

JSR Group

# CSR

Report 2012



JSR Corporation



## Editorial Policy

The JSR Group's corporate social responsibility (CSR) is to act with integrity as a good corporate citizen and carry out initiatives to meet the expectations of society. We publish our CSR reports to inform all stakeholders of JSR Group policies and initiatives with a view to a sustainable society.

In the CSR Report 2012, we present specific examples of the JSR Group's current efforts and also our direction from here on out. Containing a dialogue with an

expert from outside the company, this report presents specific examples of the direction that the JSR Group is aiming for and the initiatives that the Group is currently carrying out. In compliance with our Management Policies, our activities are reported according to our "Responsibility to Our Stakeholders."

A third-party opinion and an independent review regarding our activities and report are provided (with the opinion available both in the printed version and on our website, and with the review only on the website).

## The CSR Report 2012 Format

The JSR Group's CSR Report 2012 is available both in printed and online versions.

### Online

The online version presents a comprehensive report on the JSR Group's CSR activities. In addition to the content provided in the printed version, the online version details specific initiatives regarding "Responsible Care" (the environment, health, and safety) and many other responsibilities for our stakeholders.

**Web** HOME > CSR > CSR report 2012

<http://www.jsr.co.jp/csr/csrreport2012.shtml>

- Editorial Policy
- Executive Commitment
  - **Feature Article 1** Relationship between Global Social Trends and Materials
  - **Feature Article 2** Relationship between the JSR Group and Biodiversity \* You can view the full text of the dialogue here.
- About the JSR Group / JSR Group Profile / Essential Elements
- Management / CSR Management / Corporate Governance / Compliance / Risk Management
- Responsibility to Our Stakeholders
  - Targets and Results
  - Customers / Business Partners
    - Safety Assurance for Customers / Business Partners / Chemical Products Safety / Green Procurement Measures / CSR Procurement Measures
  - Employees
    - Basic Policies on Human Resources Programs / Course of Action (The 4Cs) / Recruitment and Promotion of Diverse Human Resources / Work-Life Management / Communicating with Employees / Human Resource Development / Awards by Directors
  - Society
    - Responsible Care (RC)
      - RC Management / Material Flow Management / Initiatives to Prevent Global Warming / Effective Use of Resources / Initiatives to Reduce Environmental Impact / Safety Initiatives / RC Activities by Group Companies
    - E2 Initiative™ ■ Biodiversity Conservation ■ Community Relations
  - Shareholders
- Third Party Opinion / Independent Review
- Comparative Table of Guidelines
- Report Download

### Referenced Guidelines

- Sustainability Reporting Guidelines, 3rd Edition, Global Reporting Initiative (GRI)
  - Environmental Reporting Guidelines 2007, Ministry of the Environment
  - Environmental Accounting Guidelines for Chemical Companies, Japan Responsible Care Council
- Note: Details on how this report conforms to the GRI Guidelines are available in the online version.

**Web**

CSR Report 2012 > Comparative Table of Guidelines

### Target Period

April 1, 2011 – March 31, 2012  
(Some parts of the CSR Report 2012 include activities and initiatives conducted since April 2012.)

### Operations Covered

JSR Corporation and 38 Group Companies  
 ● Operations for which data was collected on "Responsible Care" (the environment, health and safety)  
 Yokkaichi Plant, Chiba Plant, Kashima Plant, Yokkaichi Research Center, Precision Processing Research Laboratories, Tsukuba Research Laboratories, and 13 domestic Group companies

\*The names of the 13 companies above are provided and marked with \* in the section on "JSR Group Companies" on page 7 of this report.

### Publication Information

Date of publication: August 2012  
 Next scheduled issue: July 2013  
 (Previous issue: July 2011)

### Print

The printed version features CSR activities in the JSR Group that we would particularly like to communicate to our stakeholders. This version also provides the highlights of our previous fiscal year's activities.

## Index

- 03 Executive Commitment
- 05 JSR Group's Materials Essential to Daily Life
- 07 JSR Group Profile

### Feature Articles

## Materials Innovation to Solve Global Problems

- 09 **Feature Article 1** Relationship between Global Social Trends and Materials
- 13 **Feature Article 2** Relationship between the JSR Group and Biodiversity
- 17 The JSR Group's Essential Elements and CSR

### Activity Highlights

- 19 Customers / Business Partners
- 20 Employees
- 21 Society
- 23 Shareholders
- 24 Evaluation by Outside Organizations / Third-Party Opinion
- 25 Targets and Results

### Responsible Care®

("Responsible Care" is referred to as "RC" in this report.)

Responsible Care (RC) refers to autonomous management activities aimed at carrying out and improving policies relating to safety, health, and the environment as part of a company's public commitment in its management policy. It is based on the principles of self-determination and self-responsibility on the part of the company involved in producing and handling chemical substances – from development and production to distribution, use and disposal.





**We provide materials that will bring new value to society. The JSR Group will continue to take on challenges, utilizing innovation as our driving force.**

**Reaffirming the Importance of Business Continuity as a Materials Manufacturer**

In FY 2012 (April 1, 2011 to March 31, 2012), we were confronted with two severe problems – the Great East Japan Earthquake and the serious flooding in Thailand. It was fortunate that none of the JSR Group’s business establishments suffered critical or direct damage. However, at the time of the Great East Japan Earthquake, some of our raw materials suppliers were affected by the disaster, forcing our Kashima Plant in Ibaraki Prefecture to discontinue its operation for two months. At the time of the Thai flooding, the production of many Japanese companies, some of which were our customers, was seriously affected.

These natural disasters made us keenly aware once again of the extensiveness of the areas covered by the material industry. Partly because we were able to secure a safe inventory that was not affected by the disasters, we successfully avoided causing considerable inconvenience to our customers. However, since the JSR Group’s products are used in a wide range of important parts and materials for automobiles and lifeline products, we received many inquiries regarding the continuity of supply of our products.

In FY 2012, these experiences made us, as a materials manufacturer, once again strongly realize the importance of continuing our business operation.

We have already commenced the review of not only our initial responses to disasters and accidents, but also our more comprehensive business continuity management (BCM).

**Achieving Business Reform through Materials Innovation**

Under our Corporate Mission of “Materials Innovation,” the JSR Group takes actions with a view to enriching society, people and the environment by creating value through materials.

JSR 20i3 (“twenty thirteen”), the mid-term business plan launched in FY 2012, presents the type of business entity that the JSR Group desires to be in 2020. JSR 20i3, a three-year plan, is positioned as the first step toward realizing the target. To formulate the plan, we analyzed our business environment until 2030. Of the three macro trends of “climate change,” “the development of newly emerging economies,” and “shortage of food and water,” we believe that the first one is particularly crucial. While environmental problems pose a risk to companies, they also serve as business opportunities. Taking this into consideration, we are developing the E2 Initiative™, which is our effort regarding the environment to create value on both the aggressive and defensive fronts: the former comprises the products and services area of our business, and the latter, the internal activities and processes. Under the Initiative, we strive to strike an optimal

balance between Eco-innovation, which focuses on the creation of new business opportunities, and Energy Management, which emphasizes the reduction of CO<sub>2</sub> emissions.

The “innovation” referred to here is more than just creating something new. For example, the CO<sub>2</sub> impact generated by the production of synthetic rubbers for fuel-efficient tires is larger than that of traditional types of synthetic rubbers. However, when compared in terms of the CO<sub>2</sub> impact generated during the entire lifecycle of an automobile, fuel-efficient tires contribute to a considerable reduction of the gasoline consumption needed for driving, resulting in a significant decrease in the total environmental impact. In Europe and many other regions, laws and regulations are being established regarding the fuel efficiency of automobiles, making fuel-efficient tires inevitable for dealing with the trend. Under JSR 20i3, existing materials generate new value and applications in the micro trend. This is also a form of “innovation.”

We will continue to emphasize the conservation of biodiversity, which is deeply connected with our Group’s business practices. In FY 2012, we analyzed how our business activities impacted and depended on biodiversity, as well as initiating efforts regarding our raw material procurement and plant land use. Based on these, we formulated the Biodiversity Policies and established our direction.

Under the concept of “Innovation One-on-One,” the JSR Group has provided materials needed by world-top-class companies in various fields such as those of automobile tires, semiconductors, and liquid crystal displays (LCDs). We have offered such materials on a one-to-one basis and have created value with the cooperation of customers. This capability to adjust to our customer’s needs has made us highly valued. However, in the fields of the environment, energy, and life sciences, which are expected to grow in the future, both the number and scale of our business partners are large. To increase our presence as a materials manufacturer in such a value chain, I think that it is imperative for us to transform into a company with global standards of technologies and materials. While maintaining our previous pattern for achieving success, we will also create a business model superior to that pattern. This is the very thing that the JSR Group aims for toward 2020. When we look back on the first year of JSR 20i3, we find that the macro trend was going in the direction that we expected, although the speed was much faster than we expected. With our confidence and courage, we aim to accelerate JSR 20i3 even further.

**Creating a Corporate Culture Encouraging a Wide Diversity of Human Resources to Take on Challenges**

I believe that the keywords of the former half of the 2010s are “uncertainty” and “diversification.” Of the JSR Group’s total sales, the ratio of overseas sales is currently approximately 45%, which is expected to increase to approximately 70% in 2020. What will be required at that time to support the development of the Group is a wide diversity of human resources. We will



make the JSR Group an organization where a rich variety of human resources can work without any barriers, and each of our staff can fully demonstrate his/her ability. The basis for the judgment of value in such an organization is laid on

JSR Group’s Essential Elements, which were revised in 2011. The new Essential Elements have enabled all our staff to share what the JSR Group aims for. However, it is not enough simply to formulate the Elements; these Elements gain significance only after they have been instilled deeply into each of our staff. In this regard, we are making efforts to deepen understanding of the Elements. For example, I am disseminating my messages, and in-house explanatory meetings are being held. Additionally, questionnaire surveys have been conducted throughout the entire JSR Group. Although the Essential Elements have begun to be instilled steadily, we do not think that this is enough. It will take a long time, perhaps five or 10 years, to fully raise our staff’s awareness of the Elements. We will continue to make necessary efforts within the entire JSR Group.

