerns that register equivalent chemical substances must jointly prepare registration documents and apply for registration. Once registered, the European Chemicals Agency evaluates the data that has been submitted and assesses methods of safety management. Among these substances, specific hazardous substances are designated as requiring authorization. They are approved for use in the EU only when the authorities judge that the risk to public health and the environment of using the substances are managed appropriately. Accordingly, these regulations clearly demand that businesses conduct extremely complicated and extensive chemicals management.

REACH also obligates all companies in the EU that handle chemical substances (manufacturers, importers, and users) to properly manage them based on risk assessment, maintain the management processes, and exchange information among all members of supply chains.

The MCC Group has been working to comply with REACH provisions, accordingly recognizing two priority issues in particular of: 1. forming a Substance Information Exchange Forum (SIEF) and thereby facilitating communication, and 2. engaging in dialog with our partners in the supply chain.



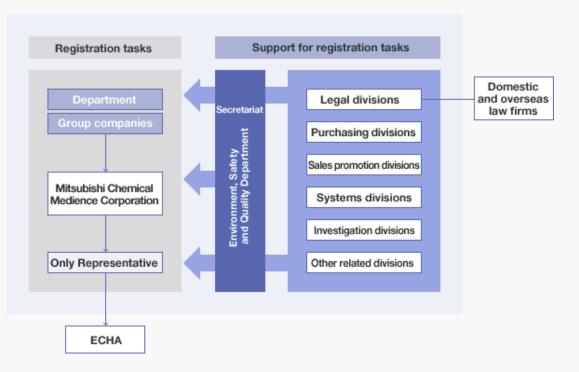
\*ECHA: European Chemicals Agency

#### Activities to date

#### 1. Building project organization for the Mitsubishi Chemical Group to comply with REACH

REACH is extremely complicated and requires extensive knowledge and comprehension. In some instances, one company alone may not fully comply with the regulations. Therefore, in 2006, Mitsubishi Chemical configured the MCC Group REACH Project, a cross-sectional organization of the Mitsubishi Chemical Group. The organization aims to strengthen knowledge and comprehension on REACH through sharing of information, and the Environmental Safety and Quality Department of Mitsubishi Chemical serves as its secretariat. This organization framework has enabled us to complete registrations according to plan, in regard to all substances with 2010 registration deadlines and all substances with 2013 registration deadlines.

#### Organization of MCC Group REACH Project



## 2. Held briefings for the entire Mitsubishi Chemical Group for explaining REACH legislation and its guidance, as well as ways to deal with it

The project secretariat has held internal workshops every two or three months to deepen understanding of the extensive REACH regulations and the different kinds of guidance issued by the European Chemicals Agency (ECHA) for ensuring compliance with REACH. To fully comply with REACH, each concerned party needs to think of specific measures and take action, so the internal workshops hold discussions while proposing ways to communicate with customers, specific items in preparing for registration and other matters of caution, in addition to explaining the provisions. The internal workshops had been held 31 times as of the end of fiscal 2012.

#### 3. Established a helpdesk for Departments and Group companies to consult with

Substances need to be dealt with one by one in the registration work required for REACH. Since procedures and issues differ with each case, the project secretariat offers individual consultation in serving as a helpdesk for the Mitsubishi Chemical Group, and answers customers' questions and provides them with explanations.

#### 4. Opinion exchange with an only representative about registration activities and current situations in the EU

For a manufacturer from outside the EU, an only representative is essential not only for complying with REACH but also for maintaining and expanding business in the EU. The Mitsubishi Chemical Group exchanges detailed information about specific action items and plans for registration with the only representative, and has participated in the formation processes of the Substance Information Exchange Forum (SIEF) on substances to be registered and technical discussions held therein. In the beginning of 2011, we started to prepare for the registration of substances with annual imports into the EU of less than 1,000 tons and with registration due in 2013. We are proceeding steadily with the preparations by exchanging information with operational divisions and only representatives under REACH regulation responsible for the individual subject substances. In recent years, we have been communicating closely with only representatives under REACH regulation to ensure compliance in such aspects as responses to requests from ECHA for the submission of information, the registration of new substances, and responses to new businesses.

#### 5. Information exchange among members of supply chain

To comply with the REACH regulation, the key issues are in how rationally and efficiently we can collect information on uses and applications of substances in Europe, which is necessary for registration. We have almost no experience in information exchange among members of the supply chain, which starts with raw material manufacturers and reaches the final users via manufacturers, retailers and logistics operators. Currently there are no official guidelines or tools, so we have endeavored to exchange information with customers in relation to REACH, at the same time explaining the REACH requirements to them and taking inventive actions such as generalizing information on uses and applications. We will continue to undertake these activities proactively.

In addition, each time an additional SVHC<sup>2</sup> is published, the Mitsubishi Chemical Group conducts detailed research on SVHCs content of products it exports to EU and provides information to importers or customers.

#### 6. Cooperating with activities of chemical and other industrial organizations such as Japan Chemical Industry Association

Mitsubishi Chemical participates in the working group of the Japan Chemical Industry Association for dealing with REACH, in efforts to understand the provisions and find solutions to questions and issues. Also, with the aim of making useful information available through our initiatives pertaining to REACH regulations, we strive to communicate as much information as possible and pursue shared awareness in this regard through active participation in lectures offered by various industrial associations.

#### 7. Information exchange for registration work through domestic consortium activities

In relation to the registration of certain general-purpose chemical substances, some of the companies in our industry involved with registration have established several domestic consortiums for information exchange. Mitsubishi Chemical has also presented opinions at consortiums in the EU, as a domestic consortium leader for certain substances. This made it possible for us to complete the registration procedures for existing substances without any trouble by the registration closing date of November 30, 2010, fulfilling the aim of these activities.

 Substances of very high concern (SVHC): SVHC refers to substances that are selected from among those that are carcinogenic, mutagenic, toxic for reproduction, etc. and that need to be subject to high-level control throughout the EU through supply chains. A total of 84 substances are designated as SVHC as of the announcement made on June 18, 2012.

## **Together with Stakeholders**



### Basic concept

#### Basic policy in communications with stakeholders

	Basic policy	Tools	Opportunities			
Customers	We aims not only to offer products and services that are safe and of high quality; it also aspires to build even an better society together with its customers, by working with them to solve their issues and achieve their ever more diverse and complex targets.	<ul> <li>Websites</li> <li>Press releases</li> <li>Product brochures</li> <li>SDS</li> <li>ADs</li> </ul>	<ul> <li>Sales activities</li> <li>Call center</li> <li>Purchasing activities</li> <li>Questionnaires</li> <li>KAITEKI forum</li> <li>KAITEKI SQUARE</li> <li>KAITEKI CAFE</li> </ul>			
Business Partners	Recognizing all entities trading with our company as business partners, we strives to build a mutually trusted relationship and foster fair and appropriate trading practices with them.	<ul> <li>Websites</li> <li>Press releases</li> <li>Product brochures</li> <li>SDS</li> <li>ADs</li> </ul>	<ul> <li>Sales activities</li> <li>Call center</li> <li>Purchasing activities</li> <li>Questionnaires</li> <li>KAITEKI forum</li> <li>KAITEKI SQUARE</li> <li>KAITEKI CAFE</li> </ul>			
Employees	Mitsubishi Chemical sincerely associates with each of its employees and strives to establish rewarding workplaces where each employee's abilities may be utilized to the utmost, and where employees can work with enthusiasm by mutually respecting diverse values.	<ul><li>Intranet</li><li>Chemipal,</li><li>KAGAKU Station</li></ul>	<ul><li>Employee surveys</li><li>Labor-management consultation</li></ul>			
Regional communities and greater society	Understanding our responsibility of being a good corporate citizen, we make sure that our activities live up to the demands and expectations of society and people.	<ul><li>Websites</li><li>CSR reports</li><li>Report from operating companies</li></ul>	<ul> <li>Factory tour</li> <li>Meeting with local authorities</li> <li>KAITEKI CAFE</li> </ul>			

<sup>\*</sup>Please also refer to the "List of Our Communication Activities with Stakeholders" on the MCHC's KAITEKI report.