When a business environment changes drastically, it is necessary for each staff member to maintain his/her competitive strength on a global level and take on challenges in his/her field. Moreover, it is important to make changes continuously by responding flexibly to a situation with uncertainty. It is also crucial for a wide diversity of human resources to accept each other’s values and cultural differences. We would like to create a corporate culture that encourages such human resources not only to maintain discipline, but also to take on challenges freely without hesitation.

**Challenges to Fulfill Responsibility to Stakeholders**

When reviewing the Essential Elements, we also reexamined our Responsibility to Our Stakeholders.

The JSR Group can be called a “stealth” company. For example, the Group’s products used for smartphones and LCDs cannot be directly identified by end-users, but they are all materials essential to such items. We hope to continue to be a materials manufacturer that is indispensable for customers in the making of their innovative products, and that provides the customers with feelings of reliance and expectation. In the previous “Business to Business (B to B)” format, the concept of “product-out” was dominant. However, in order to ensure sustainable company development in the future, it is vital to increase customer satisfaction by improving functional performance, quality, service, and cost competitiveness. From this point of view, importance should be placed on “customers / business partners,” as well as on “employees,” who are the cornerstone of business, and “society,” which includes the global environment. We believe that if we can firmly fulfill our responsibility to these stakeholders, it automatically means that we will fulfill our responsibility to our “shareholders.” The responsibility to the stakeholders is important in every aspect of the operation of our global business. The JSR Group, a participant in the United Nations Global Compact, will continue to perform our corporate social responsibility more actively even in the international society.

Providing materials that will solve customers’ problems through business, and presenting materials that will surprise the world - and thereby improve society – to achieve these goals, the JSR Group will continue to take on challenges.

**Mitsunobu Koshiba**  
Representative Director and President  
JSR Corporation

# JSR Group's Materials Essential in Various Scenes of Daily Life

JSR Group's materials are used in a wide variety of products.

The following shows how the power of chemistry makes people's daily lives more comfortable and convenient.

## Particles for Clinical Diagnostics



Minute polymer particles developed by JSR based on our polymer technologies are utilized for external diagnostic agents, as well as separation and purification for biomedical research. **8**

## Film for Touch Panel Use



ARTON™, a heat-resistant transparent resin developed by JSR, undergoes surface processing, transparent electrode formation, and other processes, before the resin is supplied in film form for use as a touch panel for smartphones and car navigation systems. **5**

## Styrene-Butadiene Rubber



JSR boasts the No. 1 share of the domestic market in synthetic rubbers for automobile tires. Our product line includes general purpose synthetic rubbers characterized by superb aging resistance and abrasion resistance, as well as materials with their own molecular structure to realize the outstanding workability and dynamic characteristics needed for fuel-efficient and high-performance tires. **1**

## Poly-Butadiene Rubber



Featuring superior abrasion resistance, dynamic characteristics, and low-temperature properties, as well as high workability, the synthetic rubber is extensively used for tires for large vehicles, industrial products, golf balls, and many more items. **1**

## Acrylonitrile-Butadiene-Styrene (ABS) Plastic



Offering both shock resistance and rigidity, ABS plastic is used in numerous applications due to its excellent luster, color and moldability. Such applications include automobile parts, industrial goods, and electrical machinery. **1**

## Thermoplastic Elastomers (TPEs)



When heated, TPEs soften, facilitating molding and processing. Also, they can be reprocessed, enabling recycling. They are used for the soles of sneakers and other footwear, adhesives, asphalt modification agents, and other items. **1**

## Paper Coating Latex (PCL)



Featuring strong bonding and high suitability for printing, PCL is used as paper coating on various printed materials, such as magazines, pamphlets, and art prints. **1**

## Liquid Crystal Display (LCD) Materials



Our LCD materials are used for displays of LCD televisions, PCs, mobile phones, and other items. Such materials, including alignment films, photosensitive spacers, color pigment dispersed resists, protective coatings, and anti-reflective coatings, are highly reputed. **3**

## Semiconductor Materials



Semiconductors comprise the heart of IT equipment. We provide materials essential to manufacturing such semiconductors, including photoresists, chemical mechanical planarization (CMP) materials, and packaging materials. **2**

## Lithium-ion Capacitors



We develop and sell lithium-ion capacitors that can charge and discharge large amounts of energy almost instantly. The capacitors are utilized to make effective use of power generated from natural energy, such as wind and solar, and to store regenerative energy. **7**

## Optical Fibers for Communications



Optical fibers are indispensable for the Internet and long-distance communications. Our optical fiber coating materials are used for many of the optical fiber cables manufactured domestically. **4**

## Thermal Management Materials



We provide latent heat storage materials used for cool storage facilities and air-conditioning equipment, resins used for paints for buildings to increase their heat insulation, and other materials that control heat to contribute to energy saving and the creation of a comfortable environment. **6 7**

## Core Business

### 1 Petrochemical Products Businesses

(Elastomers, emulsions, TPEs, and plastics)

Since our establishment as a general synthetic rubber manufacturer, we have been supplying high-quality products, including rubbers for tires, in addition to TPEs, emulsions and plastics.

### 2 Electronics Materials

We have developed high-performance semiconductor materials, including photoresists, interconnect materials, chemical mechanical planarization (CMP) materials, and packaging materials. Our materials meet diverse market needs.

### 3 Display Materials

We provide display materials that anticipate more sophisticated market needs regarding flat-panel displays (FPDs), such as liquid crystal displays (LCDs) and organic electroluminescence displays (OLEDs).

### 4 Optical Materials

We have developed resins with optical functions, such as coating materials for optical fibers and stereolithography resins. For coating materials for optical fibers, we boast the largest share of the domestic market.

## Strategic Businesses

### 5 Precision Materials and Processing

By combining innovative materials that use polymer material technologies and precision processing technologies, we have created cutting-edge product lineups, including touch-panel films and other functional films.

### 6 Performance Chemicals

Utilizing technologies established for the development of polymer materials, we develop a wide range of performance chemicals, such as high-performance dispersants, high-functional sol-gel materials, and particles for industrial use.

### 7 Environment & Energy

Applying high-functional materials, we operate our business extensively in the field of the environment and energy. Our products include binders for lithium-ion batteries, lithium-ion capacitors, bioplastic materials, and thermal management materials.

### 8 Biomedical Materials

We provide manufacturing process materials for biomedical products, external diagnostic particles, high-quality polymer materials for medical supplies, thereby contributing to the development of life sciences.

# JSR Group Profile

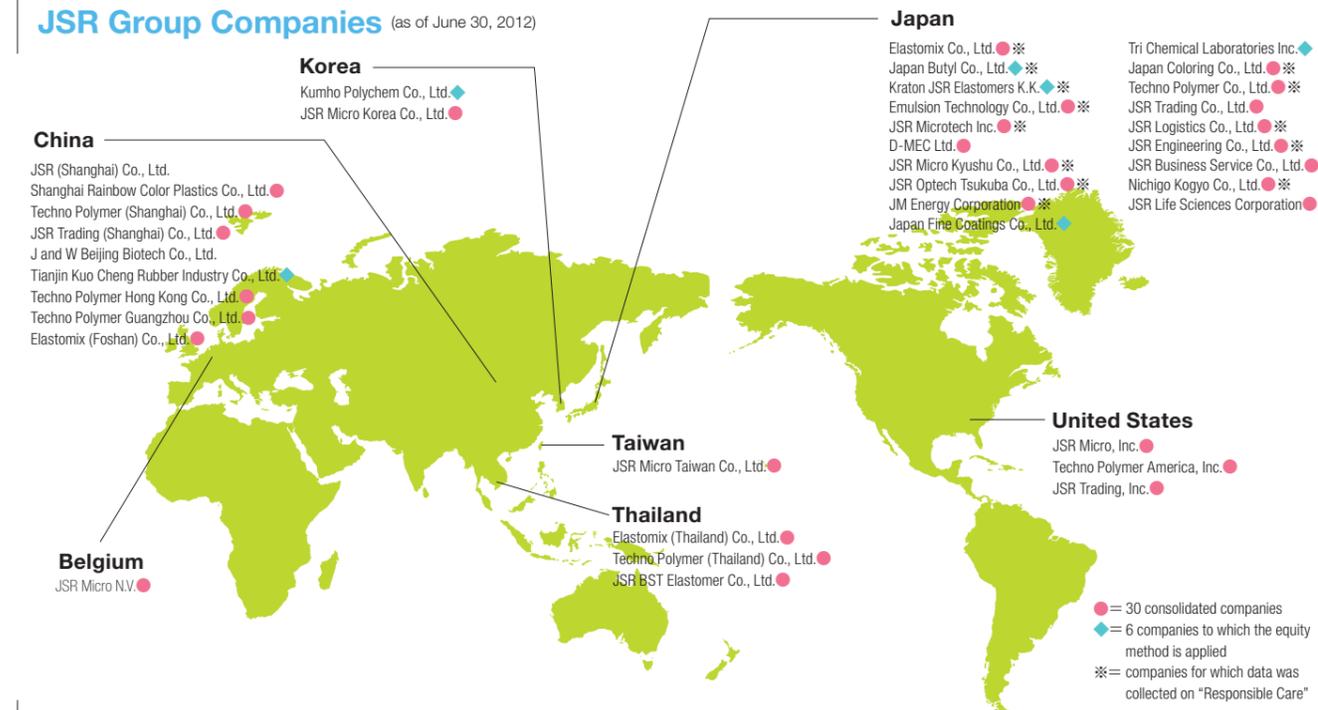
## JSR Profile (as of March 31, 2012)

**Company name:** JSR Corporation  
**Established:** December 10, 1957  
**Head office:** Shiodome Sumitomo Building, 1-9-2 Higashi-Shinbashi, Minato-ku, Tokyo, Japan  
**President:** Mitsunobu Koshihara  
**Capital:** 23.3 billion yen  
**Number of employees:** 2,529 (non-consolidated); 5,403 (consolidated)  
**Businesses:** Petrochemical products businesses (elastomers, emulsions, TPEs, and plastics), electronics materials, display materials, optical materials, precision materials and processing, performance chemicals, environment & energy, biomedical materials, etc.

## JSR Operations (as of June 30, 2012)

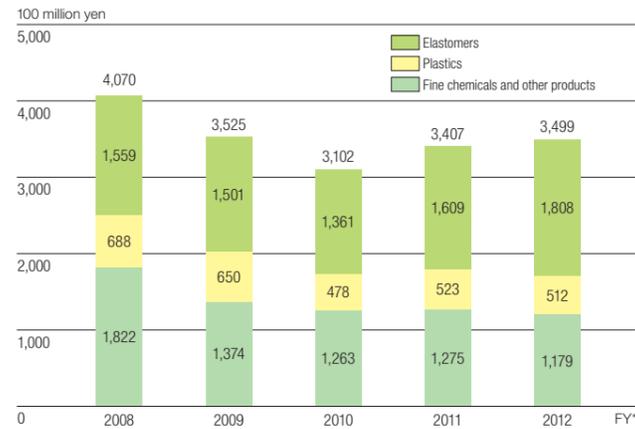
**Plants:** Yokkaichi Plant (Yokkaichi City, Mie Prefecture), Chiba Plant (Ichihara City, Chiba Prefecture), Kashima Plant (Kamisu City, Ibaraki Prefecture)  
**Research centers and laboratories:** Yokkaichi Research Center (Yokkaichi City, Mie Prefecture)  
 ○ Performance Polymer Research Laboratories ○ Display Materials Research Laboratories ○ Fine Electronic Materials Research Laboratories ○ Process Technology Development Group  
 Precision Processing Center (Yokkaichi City, Mie Prefecture)  
 Tsukuba Research Laboratories (Tsukuba City, Ibaraki Prefecture)  
**Branches:** Nagoya Branch (Nagoya City, Aichi Prefecture), Kyushu Office (Saga City, Saga Prefecture)  
**Overseas branches / offices:** Wallisellen Branch (Switzerland) / Taiwan Office / Singapore Office

## JSR Group Companies (as of June 30, 2012)

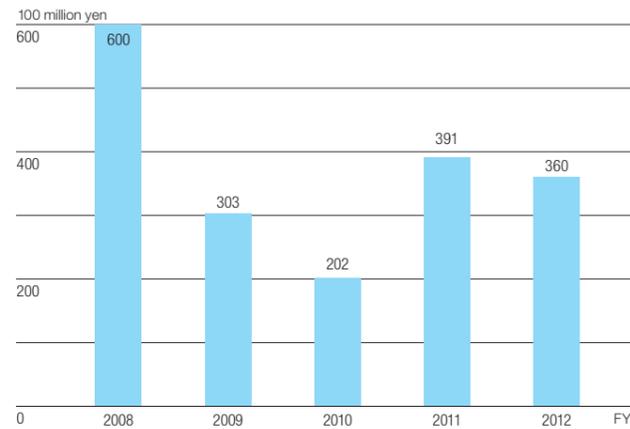


## Financial Information

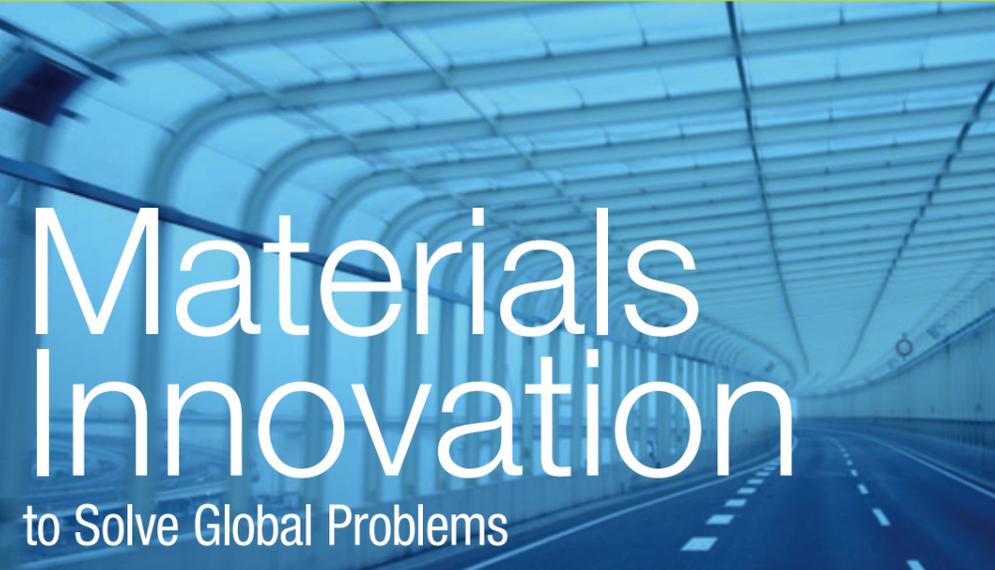
### Net Sales (consolidated)



### Operating Income (consolidated)



\* Fiscal Year ending March of indicated year



# Materials Innovation to Solve Global Problems

With the accelerating globalization of economic activities, opportunities are increasing for companies to act while giving more consideration to global problems. By participating in the United Nations Global Compact and promoting other efforts, the JSR Group exhibits our attitude of taking responsible actions in international society. Of utmost importance for companies is taking on social problems through their business capabilities. While it is important to always identify what types of value creation can be achieved in growing fields, it is also necessary to pursue ways of reducing negative effects, such as environmental impacts, to close to zero. Demonstrating the power of materials developed so far, the JSR Group would like to contribute to solving these problems and establishing a foundation for a better future.

## Feature Article 1 | Relationship between Global Social Trends and Materials

Society's needs always change, which accordingly requires that the materials provided by the JSR Group also change. Focusing on our business related to automobiles, this section explains how the Group identifies needs and problems, as well as how the Group endeavors to create value for such needs and problems.

## Feature Article 2 | Relationship between the JSR Group and Biodiversity

As long as a company operates its business, it is impossible to avoid the formation of relationship with living things in the company's local areas and also all over the earth. Presenting a dialogue with Dr. Naoki Adachi on biodiversity-related efforts to be implemented by a chemical manufacturer, this section introduces the JSR Group's activities and future direction.

# Automobiles and Materials

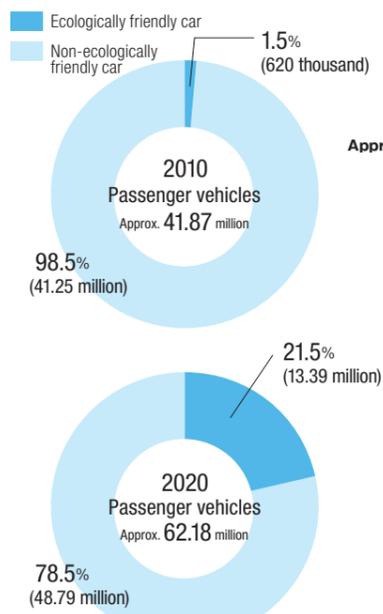


## Changes in the Environment Surrounding the Automobile Industry

### Increase demand around the World in for Automobiles, Especially Ecologically Friendly Cars

Due to the development of motorization in newly emerging countries, world automobile demand is continuing to grow. Moreover, partly because there is a global concern about global warming and the depletion of petroleum resources, and also because environmental awareness is increasing in many parts of the world, ecologically friendly cars are now gaining much more attention. Since it is expected that regulations on fuel efficiency will be established in many countries, the demand for ecologically friendly cars is expected to grow.

Actual and projected numbers of passenger vehicles sold in the world's four major markets, as well as percentages of ecologically friendly cars<sup>1</sup> for each figure

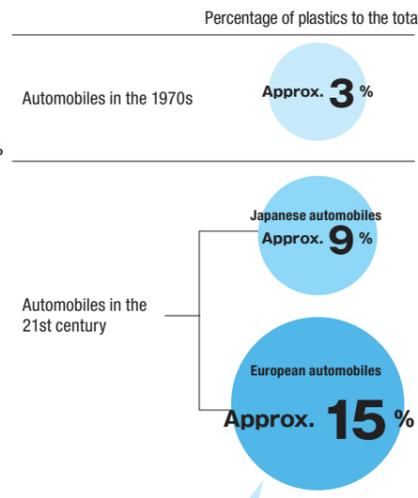


<sup>1</sup>: Actual and projected numbers of passenger vehicles sold in the world's four major markets (Japan, the United States, Europe, and China). The ecologically friendly cars above include three types: hybrid electric vehicles (HEV), plug-in hybrid vehicles (PHEV), and electric vehicles (EV).  
Resource: News Release, Nomura Research Institute, November 30, 2011

### Car Body Weight Reduction and Tire Performance Improvement to Enhance Fuel Efficiency

The fuel efficiency of an automobile is directly linked not only to cost but also to environmental impact. It is said that, to enhance fuel efficiency, effective measures include increasing the engine efficiency, reducing the air resistance of the car body, and improving the powertrain, as well as decreasing the body weight by employing aluminum, resin, and other lightweight materials, and using tires with low rolling resistance. Many automobile manufacturers are reviewing their products from the aspect of materials and accumulating their technologies.

Change in raw materials for passenger vehicles



Plastics are actively employed not only for interior and exterior parts, but also for parts in an engine compartment and for functional parts.

Resource: Plastic Parts, Masao Iwano, Kogyo Chosakai Publishing Co., Ltd.

### Regulations and Labeling Systems in Various Parts of the World



#### Tighter Regulations on Automobiles CO<sub>2</sub> Emissions in Europe

In Europe, regulations have been established to reduce CO<sub>2</sub> emissions step-by-step from 2012 to 2015, when the target of a maximum emission level of 130 g/km must be achieved.