### Together with Stakeholders Together with Customers

#### Basic ideas

The Mitsubishi Chemical Corporation (MCC) Group aims to not only offer products and services that are safe and of high quality; it also aspires to build KAITEKI society together with customers by working with them to solve their increasingly diverse and complex challenges and achieve their targets.

Providing solutions by positioning Sustainability (Green), Health and Comfort as the decision criteria for our corporate activities

MOS Indexes

C-1: Deliver products (development and manufacturing) for comfortable lifestyle > Find out more

As a member of the Mitsubishi Chemical Holdings Group (MCHC Group), the MCC Group offers solutions to customers through a broad range of chemistry-based products and technologies by positioning Sustainability (Green), Health and Comfort as the decision criteria for its corporate activities.

In addition to promoting the shift to high-performance products, the generation of high-added value and green businesses in the Performance Products segment, achieving healthcare solutions in the Health Care segment and offering global support and highperformance products in the Industrial Materials segment, the MCC Group also focuses on an increasingly diverse range of chemical raw materials to create industrial materials that contribute to the global environment and new carbon society, paving the way towards the achievement of KAITEKI together with customers.

Striving to be a Group that customers will choose as a partner

**MOS Indexes** 

C-2: Improve stakeholder satisfaction

C-3: Recognition of corporate trust > Find out more

In fiscal 2012, the MCHC Group began conducting customer satisfaction surveys, underpinned by their shared commitment to achieving accurate insight into social issues and challenges that customers face, and by their aim of maintaining close communication with customers in the course of finding solutions. The surveys sought customer views regarding the MCHC Group's core business activities relating to product quality and systems for supply, sales promotion and technical support, as well as their attitudes toward and sense of trust in the Group's operating companies. Ultimately, MCC hopes that analysis of the survey results and subsequent implementation of a PDCA cycle approach will enable us to provide even better customer service and gain higher levels of customer satisfaction.

In October 2012, MCHC also opened its showroom KAITEKI SQUARE at corporate headquarters as a means of enabling it to connect with customers in giving thought to the KAITEKI concept. The KAITEKI SQUARE showroom comprises three distinct areas or zones: 1.) a special exhibition zone where visitors can ponder social issues of the 21st century and consider the role played by science and technology toward solutions to such challenges, 2.) a permanent exhibition zone profiling MCHC Group technological capabilities and its collective strengths by showcasing Group company products and technologies designed with a focus on making the KAITEKI concept a reality, and 3.) a conceptual zone where visitors can experience society's future through video footage and interactive exhibits. The showroom features MCC products designed to bring the KAITEKI concept to life and exhibits technologies being pursued through MCC research and development efforts. KAITEKI SQUARE welcomed 9,507 visitors over the six months from October 2012 to March 2013.

MCC has established two Chemistry Plazas, Chemistry Plaza Yokohama and Chemistry Plaza Yokkaichi, with the aim of providing a venue for communication with our customers. Located in Mitsubishi Chemical Group Science and Technology Research Center in Kanagawa Prefecture, Chemistry Plaza Yokohama houses the kind of cutting-edge technologies and platform technologies that are only found at an R&D facility. Meanwhile, Chemistry Plaza Yokkaichi is located in Yokkaichi Plant in Mie Prefecture, and mainly showcases resin products and technologies to convey our quality manufacturing capabilities. During fiscal 2012, Chemistry Plaza Yokohama and Chemistry Plaza Yokkaichi welcomed 1,869 and 1,584 visitors respectively.

### Together with Stakeholders Together with Business Partners

#### Basic ideas

For the Mitsubishi Chemical Group to continue its daily business activities, the cooperation of numerous business partners is essential. These partners include raw materials suppliers, plant maintenance companies, logistics companies, and subcontractors working onsite.

Mitsubishi Chemical views those companies that cooperate with its operations as business partners, and aims to build trust while continue growing together with them. We have also established purchasing guidelines to ensure fair and equitable transaction practices.

#### Purchasing Guidelines (Excerpted)

#### **Principles**

- 1. Purchasing competitive materials, equipment, and services
- 2. Openness and fairness
- 3. Partnerships and mutually beneficial relationships

#### **Codes of Conduct**

- 1. Compliance with laws and regulations
- 2. Fairness, impartiality, and transparency in decision-making process
- 3. Clear distinction between private and business relationships

#### Requests for Suppliers

- 1. Compliance with laws, regulations, and social norms We request each business partner to comply with the following laws, regulations and social standards, in all countries and regions in which they operate.
  - (1) Compliance with laws and regulations concerning the manufacturing and distribution of raw materials.
  - (2) Compliance with laws and regulations concerning labor, health, and safety, and development of proper working environments.
  - (3) Prohibition of racial and sexual discrimination, and respect for the dignity of each employee.
  - (4) Prohibition of bribery and unfair proceedings.
  - (5) Compliance with environmental laws and regulations.
- 2. Promoting sound business management
- 3. Consideration for the environmental issues
- 4. Non-disclosure of confidential information

The full text of the purchasing guidelines is available here.

#### Policy

#### Ensuring full compliance with the Subcontractor Act

Mitsubishi Chemical conducts transactions pursuant to the Subcontractor Act Compliance Rules established in April 2008. The Subcontractor Act Compliance Rules clearly establishes an organization for complying with the Subcontractor Act, and specifically stipulates the intentions and scope of application of the Subcontractor Act and compliance matters in tasks related to order placement and payment.

During fiscal 2012, we urged employees to participate in seminars offered by outside parties, in addition to in-house study meetings, to ensure full compliance with the matters stipulated by the Subcontractor Act Compliance Rules. Also, plant purchasing departments were audited to confirm compliance with the Subcontractor Act. Study meetings and audits will continue to be held systematically during fiscal 2013 as well, to ensure compliance with the Subcontractor Act.

#### **Activities and Achievements**

#### Holding business partner briefings

#### MOS Indexes

S-3: Contribution to reduce environment impact through supply chain management

> Find out more

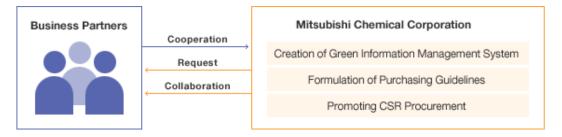
Mitsubishi Chemical aims to promote CSR activities together with its business partners to help build a sustainable society. As part of these efforts, we have established Green Information Management System in 2006 to comprehensively manage and convey information on chemical substances contained in products with the cooperation of our business partners. In the same year, we also established purchasing guidelines, made efforts to build fair and equitable relationships with our business partners, and asked our business partners to promote CSR initiatives.

In fiscal 2010, a CSR briefing for business partners was held to explain the following areas to 170 raw materials manufacturers: (1) Mitsubishi Chemical's concept on CSR; (2) promoting CSR by business partners; and (3) requesting cooperation with the CSR questionnaire on ideas and activities of CSR by Mitsubishi Chemical. The briefing was also attended by business partners of our Group companies Japan Polychem Corporation and Dia Packaging Materials Co., Ltd.

We conducted a CSR questionnaire of business partners who account for more than 90% of all purchase amounts, including the 170 companies who attended the briefing, for purchases made by Mitsubishi Chemical's Purchasing Department and under the authority of its business divisions. More than 95% responded, or an average of 34 out of 36 points. A similar questionnaire was also distributed to business partners involving materials. Overall, Mitsubishi Chemical Corporation and Mitsubishi Chemical Engineering Corporation asked a total of 400 companies for their cooperation. From fiscal 2011 through fiscal 2012, Mitsubishi Chemical visited ten companies, focusing on business parters who scored highly in their questionnaire results and companies adopting advanced approaches towards CSR procurement to confirm the status of their CSR progress and exchanged information.

At the fiscal 2011 Business Partner Briefing, explanations were delivered to 253 material manufacturers regarding (1) the details of Mitsubishi Chemical initiatives aimed at achieving *KAITEKI*; (2) the details of Mitsubishi Chemical's review of green management and operation; and (3) a request for business partners' cooperation in responding to a green survey and the shift to a new green survey.

To encourage the implementation of CSR initiatives in the supply chain, Mitsubishi Chemical plans to promote CSR activities further by providing business partners with feedback in the form of tabulated results based on CSR questionnaire responses. In particular, we will make company visits and take other steps to strengthen our efforts to motivate business partners who scored poorly in the questionnaire. We will also work to ensure that the Mitsubishi Chemical Holdings Group Charter of Corporate Behavior, which was instituted in April 2013, and similar codes are widely shared with our business partners.



Activities and Achievements

#### Conducting a general safety rally with our partner companies

Each Mitsubishi Chemical plant has established a work health and safety association to promote safety activities in conjunction with those at affiliates engaged in plant work or other tasks inside the plant, and has also provided a forum for regular liaison committee meetings and exchanges of views.

At the Mitsubishi Chemical Mizushima Plant, in addition to regular liaison meetings (held once a month) and education (education during induction, skill education, etc.), training workshops aimed at affiliate managers are held in October each year. At the training workshops, efforts are made to improve communication by having attendees engage in group discussions with the theme of safety activities and, then having the general managers of related divisions listen directly to the results. In fiscal 2011, discussions took place on the themes of "education for new plant inductees" and "how to resolve the current problems facing in-plant work overall," and extensive feedback was received. Regarding those issues brought up during the training workshop that require particular consideration, personnel from Mitsubishi Chemical and affiliates consider which measures to take and report on the results of those measures at the training session held in the following fiscal year.



Group discussions taking place at a training session

### Together with Stakeholders Together with Employees

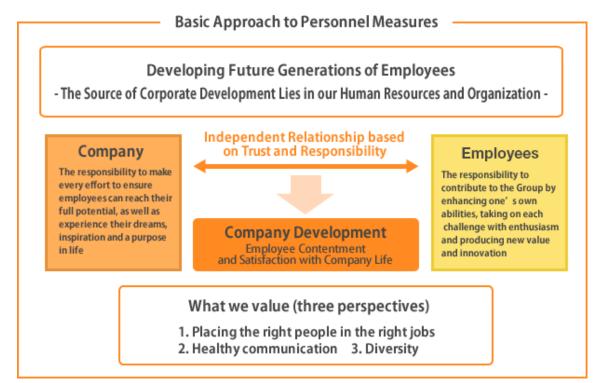
We undertake a range of initiatives to ensure that our employees, who act as the stewards for achieving *KAITEKI*, can maximize their potential.

- Basic approach
- Initiatives aimed at human resource development: Training people capable of thinking and acting independently
- Offering opportunities to take on challenges and boost awareness
- Initiatives aimed at developing the organization and corporate climate: Striving to develop an organization and corporate culture that makes work rewarding for anyone
- Helping employees attain a work-life balance by promoting a reduction in total working hours
- Striving to establish a culture of human rights through ongoing education and awareness-raising activities
- Running of employee surveys
- Building productive labor-management relations

### Policy Basic approach

The Mitsubishi Chemical Group believes that for the sustainable development of a business, the Company and each employee need to build autonomous relations based on trust and duty while fulfilling respective responsibilities, with a focus on human resources development, and the development of a good organization and culture. Based on this concept, we deal with each employee sincerely and offer a rewarding working environment that suits personal levels of development so that the capacities of each member are brought out to the fullest extent. These efforts emphasize human resources development, organizational and cultural development, and support for attaining work-life balance.

Mitsubishi Chemical's Personnel Policy





## Personnel strategy to realize sustainable corporate growth and development

Hiroshi Katayama

Associate Director, General Manager, Human Resources Department, Mitsubishi Chemical Corporation

We have drawn up a strategy in the field of personnel based on the fundamental ideas that each employee holds the key to the Company's sustainable development, and that the Personnel Division is an organization with the power and responsibility to nurture the Company's human resources. We are currently tackling various issues related to this strategy.



As priority issues over the medium-to-long term, we are working to realize the following four sets of measures so as to achieve the goals set forth in the Mitsubishi Chemical Group's APTSIS 15 medium-term management plan.

- 1. Adequately respond to the ongoing structural reorganization of the Group's business operations
- Respond to globalization
- 3. Strengthen the capabilities of personnel assigned to "front line" operations
- 4. Continue and further intensify efforts to strengthen the Group's business base

Regarding "Adequately respond to the ongoing structural reorganization of the Group's business operations," we aim to enhance the Group's competitiveness while pursuing optimal staff allocation for an optimum balance of personnel.

Regarding "Respond to globalization," we plan to hire and train staff capable of performing effectively in the global marketplace, and also to hire and train adequate numbers of national staff in each country where we operate. For these purposes, we will focus on building up a "global personnel" database.

Regarding "Strengthening the capabilities of personnel assigned to "front line" operations", as well as "Continue and further intensify efforts to strengthen the Group's business base" we are making efforts to improve administrative efficiency, to create a transparent and open corporate culture, and to make more use of the talents of a wide range of personnel, including women, foreign citizens, senior citizens, and persons with disabilities.

**Activities and Achievements** 

Initiatives aimed at human resource development:

Training people capable of thinking and acting independently

#### Basic approach to human resource development

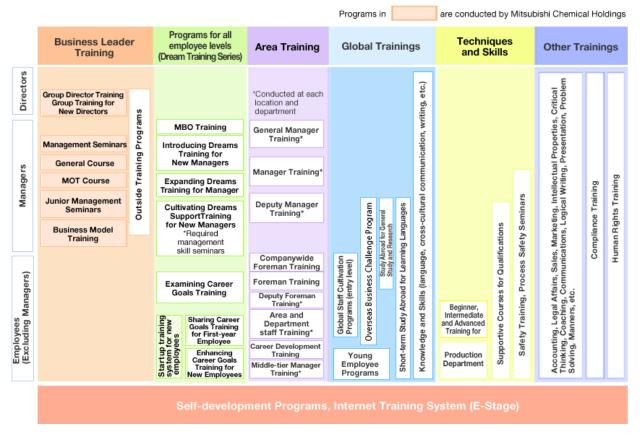
Mitsubishi Chemical believes there are three important elements in the growth of human resources, namely OJT<sup>1</sup> where personnel learn through actual work, OffJT<sup>2</sup> where personnel utilize opportunities outside work for learning and self-development, where they themselves engage in learning in various ways. By establishing links between these three elements and supplementing them with one another, they become more effective overall. With these three elements as the pillars, Mitsubishi Chemical supports the growth of its personnel in a number of ways.

- 1. OJT: On the Job Training
- 2. OffJT: Off the Job Training

The Three Pillars of Human Resource Growth



Employee training system of Mitsubishi Chemical Group



Enlarged view 📮

#### Management system

#### MOS Indexes C-2-2: Improve employee-related indicators > Find out more

Since 2001, Mitsubishi Chemical has employed a target management-oriented evaluation system. Today, the system applies to all employees, under which we conduct goal setting interviews at the beginning of a period and performance evaluation interviews for the previous fiscal year later on. In fiscal 2011, we also introduced a system to hold interviews part way through a period. In this way, we are working to further disseminate the personnel system and improve the legitimacy of evaluations.