#### Requirements for Sales of Environmentally Friendly Vehicles in the United States

The California Air Resources Board requires car manufacturers to ensure that 15% of their new cars sold in the state are environmentally friendly vehicles, such as electric vehicles, by 2025. This new regulation will become applicable to models released in 2017 or after.



#### Labeling System for Fuel-Efficient Tires

This is a labeling system administered by the Japan Automobile Tyre Manufacturers Association. In this system, both the rolling resistance performance and the wet grip performance are evaluated based on a grading system, and the evaluation is provided in a label. A "fuel-efficient tire" is defined as a tire achieving a certain level or higher in each of these parameters.

# Supporting Improvement of Automobile Performance from the Materials Aspect

When totally new functions are required for automobile bodies, fuels, tires, and other items, it is often necessary to review the materials themselves. The JSR Group has long been providing materials used for various parts of automobiles, such as tires. By improving the functions of such materials, the JSR Group will continue to contribute to enhancing the entire function of automobiles. This section presents some examples of the parts of an automobile that our Group's products are used for.

## Rubber Molecules Controlling Tire Rolling Resistance Affecting Automobile Fuel Efficiency

Fuel-efficient tires, the demand for which has been growing recently, enhance fuel efficiency by reducing tire rolling resistance. The rolling resistance of a tire has an impact of approximately 15% on fuel efficiency. While a car is driving, its tires suffer rolling resistance, which consists of the following three elements: the deformation of the rubber used in the tires, the friction of the part in contact with the road surface, and the air resistance from the front. The deformation of the rubber is the major factor, accounting for 90% of these three elements. The energy loss generated by the deformation causes the resistance.

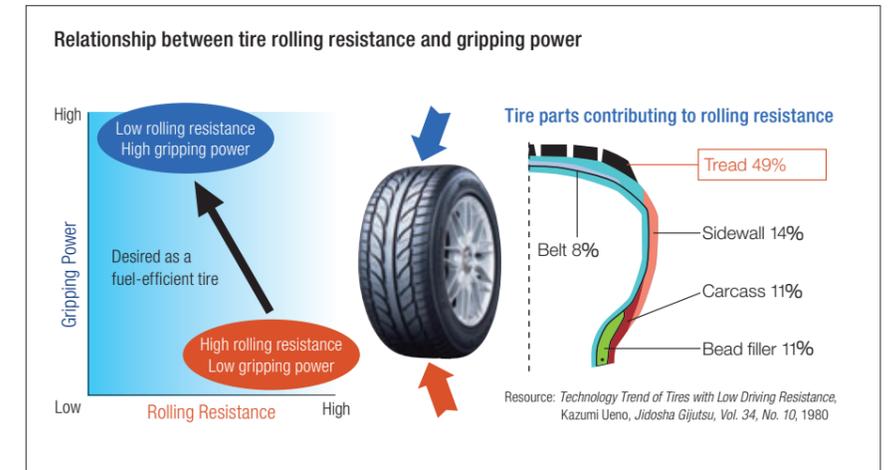
Of particular importance regarding tire parts is the tire tread, which is the only part of the tire that comes into contact with the road surface. The tread has an impact of approximately 50% on the rolling resistance. For the vehicle as a whole, the tread component has an impact of approximately 7.5% on fuel efficiency.

The decrease in the rolling resistance of the tread generally results in the reduction of the frictional force of the tires, leading to lower gripping power and affecting the tires' safety. For practical use, it is necessary to achieve the two contradictory

characteristics of "low rolling resistance" and "high gripping power."

JSR's solution polymerization styrene-butadiene rubber (S-SBR) for fuel-efficient tires has been designed to reduce rolling resistance, suppressing the energy loss generated by the deformation of the rubber during driving by 45% compared to

conventional SBR. This has been made possible by making changes to the ends of the rubber molecules to make it easier for them to form connections with the molecules of reinforcements, without changing the properties of the rubber itself. The material properties of the rubber influence the gripping power.



### TOPIC Enhancing Rubber Manufacturing Capacity in Various Countries to Accommodate Increasing Demand

Due to the increase in demand for fuel efficient tires, it is expected that the demand for S-SBR will further develop on a global basis. In December 2011, JSR increased the S-SBR manufacturing capacity of our Yokkaichi Plant to 60,000 tons per year. In Europe, JSR has an S-SBR manufacturing capacity of 30,000 tons per year based on a capacity right agreement with Styron Europe, GmbH. As a result, our global manufacturing capacity has now reached 90,000 tons in total. Furthermore, we have commenced the construction of a new plant in Thailand, further enhancing our manufacturing capacity (first phase: 50,000 tons in 2013; second phase: 50,000 tons in 2015; and total: 100,000 tons per year). Boasting an extensive foundation for the automobile industry, Thailand is home to the plants of major tire manufacturers, and has a huge domestic market. Additionally, the country is convenient as an export hub to the rest of Asia. In this regard, we will place much more focus on the country as one of our global supplying bases.



Construction groundbreaking ceremony of JSR BST Elastomer Co., Ltd. (Thailand)

### Yasumasa Takenouchi

Elastomer Dept., Petrochemical Products Div.



Due to the launch of a tire labeling system in various countries to reduce CO<sub>2</sub> emissions and the increase in the demand for tires in newly emerging countries, the demand for S-SBR has been growing in recent years. Accommodating customers' needs for the enhancement of our manufacturing capacity, we will begin to operate a new plant in Thailand in 2013. Meanwhile, in terms of quality, we are developing products with consideration to customers' needs for the further increase in fuel-efficiency of our S-SBR, while maintaining our safety performance. By fulfilling these needs of customers, we would like to increase the number of tires achieving still greater fuel-efficiency, thereby contributing to reducing CO<sub>2</sub> emissions.

## Our Materials Contribute to Vehicle Performance Improvement in Unexpected Places

### Fuel Hoses, Brake Hoses, and Packing

Automobile parts used for fuel-related items need to be resistant to oil. Nitrile rubber (NBR), which can be referred to as a representative of oil-resistant, special-purpose rubbers, features other characteristics, such as excellent mechanical properties and chemical resistance.



### Interior Parts

Environmentally friendly olefin-type materials are increasingly being used for interior parts, such as dashboards and side pillars. Items made of DYNARON, an improved olefin-type material, are soft, scratch-resistant, and cold-resistant. Meanwhile, HUSHLLOY™, a special styrenic thermoplastic resin, features the ability to effectively reduce squeaking noises and other unpleasant sounds generated from the points of contact of plastic parts. In this regard, this resin is employed for many interior parts, such as cup holders and air conditioner outlets.

### Window Frames

EXCELINK™, a thermoplastic elastomer used for fixing corner materials, such as window frames, features excellent elasticity and durability. Additionally, when heated, EXCELINK® softens up, enabling the material to be remolded and reprocessed, thus enabling recycling. Moreover, ethylene-propylene diene monomer (EPDM) rubber is resistant to ultraviolet, ozone, and heat. Its specific gravity is low, contributing to reducing the weight of automobiles.



### Radiator Grills

Since a radiator grill serves as the "face" of an automobile, it features an appearance and a design that has been well thought out by the automobile manufacturer. In order to accommodate the demand for such a design, we provide ABS resin that can be used for both plating and coating, as well as AES / ASA resins that can be used with partial coating or without any coating, and that are highly resistant to ultraviolet, wind and rain.



### Urethane Adhesive for Plastic Bodies

Carbon fiber reinforced plastics (CFRP) are used for sports car bodies to reduce their weight. As a CFRP adhesive, our Mighty Grip is used. Materials can be selected based on application and glue strength (from super-soft to hard).

### Housing of Rear Combination Lamps

Processability is one of the important points for automobile parts. ASA / AES resins do not need special processing before they undergo vapor deposition, helping to achieve a very nice finish.



#### Comments from a Development Staff Member

#### Kentaro Kanae

Performance Polymer Research Laboratories, Yokkaichi Research Center



When developing thermoplastic elastomers, I try to carry out material design with due consideration not only to what is required for the end products, such as recyclability and weight reduction, but also to what should be done to reduce environmental impact during the processes of manufacturing elastomeric products, such as process simplification or shortening the production time. The next-generation ecologically friendly cars, such as future electric vehicles, will need materials that are not just an extension of existing technologies but that are created based on totally new ideas. Utilizing JSR's core technologies, I would like to develop innovative technologies and thereby contribute to society.

#### Comments from a Foreign Sales Staff Member

#### Shinya Katade

Techno Polymer America, Inc.



We feel that in the U.S. automobile market, there is a further increase in demand for not only quality but also cost reduction. By maintaining and improving our quality and also offering products that will accommodate users' demand for "total cost reduction," rather than simply providing products made of cheap materials, we would like to differentiate ourselves and contribute to the development of the automobile industry.

## Materials Supporting Cutting-Edge Business

In new business and growing fields, innovation is required for technologies and materials. The JSR Group continues a wide variety of bold attempts in strategic fields, which are expected to grow in the future. We enhance the value of products by conducting thin film processing for existing excellent materials and precision processing for the surfaces of thin films. Also, we make active applications of our high-functional materials and polymer technologies. By so doing, while anticipating ever-changing social needs while we continue to contribute to society.

Precision Materials and Processing

Performance Chemicals

Environment & Energy

Biomedical Materials

### Life Sciences and Materials

High precision is required for the research and development of medical products. At the same time, it takes a long time to launch a medicine into the world as a finished product. We believe that material technologies cultivated by the JSR Group can support such a creation process. We contribute to the creation of medicines, by offering materials and technologies needed at each phase of medicine creation, as well as providing materials for diagnosing the efficacy of medicines and for manufacturing medicines. Moreover, we provide particle products for diagnosing diseases and susceptibilities. The products are used in a wide range of fields from clinical examinations to genetic analyses.