#### Fostering the next generation of executives

The Mitsubishi Chemical Group participates in the Mitsubishi Chemical Holdings Business College: General Course aimed at the early development of the next generation of executives. Employees recommended by respective Group companies participate in this program for fifteen months to acquire skills useful for actual business operations, strategy formulation and implementation, through management literacy education, case studies and research on specific topics.

For example, in the Lessons by Executives part of the program, current executives give lectures based on their experiences, then join the participants in a discussion. In this way, the aspirations of the executives and current issues are conveyed to and shared by future generations, and participants are expected to identify practical actions they should make.

After the seminar, employees who participated are assigned to positions and duties that allow them to practically apply what they have learned and expand their experience, and which promote their growth.

#### **Cultivating Global Human Resources**

The Mitsubishi Chemical Group is currently making an active effort to globalize its businesses by establishing overseas production bases and expanding overseas businesses mainly in China, India, and other emerging economies. In addition to conventional training, we are promoting appropriate new initiatives to cultivate global management human resources capable of dealing with mergers and acquisitions and the configuration of alliances and partnerships.

The Global Staff Cultivation Program (entry level) started in fiscal 2010 for young employees who have no experience in overseas duties. Continuing from last year, China was once again selected to be the Program's training area for 2012 given its status as one of the world's most lively business region. Trainees visited local subsidiaries and other locations, heard lectures from local senior management, held discussions with



Scene from global training

regional staff, and conducted research on specific topics related to overseas business. One participant commented: "Given how fascinating the world of global business is, my motivation to play an active role in this area is even stronger than before."

To expand the horizons of human resources able to perform on the global stage, we reviewed our existing overseas internship program and restarted it as the Overseas Business Challenge Program in the latter half of fiscal 2011. Through the new program, we have expanded the range of choices in terms of the location, timing and duration of overseas internships, making it possible for more employees to gain experience in language study and practical training overseas.

#### **Activities and Achievements**

# Offering opportunities to take on challenges and boost awareness

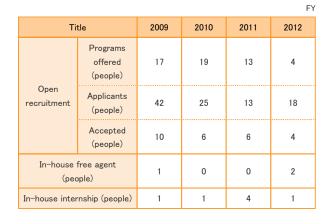
In addition to usual personnel transfer and rotation among divisions, Mitsubishi Chemical has established a system where employees may declare their desires related to their duties and career, and transfer to desired areas.

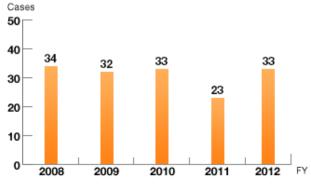
The system works in three ways: open recruitment where programs are offered in-house and those wishing to participate apply, in-house free agencies where employees make a request for a transfer to another duty, and in-house internships where employees are transferred to another duty for two to three years for training on the assumption they will return to their previous duty. These ongoing efforts are being made to encourage greater use of the system, such as improving ease of use by unifying application forms and trying more effective measures for publicizing the system among employees.

A career counseling system adopted in fiscal 2006 also enables employees to independently consider their career path. Qualified career counselors are assigned in-house and other employees may consult with them at any time about their careers. The system offers awareness-building opportunities for employees who are seeking to form their career path. Individual guidance is given from the viewpoints of taking inventory of one's career so far and of rediscovering oneself.

 Actual use of open recruitment, in-house free agencies, and inhouse internships

Number	of people	who	consulted	career	counselors





#### **Activities and Achievements**

Initiatives aimed at developing the organization and corporate climate:

Striving to develop an organization and corporate culture that makes work rewarding for anyone

The Mitsubishi Chemical Group proactively promotes diversity for developing a corporate culture where all employees mutually respect each others' values and find work rewarding.

#### Efforts to promote the active participation of female workers

MOS Indexes C-2-2: Improve employee-related indicators

C-3: Recognition of corporate trust > Find out more

Aiming to be a company where all employees work to their fullest capacities regardless of their gender, as well as having appeal as a place where energetic workers come together, Mitsubishi Chemical in 2008 adopted the Women's Initiative & Work Innovation (WIN-WIN) Plan. Using the targets stated in the plan as guidelines, Mitsubishi Chemical has established systems to provide necessary career support to female workers, including leave while accompanying the spouse's overseas assignment, temporary suspension of transfer, and declaration of the desired place of work. Systems related to child care and family care that help women maintain a work-life balance are also being used on an ongoing basis, and we continue to offer various supporting measures that women require, such as the WIN-WIN plan.

#### Target values of Women's Initiative & Work Innovation (WIN-WIN) Plan (%)

FΥ

Item		2009	2010	2011	2012	Target values <sup>3</sup>
Ratio of women among	management	4.6	4.6	4.9	5.3	over 20
Ratio of women	Clerical	32	41	39	36	over 40
among new hires	Engineering	9	16	14	8	over 20

<sup>3.</sup> The target for ratio of women among management is for fiscal 2025 and for women among new hires is for fiscal 2015.
The result for the ratio of women among management as of April 1 for each year



## Example of an Initiative Aimed at Promoting Active Participation of Female Workers

The Mizushima Plant launched a project to promote the active participation of female employees in 2009. The project includes the formulation of medium-to-long term career plans, job analysis and training aimed at changing the way of thinking about employees and the organizational hierarchy.

In fiscal 2011, group work dealing with the various challenges faced by the plant was conducted. Mizushima Halcion Activities was newly established as a body tasked with realizing the recommendations produced, and activities are still being pursued in this capacity on an ongoing basis.



Mizushima Halcion Activities

Mizushima Plant has also gained recognition for initiatives including its track record of having male employees take child care leave. The plant has sought to develop a work environment in which employees can actively engage in work regardless of gender, earning it an award from the Okayama Governor as an Okayama Child-raising Support Declaration Company.

In the same way, at each of its sites Mitsubishi Chemical is working to develop a corporate culture in which female workers can actively participate.

#### ▋ Work−life balance support systems introduced in fiscal 2010 (both male and female employees are eligible)

#### 1. Leave for accompanying spouse's overseas assignment

Allows employees to take leave of up to three years when accompanying the spouse's overseas assignment.

#### 2. Temporary suspension of transfer

Allows employees to be exempted from transfer that accompanies relocation and to continue working at the current place of work for a specified period while raising a child.

#### 3. Declaration of desired place of work

The system allows employees to ask to be transferred to the spouse's place of assignment when the spouse is transferred to a remote location and work-life balance is hindered or there are other family reasons.

System	2010	2011	2012 (non-consolidated figures in brackets)
Maternity leave before and after childbirth (people) <sup>4</sup>	62	59	35
Child-raising leave (people)	126	116	110(80)
Shorter work hours while raising a child (people)	211	210	218
Nursing care leave (people)	2	2	6(5)
Shorter work hours while providing nursing care to family members (people)	1	3	4
Fertility treatment leave (people)	1	0	0
Subsidy for fertility treatment (cases)	41	40	53
Leave to accompany spouse's overseas assignment (people) <sup>5</sup>	3	1	1
Temporary suspension of transfer (people) <sup>5</sup>	1	0	0
Declaration of desired place of work (people) <sup>5</sup>	5	3	1

<sup>4</sup> Only female workers may take maternity leave before and after childbirth. Both male and female workers are eligible for other support systems.

 $<sup>5\ \</sup>mbox{These}$  are the systems for supporting work–life balance that were introduced in fiscal 2010.

#### Front Runner

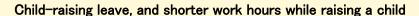
## Taking leave while accompanying the spouse's overseas assignment

Michi Oohashi General Affairs Department Yokkaichi Plant Mitsubishi Chemical Corporation

My husband was transferred to the United States in 2010, and for a while I continued to work alone in Japan. However, the system for leave while

accompanying the spouse's overseas assignment was introduced, and since I also had the backing of my supervisor, I decided to take the leave. Thanks to the system, I was able to join my husband without having to quit my job. I also appreciate the warm sending-off I received from everyone at the workplace.

After my husband had been reassigned back to Japan, I returned to my previous place of work in May 2013. I was a bit worried about how things would go, having been away from the job for a while, but many people made me feel at home, greeting me with a friendly "welcome back"! For this, I am really grateful. Every day I feel very fortunate that we were able to stay together as a family, and that my husband and I were able to continue our careers without interruption. By taking the leave to accompany my husband to the United States, I placed an extra burden on my colleagues at work, and I will do my best to skillfully balance my job and home life as a way of showing my appreciation for their support.



Kaori Miura

Intellectual Property Division
Science and Technology Research Center,

Mitsubishi Chemical Corporation

I took child-raising leave for the first time in 2009 and then again in 2012, and I was reinstated in my old job in January 2013. At first, after starting in the job again, I felt like I wouldn't be able to continue working, as my second child was having trouble settling in at preschool and was constantly falling ill. However, thanks to being able to take advantage of the Company's system for shorter work hours, as well as the understanding and support shown by my colleagues, I managed to get over the worst period. Both my children have now become completely used to preschool, and they go off there happily together. The elder child tells me all about the fun time they have at preschool, and this lets me go off to work without any worries.

Even though my children no longer get sick quite so often, it still happens sometimes, and this forces me to take leave at short notice. I am very grateful to my colleagues for the way in which they worry about my welfare and help to pick up the slack in the office. For the time being, I can only be the recipient of such support, but I aim to do my best at work and at home, and one day I will be able to provide the same sort of support for others around me.



#### Promoting diversity in recruitment

#### MOS Indexes C-2-2: Improve employee-related indicators > Find out more

Mitsubishi Chemical promotes diversity in its recruitment activities, with the hope of revitalizing the organization by addressing changes in the business environment and globalization, and by assembling diverse human resources. Specifically, we are working to increase the percentage of female hires and promoting the recruitment of local human resources in Japan and at overseas companies. Application eligibility has also been expanded for university graduates, treating them as new graduates for up to three years after graduation. We are also making active use of mid-career recruitment.

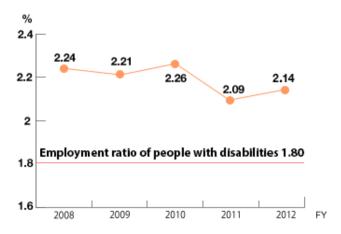
In fiscal 2013, 100 new graduates were hired, 24 of whom were women and six were foreigners. After recruitment, training commenced for this diverse array of employees to enable them to make an outstanding contribution to the realization of KAITEKI in the years ahead.

#### Helping people with disabilities bring out their skills

Under a philosophy of normalization, in 1993 we established a special subsidiary, Kasei Frontier Service, Inc., for helping people with disabilities take on roles with greater responsibility, developing their capabilities, and contributing to society. At the same time, we have sought to improve their working environment. The subsidiary's major businesses include information processing services, general printing services and work consigned by Mitsubishi Chemical. As of June 2013, 78 people with disabilities (of a total of 121 employees) work at the Kita Kyushu head office and Yokkaichi branch office in ways that suit their respective skills.

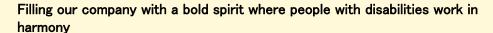
The employment ratio of people with disabilities as of fiscal 2012 is 2.14%. Since raising the statutory employment ratio to 2.00% in April 2013, we have maintained a level that is above this.

#### Change in employment ratio of people with disabilities



\* Includes companies to which Mitsubishi Chemical's system of disabled person employment ratio applies

### Front Runner



Kenichi Sato

Representative Director

Kasei Frontier Service, Inc.

Kasei Frontier Service, Inc. considers both the tangible and intangible aspects of the working environment to enable people with disabilities to work with enthusiasm. Yet we have never treated people with disabilities in a special way. This is because we hope to be a group with a bold spirit where people with disabilities and those without impairments work in harmony.

In our management, we are continually mindful of making the company an organization we can be proud of as a team of human beings. For this purpose, this must be a company where anyone can work comfortably in a friendly but competitive environment. On the other hand, we need to face the reality that, as we age, we experience different phenomena. Even under these circumstances, we need to develop working environments where each of our employees feels joy when they work and have a sense of participating in and contributing to society.

#### Front Runner

#### Sharing a common motivation with my colleagues

Shoji Tanaka

(disability of the lower extremities)

Head of Technical Division, OA1 Group, OA Division,

Kasei Frontier Service, Inc.

In my present post, I am busily working every day alongside staff of various disabilities, in such operations as data entry and database creation.

Sometimes, when it seems that we couldn't possibly meet a customer's deadline, we all pull together and manage it somehow. I put great importance on making products that will satisfy our customers, and in the future I would like to do more to help bring people together for mutually fruitful results.



#### Utilizing skills of senior workers effectively

Since the Act for Stabilization of Employment of Older Persons was amended in April 2013, companies have become obligated to make employment opportunities available to interested employees up to the age of 65. Staying ahead of social trends, however, Mitsubishi Chemical established prior to this the Senior Partner System for rehiring enthusiastic and able employees after they reach retirement age. In fiscal 2012, 167 (about 78%) of 214 such employees were rehired under the system. They use their skills as experienced workers and train younger workers to pass on the expertise and techniques they have acquired in their careers.

**Activities and Achievements** 

# Helping employees attain a work-life balance by promoting a reduction in total working hours

The Mitsubishi Chemical Group believes that maintaining work-life balance improves productivity and motivation for both men and women. Based on this thinking, Mitsubishi Chemical has attempted to reduce total work hours so that all employees can lead healthy and satisfying daily lives.

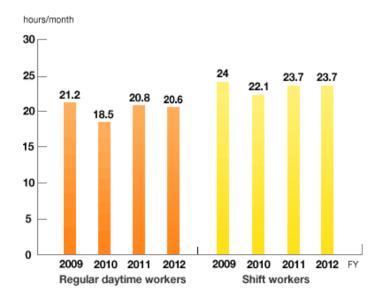
Reducing overtime and holiday work hours and eliminating excessive work hours by raising work efficiency

MOS Indexes C-2-2: Improve employee-related indicators > Find out more

Mitsubishi Chemical seeks to reduce overtime, holiday work, and excessive work hours by ensuring division managers properly understand the duties and work hours of subordinates, eliminate excess or waste in their duties, and maintain appropriate duty allocation within the workplace.

Specifically, Mitsubishi Chemical also has a number of policies designed to boost work efficiency, including the simplification of in-house materials and reviewing the timing of meetings. In addition, we introduced in November 2012 restrictions on room access after 7:00 p.m. in an effort to raise awareness of completing work within set time periods and then going home. In fiscal 2011, there was a slight increase in overtime and holiday work hours due to large-scale periodical repairs at plants, responding to the earthquake disaster and hiring more replacement staff due to an increase in the number of holidays for shift workers. However, from a long-term perspective taking past results into account, work hours are on a downward trend.