#### China Diagnostic Products Joint Venture Established

The diagnostic market in China shows strong growth due to several environmental changes, including the expansion of the upper and middle classes in coastal areas, as well as the spread of medical services to rural areas as a result of government measures. With this background, in February 2012, JSR established J & W Beijing Biotech Co., Ltd., a joint venture with Beijing Wantai Biological Pharmacy Enterprise Co., Ltd., a diagnostic drug manufacturer based in Beijing, China. By making effective use of our business knowhow, particle materials technologies, and China-wide sales network cultivated so far, we would like to further expand into the business of diagnostic intermediates.



Groundbreaking inauguration ceremony of J & W Beijing Biotech Co., Ltd.

#### Austria Strategic Investment for Expanding Our Biomedical Business

In November 2011, JSR made a strategic investment in BIA Separations, an Austrian specialist company in separation and purification in the biomedical field. The company is the world's only developer and manufacturer of short monolithic chromatographic columns used for the purification of vaccines and DNA and antibody based medicines. This alliance will enable technologies owned by the two companies to be utilized in order to provide more effective purification technologies to the market, and thereby significantly contribute to the state-of-the-art medical field.



Japan

#### Establishment of JSR Life Sciences Corporation

Nobutaka Tani  
President  
JSR Life Sciences Corporation

In February 2012, JSR Life Sciences Corporation was established as a new company for the development, manufacture, and sales of biomedical materials. In the biomedical field, there are now two major trends at the global level. One is the need for high technologies to cure diseases for which treatment methods have not yet been established. The other is the need to deal with the expansion of quantitative demand found in many parts of the world, such as China. To respond to these needs promptly, there is a limit to what can be achieved by research and development and business operations promoted only in Japan. In the JSR Group, research and development have been conducted globally, transcending the boundaries between segments. Utilizing this advantage, JSR Life Sciences Corporation acts as a practical headquarters in the Group's biomedical business, and consolidates the Group's medical materials resources, striving for an even better management efficiency. We are proud of our "materials power" specific to us as a chemicals manufacturer, such as our superb polymer technologies. We believe that based on such assets, we can develop business that can never be realized by any other companies. In the mid- to long-term view, we would like to make alliances with outside organizations with a wide diversity of expertise and make investments in venture companies. By so doing, we strive to increase the variety of our products and demonstrate our collective ability.

# What is Biodiversity to a Chemicals Manufacturer?

Corporate activities are deeply connected to the global environment; this, of course, also applies to the JSR Group.

Of particular notice is biodiversity, which we recognize as presenting both risks and opportunities to our sustainable growth as a company.

This section presents a dialogue between Dr. Naoki Adachi and Koichi Kawasaki, Managing Officer of JSR Corporation, on the relationship between a chemicals manufacturer and biodiversity.

The discussion was held on May 15, 2012

## Efforts Accelerated by Companies to Conserve Biodiversity

### Dr. Adachi

It has been two years since the 10th Conference of the Parties to the Convention on Biological Diversity (COP10) was held. COP11 is to be held this autumn. Time really flies! One of the biggest achievements of the COP10 was the establishment of the Aichi Biodiversity Targets. It requires us not simply to conserve nature for the next decade, specifically toward 2020, but also to adopt a sustainable method when using biomaterials and natural resources for business activities.

What I feel strongly about nowadays is the emergence of companies that have set their targets at not simply reducing the environmental impact generated by their business activities, but at somehow reducing such an impact to close to zero. If the environmental impact generated by a company's business activities is, for example, at level 10, the company aims to reduce the level to almost zero. On top of diminishing the environmental impact due to its business activities in one area, the company promotes biodiversity conservation activities in another area. By combining these two efforts, the company strives to reduce its environmental impact level to as close to zero as possible, sometimes even seeking to generate positive environmental impact. Even if it might be difficult to realize such an aim right now, there is a move toward the achievement of the aim sometime between 2015 and 2020.

This year, in June, RIO+20, a global environmental conference, will be held in Rio de Janeiro, Brazil. The keyword of the event is "green economy." The

green economy here refers to efforts to realize the limits of our planet and not to exceed those limits, in order to prevent any further destruction of the currently existing environment. To do so, natural capitals are important. Business activities entail a wide variety of capitals, including financial, human, and social capitals. With this as a background, I think that there is a movement toward creating a new type of economy. Under the new economy, it is thought that since nature itself is a capital, it should be increased and strengthened as it is used.

### Kawasaki

Are there any changes in the field of chemical industries?

### Dr. Adachi

Honestly speaking, I think that things are getting tougher for chemicals manufacturers. This is because it is evident that petrochemical business operators, such as the JSR Group, cannot use petroleum forever as they have done so far. Such a company needs to make a shift sometime in the future. Although this does not have to be done right away, the company will inevitably be required to change its materials to natural ones and also to provide materials that are of even higher quality than those that it has offered so far.

### Kawasaki

For some of our products, synthetic rubbers must be used to form their molecular structures or achieve their performances. We don't believe that everything we use now can be replaced. In this regard, we would like to offer customers products with total value. For example, it is very significant to provide materials that will enable a reduction in the energy generated while manufacturing tires and a decrease in the CO<sub>2</sub> emissions discharged while the vehicles are driven.

### Dr. Adachi

What makes environmental problems difficult is that they consist of a wide variety of elements – not only biodiversity, but also CO<sub>2</sub> emissions, environmental efficiency, and waste. The problem is, with consideration to such elements, how to reduce environmental impact in total, and how to further increase sustainability. Meanwhile, the abuse of natural resources stems from the idea that natural resources are very inexpensive or free of charge. Without recognizing that natural resources also have their own value, conservation is impossible. I think that many more actions are now being taken to measure such value from the aspect of economy and to pay an appropriate cost for that value.

## Identifying Relationships between JSR and Biodiversity; and Promoting Far-Sighted Activities

### Kawasaki

While promoting our biodiversity efforts, we have participated in the Japan Business Initiative for Biodiversity (JBIB) to expand our knowledge. Since we are a manufacturer, we first began by identifying the environmental impact generated by manufacturing and production activities. Last year, we made our version of the Business & Biodiversity Interrelationship Map to analyze the environmental impact and began to consider the next steps to be taken. For land use, assessments were carried out at each plant in accordance with JBIB's guidelines, enabling us to recognize points to be improved. To reduce our environmental impact as much as possible, or to reduce it to zero if possible, we have recently formed working teams to promote activities at their plants. Regarding materials, our procurement team took the lead in comprehensively checking how many naturally derived raw materials we utilized. Although we now understand approximately how many such raw materials we use, we have not yet checked the environmental impact generated when the raw materials were harvested or extracted. We think that this is the next step we should take without hesitation.

### Dr. Adachi

What convinces me of your excellence is the fact

that you have gotten to work on two of the most important points. For future processes, it would be even better for you to consider connections with other companies in an industrial complex. This will help develop the perspective of mutual prosperity with living organisms across the entire community. I think this is an exciting idea. Meanwhile, I guess many more manufacturing bases will be established in foreign countries, especially in developing regions. Such regions have richer biodiversity, and there is a concern that economic development is being promoted at the expense of biodiversity. This is what needs to be considered.

Meanwhile, it is a great burden and also tough for a company to check technical matters about raw materials on its own. In Europe, for example, there is an ongoing effort to create a system in which a calculation formula is employed to determine how much environmental impact is generated by a certain pattern of activity. Under this effort, since the current database is related only to major raw materials, if a company—say the JSR Group—uses raw materials that are not often used by other companies, the JSR Group needs to check the materials and add to the database the data that the Group gathers regarding the materials. This will gradually increase the scope of coverage of the database.

### Kawasaki

In 2011, we formulated our biodiversity policies. Our first focus in the policies is on land use and raw materials. As the next step, we will incorporate the perspective of biodiversity into our product development. In the United States and Europe, for example, studies are underway regarding the synthesis of butadiene and isoprene, which are materials of synthetic rubbers, with the use of microorganisms. We are very interested in these studies. We expect that it will become very difficult in the future to secure the materials that we need. Accordingly, we think that in order to secure stable supplies, it will be important to diversify our materials.

### Dr. Adachi

"Biodiversity" means that there are many living things that live in a wide diversity of ways. It is believed that living things in prehistoric times were much simpler and comprised a much smaller number of types, and that they have developed their diversity over long periods of time. Thanks to this diversity, even if some living things cannot adapt well to changes in the environment and cannot survive, others can do so. I think that this also applies to materials. It is important to select not only one type of material based on efficiency and cost, but to use such a material as a main selection

## Koichi Kawasaki

Managing Officer  
Safety and  
Environmental  
Affairs



and also always secure many other options. The diversity of products and manufacturing processes will enable you to continue your operation even if the environment surrounding you changes drastically in the future.

When you visualize the future of your company, you will probably imagine that the company will come to respect or depend on biodiversity even more so than now. I'm sure that when you look back at the past in 10 or 20 years' time, you will probably think "it was tough at that time, but now we understand that it was a matter of course." If you stick to your traditional means, you will lag behind the times. However, the JSR Group is leading the way ahead of others. I hope that the Group will continue to take on challenges and continue to be a leading company.

For your future business, I think you will need to respect and rely on biodiversity even more than you do now, so I hope you to continue to take on challenges. — Dr. Adachi

Our first focus is on land use and raw materials. As the next step, we will incorporate the perspective of biodiversity into our product development and cooperation with local communities. — Kawasaki



The full text of this dialogue is available in the CSR Report (online version).