#### Change in overtime and holiday work hours (general workers)



Measures for encouraging employees to take annual paid vacation

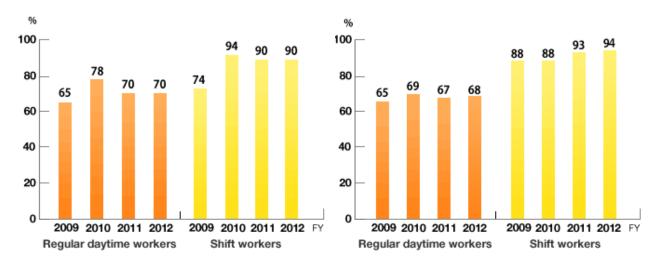
MOS Indexes C-2-2: Improve employee-related indicators > Find out more

Aspiring to encourage employees to lead well-modulated daily lives with greater leisure, Mitsubishi Chemical is striving to create an environment that allows employees to take planned vacations. Examples include setting planned annual holidays (three days each year) and adopting a life support holiday system. The life support holiday system enables an employee taking two consecutive paid days off to take an additional day off once a year. This enables five consecutive days off if a weekend is included, encouraging employees to take extended holidays. Employees aged 30, 35, 40, 45, 50 and 55 are allowed three extra days off, to take even longer vacations.

We have also established volunteer holiday (five days), volunteer leave (three years), and donor holiday (in the number of necessary days) systems to assist employees doing volunteer work.

#### Change in number of paid vacation days taken

#### Change in the ratio of life support holiday system taken



#### Changes in shift work systems

**MOS Indexes** 

C-2-2: Improve employee-related indicators

C-3: Recognition of corporate trust > Find out more

At the plants of Mitsubishi Chemical, shift workers currently work in three shifts through four groups. However, a study is underway to change to three shifts and five groups or other shift systems to allow greater leeway for shift workers, taking the nature of duties and plant features into consideration.

#### Example of three-shift and five-group system

Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Α	1	1	1	1	Р	3	3	3	3	Р	2	2	2	2	Р	Р	1	1	1	1	Р	3	3	3	3	Р	2	2	2	2
В	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	Р	3	3	3	3	Р	2	2	2	2	Р	Р	1	1
С	Р	3	3	3	3	Р	2	2	2	2	Р	Р	1	1	1	1	D	D	D	D	D	D	D	D	D	D	D	D	D	D
D	3	Р	2	2	2	2	Р	Р	1	1	1	1	Р	3	3	3	3	Р	2	2	2	2	Р	Р	1	1	1	1	Р	3
E	2	2	Р	Р	1	1	1	1	Р	3	3	3	3	Р	2	2	2	2	Р	Р	1	1	1	1	Р	3	3	3	3	Р

Legend

Shift	Work description
Р	Public holidays
1	Shift 1
2	Shift 2
3	Shift 3
D	Daytime

6. Employees may take consecutive days off while working the daytime shift



## The drafting of the 4th Action Plan (April 2013 - March 2018)

The Act for the Promotion of Measures to Support the Nurturing of the Next Generation went into force in 2005, following which Mitsubishi Chemical Corporation drew up its Action Plan for General Business Proprietors. Then, in 2007 Mitsubishi Chemical acquired the "Kurumin" certification as a company providing help for its employees in bringing up children. Since that time, the Company has continued to provide a working environment enabling its employees to achieve a good work-life balance, and since April 2013 we have been promoting enhanced work-life balance support in line with the stipulations of our 4th Action Plan.



#### The 4th Action Plan

We have drawn up the following action plan to realize a working environment in which all employees can achieve a good work-life balance, enabling them to work efficiently and make full use of their skills.

- 1. Period of plan: April 1, 2013 to March 31, 2018 (5 years)
- 2. Objectives

Goal No.1: Provide increased support for child-raising by employees

 Examine ways in which the working environment can be improved to help employees achieve a healthy work-life balance

Examples:Improve follow-up procedures for employees taking advantage of the Company's work-life balance support system; promote understanding and wider utilization of newly introduced systems; expand maternal welfare activities; promote greater involvement in child-raising by fathers; examine expansion of work-menu options for mothers and fathers during child-raising period; develop a corporate culture that encourages employees to take advantage of system of paid leave for child-raising.

#### Measures taken

April 1, 2013 to March 31, 2018

Formulation and implementation of specific measures; operation of new system, and comprehension of issues needing to be addressed

Goal No.2: Take measures to further foster a corporate culture that helps employees achieve a healthy balance between work and child-raising

- Various educational activities to foster the desired culture across the entire Company
   Plan and hold lectures and seminars; make use of existing in-house training system
- Continue and further enhance in-house educational activities regarding human rights aimed at helping bring about a gender-equal society

Take measures to raise human rights consciousness through training

• Take steps to reduce overtime to help employees achieve a healthy work-life balance (Examples: campaign to encourage employees to leave work at the fixed time; hold talks in the office regarding use of the system of paid leave for work-life balance support, and on cutting back on overtime hours worked)

#### Measures taken

April 1, 2013 to March 31, 2018

Formulation and implementation of specific measures

Goal No.3: Apply Companywide regional support measures for fostering sound development of young people

Provide opportunities for children and adolescents to acquire work experience and experience of participation in the wider society, such as holding factory tours, conducting chemical experiments in front of students at local elementary and junior high schools, inviting children to visit workplaces, and offering internships and other practical work experience programs

#### Measures taken

April 1, 2013 to March 31, 2018

Specific activity program

#### **Activities and Achievements**

# Striving to establish a culture of human rights through ongoing education and awareness-raising activities

#### **MOS Indexes**

C-3: Recognition of corporate trust > Find out more

The Mitsubishi Chemical Group established Guidelines for the Promotion of Human Rights Awareness in 1980, and has continued to engage in human rights education and awareness-raising activities ever since. From the outset, we have tackled human rights issues to fulfill our social responsibility as a corporation. Today, we conduct training and awareness-building (including at our overseas subsidiaries) to deepen the proper understanding and recognition of human rights issues and ensure that we conduct business activities in ways that conform to the Ten Principles of the United Nations Global Compact.

Each year, we develop a timely priority issues list. In fiscal 2010, for instance, we implemented training based on a three-year plan for reconfirming and understanding the Buraku issue, eradicating prejudice as well as preventing sexual, power, and other forms of harassment. In fiscal 2012, we conducted 556 group training sessions at domestic and overseas business sites aimed at all employees working within the Group, including executives and temporary staff. In total, 11,611 employees attended these sessions. Human Rights E-Training is also continuously administered using the Company Intranet, and has been used by some 17,072 employees to date. The percentage of employees who have undergone group training currently stands at around 42% of all employees (members such as executives and top management undergo training on a yearly basis).

#### Education and training on human rights given

FΥ

Training description		2009	2010	2011	2012
Group seminars	Number of times	328	406	432	556
	Number of people	10,049	9,684	10,019	11,611
Human Rights E-Training	Number of times	4	4	4	4
	Number of people	13,930	16,742	20,364	17,072
Overseas seminars <sup>7</sup>	Countries	1	2	0	1
	Number of times	4	2	0	3

<sup>7.</sup> Includes surveys on overseas human rights situations

Results of Questionnaire after Group Human Rights Training (2012)



Mitsubishi Chemical precludes any and all discrimination in its hiring and selecting employees. Even if infectious diseases such as HIV and gender identity disorder, which have been issues in recent years, are made known after joining the Company, Mitsubishi Chemical takes appropriate steps according to a manual to deal with them, taking careful note of the privacy of the persons concerned.

# Guidelines for the Promotion of Human Rights Awareness (Preamble)

Based on the Mitsubishi Chemical Holdings Group Charter of Corporate Behavior, we recognize the importance of educating our employees in the principles of human rights. As part of our corporate social responsibility, we work to increase awareness within the Mitsubishi Chemical Group of human rights issues such as social discrimination against outcast people, and aim to detect and prevent all cases of discrimination or harassment. For these purposes, we herewith lay down these guidelines for the promotion of human rights awareness.

**Activities and Achievements** 

Running of employee surveys

**MOS Indexes** 

C-2-2: Improve employee-related indicators > Find out more

The Mitsubishi Chemical Group has conducted employee surveys since fiscal 2006. In fiscal 2012, 25,498 employees, representing roughly 90% of all domestic employees and employees stationed overseas, cooperated with the survey. The survey addressed a diverse range of issues from employee satisfaction to the workplace environment, with initiatives being undertaken to reflect the feedback from employees in various management policies.

#### **Activities and Achievements**

# Building productive labor-management relations

Labor unions exist at the Mitsubishi Chemical head office (as well as branch offices) and production sites at Kurosaki, Yokkaichi, Naoetsu, Mizushima, Sakaide, Kashima, Nagoya, Tsukuba, and Odawara, which together form the Mitsubishi Chemical Labor Union Federation. The Federation and labor unions do not participate in senior bodies, but pursue a policy of working together with the Company. The emphasis is placed on maintaining and strengthening sound labor—management relations, and the two parties meet regularly at biannual management and labor committee meetings.

Some Mitsubishi Chemical Group companies have organized labor unions, and these have all maintained productive labor-management relations.

# Front Runner



# Mitsubishi Chemical Labor Unions Federation

Yasuharu Kukino

Chairman

Mitsubishi Chemical Labor Unions Federation

The life force of Mitsubishi Chemical undoubtedly lies with the people, and for this reason we believe labor-management relations start with business administration that fully brings out human ability and engenders trust in management. With the aim of further strengthening labor-management relations, our



Federation will perform its roles appropriately by conducting activities for linking the frontlines of management and worksites, as management's partner and checking function, and by candidly exchanging opinions at Management Council Meetings and on other occasions.

I am also fully aware that the overarching basis for the Mitsubishi Chemical Group's ongoing prosperity lies in safety and compliance. Our Federation will redouble its efforts to share information and promote exchanges with other labor unions through the Mitsubishi Group Council (Mitsubishi Chemical Holdings Group Labor Union Council) and other organizations, thereby deepening ties among labor unions that gather under the Group.

# Together with Stakeholders Corporate Citizenship Activities

# Basic concept

As a member of the Mitsubishi Chemical Holdings (MCHC) Group, Mitsubishi Chemical engages in corporate citizenship activities that include fostering the development of the next generation, communicating with local communities, and disaster support in line with the Mitsubishi Chemical Holdings Group Corporate Citizenship Activities Policy.

# MCHC Group Corporate Citizenship Activities Policy

As good corporate citizens, the MCHC Group has been striving for realizing KAITEKI with better understanding the culture and customs in communities and countries where we operate. Furthermore, we have been active in responding to real needs and demands of the communities through various manner including our business activities where we locating.

#### [Approach]

As a whole we shall:

- · Conduct corporate citizenship activities in communities and countries where we operate from a view point of Sustainability, Health, and Comfort.
- · Deepen our understanding on social needs through communication with various stakeholders and other organizations.
- · Go along with all employees for the activities and encourage their positive participation.
- · Support employees for their volunteer activities.

#### Activities in support of post Great East Japan Earthquake Reconstruction

MOS Indexes C-3: Recognition of corporate trust >Find out more

Many places in Tohoku suffered enormous damage from the tsunami that followed the Great East Japan Earthquake. As part of our activities to support reconstruction in Tohoku, we invited primary school students from Kamaishi City and Otsuchi Town in Iwate Prefecture, together with their parents/guardians, to Tokyo in cooperation with Good Neighbors Japan<sup>1</sup>, an NGO. Called "Let's Go To Tokyo," this event enabled the group of 68 people to visit Tokyo Disneyland, Tokyo Sea Life Park in Kasai, KAITEKI SQUARE showroom, and our science experiments classroom in our head office building.

To date, the MCHC Group has provided aid for the areas affected by the earthquake through donations of money and supplies, and has supported its employees in their volunteer activities in Tohoku.

We carried out the recent "Let's Go To Tokyo" event as part of these activities to provide support for the affected areas, and we believe that inviting children from these areas to Tokyo gives them both a psychological break and the opportunity to learn more about the MCHC Group and its business operations.

 Good Neighbors Japan is a Japanese Specified Nonprofit Corporation and part of Good Neighbors International, which engages in activities to improve lives through education, food, shelter, community development, medical care, advocacy, and emergency relief in over 20 countries.



"Let's Go To Tokyo"



Science experiments



Visiting the KAITEKI SQUARE showroom

## Fostering the development of the next generation

#### **Traveling Science Class**

**MOS Indexes** 

C-3: Recognition of corporate trust > Find out more

Each Mitsubishi Chemical Group location runs a science class with the aim of sparking an interest in chemistry and science among the children who will lead the next generation.



# Traveling Science Class (Kashima Plant)

To forge communications with the local community and spark an interest in chemistry and science among the children who will lead the next generation through fun chemistry experiments, the Kashima Plant has run a traveling science class for elementary school fifth graders in Kamisu City, Ibaraki, where the plant is located, since 2000.



For fiscal 2012, experiments on density were held at four local elementary schools under the theme "Will It Float or Will It Sink?" beginning on January 2013. The students were amazed to observe the mysterious phenomena caused by differences in density, such as the neat way honey, water, ethanol and vegetable oil separate into layers in a graduated cylinder, and unsinkable soap bubbles, and enthusiastically took part in the experiments together with the Mitsubishi Chemical and R&D Center employees who served as instructors.



# Seishin Gakuen Seminars (Kashima Plant)

Seishin Gakuen High School in Kamisu City, Ibaraki, which lies adjacent to the Kashima Plant, has been designated by the Ministry of Education, Science, Sports and Culture as a "Super Science School" that promotes the development of science and technology-based human resources. As a part of these efforts, in December 2011 local companies including Mitsubishi Chemical gave special lectures during Saturday seminars held by the school.



Under the theme "The Plastic that Creates the Future," we conducted lectures combined with experiments concerning plastics, ranging from plastics we are familiar with in our daily lives to high-performance plastics, for third-year junior high school students and first-year high school students. The students actively participated in the seminar, eagerly asking questions even after the end of the lecture.



# 2012 Youngster's Science Festival in Kurashiki (Mizushima Plant)

In November 2012, we set up a booth for scientific experiments and engineering experiences at the 2012 Youngster's Science Festival in Kurashiki, Okayama Prefecture. The festival is a science education event held on a nationwide scale with the aim of helping youngsters understand the attraction of science through real-life experience. This was the 14th science festival in Kurashiki, and Mitsubishi Chemical's Mizushima Plant has taken part every year since 2006.



On the day, we worked with children on experiments using liquid nitrogen and the creation of Cartesian divers. The eyes of the participating children shone as they experimented with freezing flowers and vegetables using liquid nitrogen, and gasped in surprise as the Cartesian divers they had created with their own hands floated in accordance with scientific principles in a bottle filled with water, and moved up and down when the pressure in the bottle was increased or decreased through squeezing or releasing.



# Science classes during local festival in Kurosaki (Kurosaki Plant)

Mitsubishi Chemical held a chemistry class during Chikuzen Kurosaki Town
Festival in the Kurosaki area centered in the shopping district in front of Kurosaki
Station in Kitakyushu City, Fukuoka Prefecture. This is the ninth time Mitsubishi
Chemical (Kurosaki Plant) has held the science classes, which is held each year.

Once again, R&D Center employees played a central role as instructors, conducting experiments, making slime from laundry starch and aromatic substances from Aqua Pearl (super-absorbent polymer manufactured by San-Dia Polymers, Ltd.).



The classes were such a great success that many children lined up to take part and displayed keen interest as they set about making the products of the experiments.

#### Mitsubishi Chemical Junior Designer Award (MCJDA)

Mitsubishi Chemical has supported the Mitsubishi Chemical Junior Designer Award (MCJDA) [Japanese only] since fiscal 2006 for supporting young designers and promoting design. MCJDA is the only Award in Japan for graduation projects of students aspiring to be leading designers in all areas of design including product, graphic, fashion, multimedia, packaging and design studies. Through MCJDA, we strive to create opportunities to find promising young designers and introduce them to the public. We usually issue a call for works in January, and announce the award winners and exhibit the winner's project in the fall.