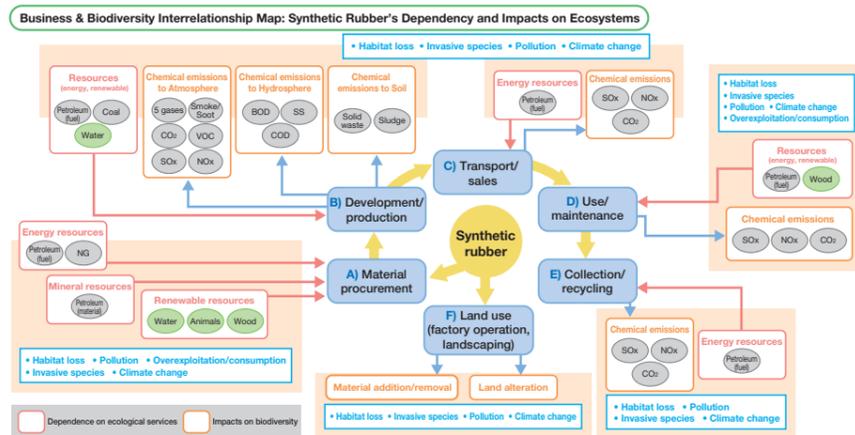
Web CSR Report 2012 > Feature Article 2 > Relationship between the JSR Group and Biodiversity

# JSR Group Initiatives to Conserve Biodiversity

## Identifying the Dependence and Impact of Our Business Activities on Biodiversity

To identify how our business activities depend and impact on biodiversity, we reviewed the relationships between JSR and biodiversity, with reference to the Business & Biodiversity Interrelationship Map developed by the Japan Business Initiative for Biodiversity (JBIB). The map illustrates how business activities are dependent on ecological services and how the activities have impact on biodiversity in each process of “raw material procurement,” “development and production,” “transport and sales,” “use and maintenance,” “collection and recycling,” and “land use.” We formulated our version of the map for synthetic rubbers in FY 2011 (April 1, 2010 to March 31 2011), and for fine chemicals in FY 2012 (April 1, 2011 to March 31 2012).

This revealed that particularly important problems for JSR Group’s business activities were “raw material procurement” and “land use at business establishments.” For other processes, we will promote necessary measures, especially environmental efforts and the E2 Initiative™.



Business & Biodiversity Interrelationship Map (synthetic rubbers) (Larger view is available in the online version of the CSR Report.)

### Investigation on Raw Material Procurement

The investigation on the procurement of raw materials used by the JSR Group has revealed that in both the business segments of petrochemicals and fine chemicals, some of the raw materials, though small in quantity, are naturally derived ones that cannot be replaced with any other materials.

## Assessment of Land Use at Business Establishments

Utilizing the Land Use Score Report of the Guidelines for Promoting Business Establishments in Harmony with Living Things, developed by JBIB, we are carrying out an assessment of biodiversity at the sites of our business establishments. We made such an assessment in FY 2011 at the Chiba Plant and Tsukuba Research Laboratories, as well as in FY 2012 at the Yokkaichi Plant, the Chiba Plant, the Kashima Plant, Tsukuba Research Laboratories, and JSR Micro Kyushu Co., Ltd. At the assessment, we made an actual observation of the site of the relevant business establishment, checked the size of its green spaces, the vegetation, and the types of insects and birds inhabiting the site, and determined the level of

consideration to biodiversity.

As a result, it was found that while due consideration was paid to the water cycle at each of the business establishments, as was indicated by the effective use of rainwater, low scores tended to show regarding the formation of an ecosystem network with the soil that supports the green spaces and vegetation, and also with the surrounding environment. The JSR Group had never assessed the sites of our business establishments from these points of view. Based on the results of the FY 2012 assessment, we would like to conduct an assessment every year. By making effective use of the plan-do-check-act (PDCA) cycle, we strive to increase our scores gradually.

### Hisao Igarashi

Administration Team  
Tsukuba Research Laboratories



Utilizing the Land Use Score Report and the Living Things Monitoring Sheet, we assessed our green spaces from the perspective of biodiversity. These tools were easy to use even for those without special expertise, like ourselves. The assessment results enabled us to identify points to be improved regarding our green spaces. These points have been promptly reflected into our FY 2013 plan, and we are currently working on the reduction of the use of herbicides and other efforts.

### Summary of Investigation Results

- ① It was found that the green spaces at the business establishments (in compliance to the Factory Location Act, etc.) were extensive enough to contribute to biodiversity.
- ② However, no maintenance or management with consideration given to the conservation of biodiversity are currently provided.
- ③ Based on the above two points, we will carry out maintenance and management with consideration given to the conservation of biodiversity, with particular emphasis on the green spaces extensive enough to contribute to biodiversity.



Assessment at the business establishments: JSR Micro Kyushu Co., Ltd. (left), and Tsukuba Research Laboratories (right)

## Forming Our Biodiversity Policies

We have formed biodiversity policies identifying problems revealed by the efforts we have made so far. The policies serve as the basis for the promotion of specific efforts in the future.

### JSR Group's Biodiversity Policies

To contribute to the establishment of a sustainable society, the JSR Group strives to identify how our business activities depend on and impact biodiversity, and to promote efforts with consideration to biodiversity.

- ① We prioritize biodiversity conservation in procuring naturally derived raw and processed materials.
- ② We work to make the green spaces of our business establishments biodiversity-friendly.
- ③ We strive to develop of biodiversity-friendly products.
- ④ We emphasize engagement of our staff and cooperation with local communities.

③ and ④ will be taken up at full speed after FY 2015.

## Lectures Provided by JSR Outside the Company

### Lecture at the Japan Rubber Manufacturers Association

A lecture titled “JSR’s Efforts for Biodiversity” was provided at a seminar held by the Japan Rubber Manufacturers Association with the title “Perspective Essential to Future Business – Biodiversity and Companies.” Explained in the lecture was our preparation of the Business & Biodiversity Interrelationship Map to analyze the dependence and impact of our synthetic rubbers on biodiversity, as well as



Seminar held by the Japan Rubber Manufacturers Association

the use of the Land Use Score Report and the Living Things Monitoring Sheet to assess the green spaces of some of JSR’s business establishments, and investigate the ecosystem at the sites of the establishments. The explanation was followed by an active Q&A session.

### Symposium

### Story of biology told by a corporation Part 5

A member of JSR Tsukuba Research Laboratories delivered a lecture at a sectional meeting of the Story of biology told by a corporation Part 5. This is Japan’s most established symposium on biodiversity for companies. With the theme “Usability of Promotion Tools from the Perspective of Managers,” he shared the knowledge gained at Tsukuba Research Laboratories through an



Story of Living Things Told by Companies, Part 5

investigation in which the Guidelines for Promoting Business Establishments in Harmony with Living Things was used. He also explained JSR’s active efforts regarding biodiversity.

We recognize that the conservation of biodiversity is one of the important social problems to be dealt with by companies. The conservation of biodiversity tends to be thought of as the preservation of endangered species. This type of social contribution is, of course, significant. As a business operator, however, we would like to contribute to the conservation of biodiversity through our business activities. For the time being, we will continue to promote efforts with emphasis on consideration to biodiversity at the phase of material procurement, and on the improvement of green spaces at our business establishments. Through these activities, we hope to be able to contribute as much as possible to the enhancement of the sustainability of the earth. We would also like to promote cooperation with many more business partners and other local companies.



General Manager, CSR Department

Tatsuya Kubo

# The JSR Group's Essential Elements and CSR

To create a corporate culture in which sustainable growth is achieved regardless of replacement of personnel or changes in organizational forms, and to ensure that such a culture permeates across the JSR Group, we established our Essential Elements in April 2011 as values to be shared among all staff within the Group to enable them to act with responsibility and confidence.

The Essential Elements consists of the Corporate Mission, the Management Policies, and the Course of Action.

## Corporate Mission

### Materials Innovation We create value through materials to enrich society, people and the environment.

Our value is not limited to "materials" but includes the components that capitalize on the strengths of the materials themselves.

We will research, create and introduce high quality, highly functional chemistries, materials and technologies to the markets we serve.

Value will be created throughout all corporate activities across the JSR Group including manufacturing, sales, research and development, procurement, logistics, planning and administration.

We deliver exceptional materials that enhance people's lives while refusing to compromise on our social and environmental responsibilities.

## Management Policies JSR's Fundamental Pillars of Management

### Continuous Creation of Businesses

As society evolves, so does the demand for specialized materials and advanced products. JSR continuously evolves to anticipate and respond to changing marketing needs and, in doing so, achieves dynamic growth.

### Enhancement of Corporate Culture

As society evolves, so will our organization. JSR will build on its existing positive corporate culture to create an organization and management style with the vitality to keep evolving.

### Increase in Corporate Value

JSR will position itself to increase our overall corporate value by creating businesses through materials with focuses on customer satisfaction and the fulfillment of employees.

## Management Policies Responsibility to Our Stakeholders

### Responsibility to Our Customers / Business Partners

When interacting with our business partners and customers, the JSR Group will:

- Constantly evolve to meet the demand for new materials
- Always strive to increase customer satisfaction
- Act in good faith and maintain fair and equitable business relations
- Continue to be socially and environmentally conscious throughout the supply chain

### Responsibility to Our Employees

All employees should expect:

- To be evaluated and rewarded based on fair standards
- Continuous opportunities to grow by challenging themselves
- Acceptance of the diversity of fellow colleagues and to be provided a place where all employees can work together as a team

### Responsibility to Society

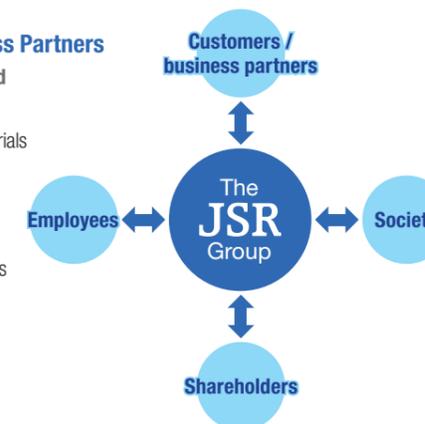
All members of the JSR Group will honor our responsibility to both the local and global communities through:

- Responsible and respectful business practices (Responsible Care) that considers the environment and safety
- Support for environmental conservation by providing eco-friendly products
- Reduction of our environmental impact throughout the entire product lifecycle
- Active contribution to conserving biodiversity throughout its business activities and the entire product lifecycle

### Responsibility to Shareholders

The JSR Group will maintain its responsibility to its shareholders by:

- Aiming to increase corporate value by creating business opportunities through materials
- Constantly enhancing its management efficiencies
- Inspiring trust by being highly transparent and conducting sound corporate management practices



## Course of Action: 4C



### Challenge

All employees of the JSR Group should share a common, global focus and desire to succeed. Employees should feel confident to autonomously take on new challenges, learning from successes while viewing setbacks as opportunities to learn, grow and improve.