In fiscal 2012, the twelfth<sup>2</sup> awarding, 260 works were sent in. Of these, 14 won award for their uniqueness, representing great variety.

This is the seventh awarding since the title changed to MCJDA because of changes in supporting companies



2012 MCJDA Awarding Ceremony



Naturally-derived colors (by Haruka Suzuki) awarded the 2012 MCJDA Grand Prix

**Activities and Achievements** 

# Communicating with local communities

# Coordination with Local Public Interest Corporations Incorporated Foundation

Mitsubishi Chemical (Kurosaki Plant) is a member of the Kitakyushu International Techno-cooperative Association (KITA). In this capacity, we provide the space opportunities and develop the curricula to transfer technological expertise to developing countries needed for international training in Kitakyushu City, Fukuoka Prefecture, and also take part in activities to help promote international cooperation in a bid to achieve personal exchanges and technology transfers. Mitsubishi Chemical has participated in these activities since KITA was first established in 1980 and remained involved with the running of KITA, with successive Kurosaki Plant general managers having served as presidents directors or councilors of the association to date.

For fiscal 2012, a total of 81 trainees from 34 countries were accepted into eleven courses held for 28 days. The training mainly consisted of courses on managing and cleaning air pollution and industrial wastewater, equipment management technologies and activities to prevent industrial accidents, and also included actual plant tours inside the Kurosaki Plant premises.

The trainees are interested in learning about the environmental conservation technologies employed by Japan, which went from being one of the world's major polluters to achieving environmental improvements in a short time. For their part, the team of instructors conducts the training each year with the hope that the training will prove useful to the trainees after they return to their own countries.

There are also many opportunities for exchange between employees and trainees during the training, and this is also useful in the education of employees.





# **About Mitsubishi Chemical Corporation**

Mitsubishi Chemical Corporation was incorporated on October 1, 1994 through the merger of Mitsubishi Kasei Corporation with Mitsubishi Petrochemical Co., Ltd. The company's roots trace back to Nippon Tar Industries Corporation, established on a fifty-fifty basis capital contribution by Mitsubishi Mining Company, Ltd. and Asahi Glass Co., Ltd. on August 1, 1934. Today, Mitsubishi Chemical Corporation and its 225 Group companies conduct business across the three domains of performance products, healthcare and industrial materials.

See the securities report for details.

# Corporate data of Mitsubishi Chemical Corporation (May 2012)

Mitsubishi Chemical Corporation

**Establishment** June 1, 1950 (incorporated on October 1, 1994)

**Head office** Palace Building, 1–1, Marunouchi 1–Chome, Chiyoda-ku, Tokyo

President & CEO Hiroaki Ishizuka
Paid-in capital 50,000 million yen

**Listing** Unlisted

URL http://www.m-kagaku.co.jp/index\_en.htm

# Group Overview (Fiscal year ended March 2013)

Mitsubishi Chemical Corporation

 Subsidiaries
 140

 Affiliates
 44

 (Total)
 184

Number of employees 5,778 (non-consolidated)

27,312 (consolidated)

# **Business Domains and Main Products**

#### **Electronics Applications & Designed Materials**

We provide increasingly diverse markets and society with a wide range of solutions, from materials to devices, by utilizing chemistry-based featured technology clusters.

>Details 📮

## White LED lighting / supplies

White closely resembling natural light achieved with proprietary technology





#### Display Materials and Related Products

Offering a vast range of solutions including materials and components for LCD displays



#### Recording media

No. 1 market share of the recordable CD/DVD/BDsold worldwide by brand \* \*(according to the SCCG/JRIA data)





#### Performance Film

Functions developed for specific applications





#### Semiconductor-related Products and Services

Providing services such as wafer reclamation and precision cleaning together with materials such as high-purity process chemicals



# Lithium ion battery materials

Only manufacturer providing t he four core materials



## Specialty chemicals

Materials that enable a variety of added functions



#### Food ingredients

Range of products based on natural materials





#### Ion exchange resins

Supporting separation and refinement solutions for customers with a wide range of offerings, including pure water production and the purification of pharmaceuticals and foods



## Health care

From clinical testing to diagnosis and drug-discovery support, we engage in a wide range of healthcare-related businesses to help people lead healthy and fulfilling lives.

>Details 📮

# Active pharmaceutical ingredients / pharmaceutical intermediates

Using cutting-edge,organic synthesis technology to provide fine chemicals



## Food and Hygiene Testing

Support to ensure all-round "food safety" from the raw ingredients that go into food to environmental hygiene



# Doping testing

Japan's only WADA (World Anti-Doping Agency)-accredited doping testing institute



#### Diagnostic reagents and instruments/clinical testing

From clinical testing to installation of diagnostic support systems



#### Chemicals & Polymers

With energy and resource-saving materials design, optimum process design and ultra-stable plant operation positioned as our core technologies, we seek to enhance our international competitiveness while providing the chemicals that support sustainable and diverse social infrastructure.

>Details 📮

# High performance graphite

World-class quality through integrated production



#### Coke

Crafted technologies supporting core industries World-class production capacity as a merchant coke producer



#### Terephthalic Acid

Expanding into growth markets by establishing manufacturing and sales bases in Asia Top share in Asia, No.2 in global



#### C4 chemicals

Responding to the need for high value-added chemicals for applications across an array of industries including high-performance fiber



#### Performance polymers

Developing functional resins featuring elasticity, durability, and heat resistance





#### PHL/BPA/PC

Developing with low environmental impact manufacturing process and global partnership Top PC share in Asia





#### Polypropylene

A lineup of high quality, high function polypropylene products Top share for automobile in Japan



#### PET Resin

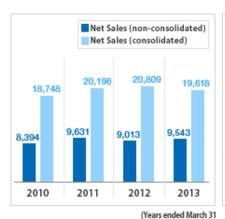
Having established a consistent product chain from the raw material terephthalic acid to resins and films Catering to all manner of needs with a sophisticated design, development and manufacturing techniques





# Financial Highlights (non-consolidated / consolidated)

 Change in Net Sales (units: 100 million yen)

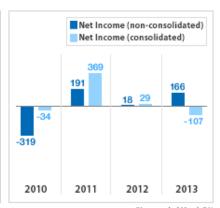


 Change in Operating Income (units: 100 million yen)



(Years ended March 31)

 Change in Net Income (units: 100 million yen)



(Years ended March 31)

# Global network

The Mitsubishi Chemical Corporation (MCC) Group maintains a global network of businesses comprising six major overseas local corporations, 13 Group companies in the performance products domain, and 18 Group companies in the industrial materials domain. The MHCH Group aims for these global networks account for 33% of overseas net sales by fiscal 2015.

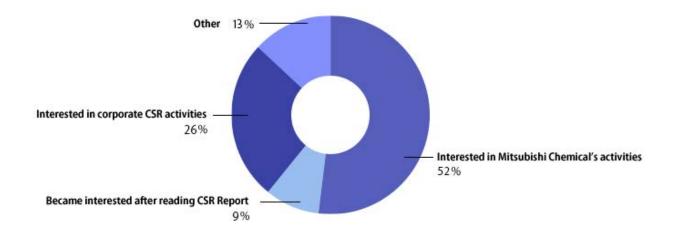


# Results of questionnaire on CSR Report 2012

Thank you for your valuable opinions and comments on CSR Report 2012. We will refer to your feedback in our activities geared toward making *KAITEKI* a reality.

Below, please find the aggregated results of responses to the questionnaire.

# Q1: What was your reason for visiting the website?



## Q2: What is the position of the person responding to the questionnaire?