### Communication

All employees should feel comfortable and confident maintaining open lines of bi-directional communication at all levels within the JSR Group. Employees should strive for organizational transparency through direct conversations as the best means of sharing value and achieving common goals, especially in the face of growth and diversification.

### Collaboration

Employees will work together in the spirit of cooperation, valuing common, corporate goals over internal or departmental barriers. Employees will also be encouraged to actively collaborate with external resources and not be bound by conventional ideas.

### Cultivation

All employees will cultivate an environment that supports bi-directional communication between managers and subordinates, and provides opportunities for them to develop together as individuals and as members of productive, supportive teams.

## The JSR Group's CSR

The JSR Group's mission is to create value through materials to enrich society, people and the environment. In this process, it is important for us to act with integrity as a good corporate citizen and live up to the trust that our stakeholders place in us. Our CSR represents the initiatives we employ to successfully achieve our mission, and as such we view CSR as a key management issue.

The CSR Committee serves as the central mechanism for responding to new issues that emerge in the needs of society as it becomes more complex.

### Promotion by Four Committees



## Major Activities Promoted in FY 2012

### Activities to Disseminate the Essential Elements across the JSR Group

- We distributed *An Introduction to the JSR Group's Essential Elements* to all our staff to acquaint them with the Essential Elements.
- The President held explanatory briefings on the subject at JSR sites across Japan and overseas.

### Revising the Principles of Corporate Ethics and Promoting of the Principles at Our Foreign Bases

- We revised the JSR Group Principles of Corporate Ethics to reflect the Essential Elements.
- We published the JSR Group Principles of Corporate Ethics in five languages (Japanese, English, Chinese, Korean, and Thai), and distributed non-Japanese versions to staff at our foreign bases to acquaint them with the Principles.
- We decided to also conduct a survey on awareness of corporate ethics every year at our foreign bases; before 2011, the survey was carried out domestically every two years.

## Participation in the United Nations Global Compact



In April 2009, the JSR Group became a participant in the United Nations Global Compact. Amidst increasing pressure for corporate social responsibility, businesses operating at a global level need to make a greater commitment to human rights, labor, the environment and anti-corruption, as expressed in the 10 principles of the Global Compact. The JSR Group considers our participation in the Global Compact to be a proclamation of our dedication to acting responsibly in the international community, and strives to work even harder to fulfill our corporate social responsibility.

### The 10 Principles of the United Nations Global Compact

- ① Businesses should support and respect the protection of internationally proclaimed human rights.
- ② Businesses should make sure that they are not complicit in human rights abuses.
- ③ Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
- ④ Businesses should uphold the elimination of all forms of forced and compulsory labour.
- ⑤ Businesses should uphold the effective abolition of child labour.
- ⑥ Businesses should uphold the elimination of discrimination in respect of employment and occupation.
- ⑦ Businesses should support a precautionary approach to environmental challenges.
- ⑧ Businesses should undertake initiatives to promote greater environmental responsibility.
- ⑨ Businesses should encourage the development and diffusion of environmentally friendly technologies.
- ⑩ Businesses should work against corruption in all its forms, including extortion and bribery.

# Customers / Business Partners

Web CSR Report 2012 > Responsibility to Our Stakeholders > Customers / Business Partners

## Customer Relations

### Received Intel's Supplier Continuous Quality Improvement (SCQI) Award

We were granted by Intel Corporation, a world-class semiconductor manufacturer (California, the United States), the company's most prestigious Supplier Continuous Quality Improvement (SCQI) Award. We received the award for two consecutive years from FY 2011, with FY 2012's award being our third overall. We provided Intel with advanced photoresists, packaging materials, and CMP consumables. The award was in recognition of our extraordinary commitment to exceptional quality and performance in consideration of Intel's goals.



At the SCQI Award ceremony (photo taken by Jeff Caroli)

### Established More Bases to Meet Asian Customers' Needs

In order to accurately identify information regarding growing Asian markets, including Chinese market, and promptly respond to customers, the JSR Group constructed research and development facilities containing clean rooms with evaluation equipment and analytical instruments at JSR Micro Korea and JSR Micro Taiwan. Both companies manufacture and sell liquid crystal display (LCD) materials. By promoting product development locally and comprehensively, and providing feedback to their manufacturing section located adjacent to the facilities, the companies are now ready to promptly accommodate to customers needs. Meanwhile, in China, many local liquid crystal panel manufacturers and many major foreign manufacturers, such as those from Japan, Korea, and Taiwan, are now planning to establish their plants, indicating expectations for the future growth. In this regard, JSR Shanghai, our local Chinese corporation, opened branches in Beijing City and Shenzhen City to respond to the needs of customers in the display material business in Northern and Southern China. In the elastomer business field, in a bid to meet the demand for synthetic rubbers for fuel efficient tires in

Asia and Europe, we are currently constructing a joint plant in Thailand. As indicated by this, along with the operational launch of our manufacturing base in Germany in 2009, we are currently establishing our framework to respond to the globally increasing demand.



**Nobuo Kawahashi**  
President  
JSR Micro Korea Co., Ltd.

Since our establishment in 2003 as a company with the single function of manufacturing, JSR Micro Korea has been diversifying its roles, as indicated by the expansion of the types of our manufacturing products, the merger with a sales division, and its establishment of a research and development division. Since the completion of our research building in 2011, many researchers from our customer organizations have been carrying out joint research at our laboratories. Now that we have begun to promote research and development in Korea, in addition to the functions of manufacturing and quality assurance, we are now able to provide total solutions for our customers promptly. This has further raised our customers' reliance and trust placed on us, further increasing our presence in Korea.

## Relationships with Business Partners

### CSR Procurement Initiatives with Cooperation of Our Business Partners

In FY 2011, JSR began CSR procurement initiatives to implement and promote CSR activities in our supply chains. Specifically, we incorporated environmental and social aspects into our Purchasing Policy. Based on the policy, we conduct questionnaires for our business partners to identify their situations. If we find any problem, we dispatch our procurement staff to the business partner concerned to work on solving the problem together.

In FY 2011, the first year when we conducted the survey, we questioned our business partners both in and outside Japan, covering approximately 90% of all purchased raw and processed materials by cost. In FY 2012, we raised the percentage to 95% and extended the coverage also to our business partners related to construction work.

Comments from Business Partner

**Hirotohi Satake**  
Director & Tokyo Branch Manager Komatsuya Corporation

Conducting a questionnaire survey as a form of CSR initiatives is not so unusual. As for JSR, however, the company dispatched its staff to our company to confirm and discuss our situation. This approach very significant also to us, and helped us to raise our awareness of CSR. Thank you very much.

**Masato Hotta**  
Procurement Department I

When communicating with a business partner, I emphasized sharing information and exchanging opinions regarding CSR procurement, rather than providing guidance from JSR. By so doing, I was able not only to help the partner understand the importance of our initiatives, but also to identify the partner's situation. I felt that this was truly significant.



Meeting with a business partner to solve a problem together

# Employees

Web CSR Report 2012 > Responsibility to Our Stakeholders > Employees



## Corporate Culture Reform Activities

From the results of our Employee Awareness Survey, which we conduct once every three years, we have identified two characteristics of corporate culture at JSR. One is discipline, we have been passed on down through the years at JSR and which we plan to continue to treasure. The other is freedom, which we have lacked in the past but are working on improving. We established the 4C Course of Action to achieve both of these goals.

### "Cultivation" Activities

Since FY 2012, we have been promoting "Cultivation" activities to review the relationship between managers and their junior staff as part of our corporate culture reform efforts. With more focus placed on the "Cultivation" among the four elements of the Course of Action: 4C, we strive to encourage managers and junior staff to work together to ensure their mutual growth.

#### [Specific Activities for "Cultivation"]

##### ●OJT Promotion Activities

We have formulated the Seven Points of On-the-Job-Training (OJT), which stipulate the correct attitude toward and the basic idea of OJT. We have disseminated

these points, striving to ensure that they are thoroughly observed.

Meanwhile, we have been emphasizing the spread of our motivation education through communication between managers and junior staff. We have been promoting efforts to enhance not only individual employees' skills and knowledge, but also their motivation.

##### ●Communication Improvement Activities

We periodically hold a chat session to improve and promote communication among our employees. The theme is not only related to participants' routine work, but also to other wide range of topics, such as those common among the participants, company-wide issues, and



Chat Session

problems facing their divisions. The meeting is used also as an opportunity to permeate our Essential Elements and promote the motivation education.

##### ●Awards by Directors

Nice Support Award is granted to employees who steadily performed their duties as a force behind the scenes and supported a smooth operation of their organizations. Nice Try Award is given to employees who contributed to the cultivation of the corporate culture in which employees are willing to try something challenging without being afraid of making mistakes. Under this awarding system, which was introduced in FY 2012, the awards are granted semiannually to relevant employees by their directors.



Award recipients at the Tokyo Headquarters

## Diversity / Work-Life Management

### Held Elderly-Nursing Care Seminar

In FY 2012, Introductory Seminar on Striking a Balance between Work and Elderly-Nursing Care was held at each of our business establishments, with an outside expert invited as the lecturer. At the seminar, participants listened to the lecturer's experience and learned about the mental and physical preparation for elderly-nursing care. They also tried various practical experiences needed for the care, such as assistance for an elderly person to stand up with consideration to the prevention of the care-provider's suffering back pain. The participants' comments were along the lines of: "the time has finally come for the company to think about elderly-nursing care!" and "the talk of the lecturer's experience was very informative."



Elderly-nursing care seminar

### Diversity Promotion Activities

In 2010, we began to promote diversity promotion activities in order to bring out a wide variety of our employees' capabilities and create the corporate culture where all the employees can fully demonstrate their abilities.

Currently, the diversity promotion activities are on the second phase, namely "Seeding Time." Activities to support the careers of our female employees are currently diversifying. In fact, the types of divisions to

which our female employees are assigned have become richer. Also, we encourage our female employees who have switched to main career-track positions to take a skill seminar held by an outside organization. These activities are now producing excellent results. The ratio of our female employees in management positions increased to 3.0% as of April 2012, compared to 1.2% at the time of the launch of the activities. Furthermore, our diversity promotion activities are not limited to those for women; we are extending the domain covered by our diversity activities.

#### Diversity Promotion Roadmap

	Phase 1 "Ground Preparation Time" 2010	Phase 2 "Seeding Time" 2011-2012	Phase 3 "Growing Time" 2013-2014	Phase 4 "Harvesting Time" 2015	Progress
Support for women's career development	Holding a seminar for female employees who have switched to main career-track positions, and activating rotation for employees				○ Currently holding an annual seminar
	Promoting the understanding among male employees in management positions regarding women's career development				○ Currently holding an annual seminar
	Increasing the ratio of women among new employees (engineering positions: 15% - 20%; and administrative positions: 40% - 50%)				○ The ratio of our female employees newly hired in April 2012 (engineering positions: 13% and administrative positions: 57%)
	Target ratio of female employees in management positions: 5%, 2015				△ 3% as of April 2012
Global human resources	Developing HARMONY, SNS for female employees				○ Expanding the SNS for our Group companies' employees
	Globalization promoted in Japan: hiring many more non-Japanese employees				○ No. of foreign employees newly hired in FY 2013: 5
	Globalization of existing employees: short-term language seminars (English and Chinese) : more active interaction with our foreign Group companies				○ No. of participants in such seminars in FY 2012: 9 ○ No. of participants in such an effort in FY 2012: 4

# Society

Web **CSR Report 2012** > Responsibility to Our Stakeholders > Society

## Support to Reconstruct Areas Affected by the Great East Japan Earthquake

Following the occurrence of the Great East Japan Earthquake of March 2011, the JSR Group began efforts to support the reconstruction of an area affected by the disaster.

### Volunteer Activities Conducted by JSR Group Staff to Support an Affected Area

Using the Leave for Volunteers Activities System and other measures, we organized volunteer activities for our Group's volunteer staff and dispatched them to an area affected by the Great East Japan Earthquake. When planning and implementing our support plans, we cooperated with local administration and non-governmental organizations (NGOs), placing our first priority placed on accommodating the needs of the affected area.

#### Overview of Our Activities

Activity site: Oshima, Kesennuma City, Miyagi Prefecture (island in Kesennuma Bay)

Activity details: removing debris from the seashore, paddy fields, and damaged houses, supporting the reconstruction of the local fishing industry, and promoting many other efforts

Dispatch period: July 2011 (activities promoted among the JSR Group alone); and September to November 2011 and February to March 2012 (activities promoted with the cooperation of other United Nations Global Compact participant companies, with the emphasis on the continuity of the activities)  
No. of dispatch times: 12  
No. of total volunteers: 203 (within our Group)



Our group's volunteer staff making rafts and removing debris

#### Comments from Participants

JSR Engineering Co., Ltd.

#### Yoshimi Kobayashi

I was truly impressed to see that despite tragically losing their families, homes and jobs, young people, who will lead the next generation for the island, were working on the task of removing huge amount of debris without making complaints in a bid to return their island to what it had been. While engaged in the reconstruction support effort, I was able to listen about the terrible situation at the time of the occurrence of the disaster making the once peaceful island utterly different, problems after the disaster, anxiety for the future, and hopes and dreams for the future. I believe that this experience will prove invaluable for main my future life.



Techno Polymer Co., Ltd.

#### Satoe Masaki

Although it is certainly necessary for society to make fundraising as a form of support, I think that more obvious forms of volunteer activities, such as those promoted actually in an affected area and visually recognized by people in the area, are able to provide mental support for the people. I was surprised by the JSR Group's excellent practicality, unity, and leadership. The experience of working with various members of the Group made me honored once again that I am a member of the Group. I thought that support provided by companies had some special power different from that by individuals.



JSR Micro Kyushu Co., Ltd.

#### Kentaro Tanaka

I think that many people thought "I want to do something to help, but I'm not sure what to do" or "I feel uneasy about going to an affected area alone." Although many JSR staff might have hesitated to take their first step toward their volunteer action, the company encouraged them to try. I believe that their first step was followed by the second step and the third step, eventually leading to today's large scale of support.



#### Hayato Hirano

Director and Official Chairperson of the Social Contribution Committee

Along with our staff, I helped remove debris at the affected area. The first purpose of this activity was to contribute to the affected area. On top of that, the experience was invaluable also for our staff and our Group. In terms of enhancing the staff's awareness of social participation, it was a truly significant effort. We will continue to actively support our staff's participation in social activities.

### Application of Thermal Barrier Coating Agent using SIFCLEAR™ to Temporary Housing in Oshima, Kesennuma City

As a form of support through our business capabilities, we applied the roofs of temporary housing on Oshima, Kesennuma City, thermal barrier coating agent using JSR-developed SIFCLEAR™. This has reduced the increase of room temperature due to the direct sunlight and mitigated the heat of summer, contributing to improving living environment for those affected by the disaster.



Temporary housing on Oshima, Kesennuma City

### JSR Staff Donates 2 Fishing Vessels to Oshima, Kesennuma City

#### Hakaru Yamanaka

Techno Polymer Co., Ltd.

I donated two fishing vessels, which I had inherited from my father when he died. Hoping to be engaged in the fishing industry someday in the future, I had kept them on my own. Shocked by the Great East Japan Earthquake and its damage, however, I began to think that if the vessels were of some use, they should be donated to support the reconstruction. Through my senior at work who participated in a volunteer activity in July 2011, I made a proposal to the local headquarters for disaster control for me to donate the two fishing vessels, and thus donated them. I hope that my father's vessels will contribute to the reconstruction of the Tohoku region.



## Risk Management Efforts

### Risk Management System

In FY 2010, the JSR Group began to make annual efforts at all our divisions and Group companies to identify a wide range of risks, such as those related to explosions, fires, large-scale earthquakes, and pandemics, assess such risks, and formulate countermeasures. A particularly important one is positioned as a major company-wide risk. The improvement situation of such a risk is managed by the Risk Management Committee and the CSR Committee. Moreover, we annually carry out crisis management training, and work on reviewing and further improving the risk management system.

### Responses to Large-Scale Earthquakes and Tsunamis

#### •Building Structure Countermeasures

Since the Hanshin-Awaji Great Earthquake, we have been working on anti-seismic countermeasures on a level higher than we are legally demanded. As result, even though our Kashima Plant suffered the jolt registering 6-lower on the Japanese seismic scale (294 Gal) at the time of the Great East Japan Earthquake, no serious damage was found. For our future safety measures, we will further reinforce the anti-seismicity of our buildings and incorporate the perspective of countermeasures against tsunamis.

#### •System Program Countermeasures

In 2008, we introduced a system to estimate an expected seismic level based on the epicenter and earthquake scale information released by the Japan Meteorological Agency in its Earthquake Early Warning, and distribute the estimate information. In 2009, as preparation for earthquakes and other wide-area disasters, we introduced a safety confirmation system to ensure communications between our staff and us. Thanks to these measures, we were able to

respond to the Great East Japan Earthquake swiftly and secure a prompt safety confirmation. In FY 2012, we expanded the coverage of these systems to our Group companies and our staff's families.

#### •Reinforcing Our Business Continuity System

Establishing a risk management system as preparation for large-scale disasters and other risks, with the emphasis on initial responses, we have been administering the system thoroughly based on our risk management manuals. In terms of the globalization of our businesses, we have incorporated the perspective of the dispersion of risks, which is reflected into the selection of the sites of our business establishments. After the last year's Great East Japan Earthquake, we began to fully introduce the concept of business continuity management (BCM). Systemizing our previous measures and systems and compensating for deficiency, we are now endeavoring to establish a framework to ensure organic coordination and function of each measure and system on the whole.

## Support for Educational Development of the Next Generation

Many more children today are losing their interest in science, creating one of Japan's major social problems. Tackling with this situation, the JSR Group hopes that through experiences of surprise and joy, children will come to feel the importance, possibilities, and pleasure of manufacturing, and will help them know that materials are invaluable and essential for making various things in the world.

#### •Held Visiting Lectures of Science

With the cooperation of the boards of education in areas where our Group's plants are located, we periodically hold visiting lectures of science at elementary schools and junior high schools in the areas. In FY 2012, we held a visiting lecture at a junior high school of Kamisu City, Ibaraki Prefecture, as well as Fun Lab Classes at three elementary

schools in Yokkaichi City, Mie Prefecture.

#### •Conducted High-Tech University

Organized by SEMI, an international industrial organization regarding semiconductor equipment and materials, the High-Tech University was held at our Yokkaichi Plant. This was a good opportunity for high school students to enjoy practical training and other forms of education to learn about the basis of semiconductors and micro electronics and deepen their understanding about the semiconductor industry.

#### •Cooperated in Career Experience Programs

Since FY 2008, Yokkaichi Plant has been making cooperation for career experience programs for junior high school students in Yokkaichi City. In FY 2012, the plant held workplace tours for students

of Municipal Minami Junior High School (September 2011) and of Municipal Utsube Junior High School (November 2011).

#### •Cooperated in the Teacher Training Program at a Private Company

As a way of the Teacher Training Program in a private company organized by the Japan Institute for Social and Economic Affairs, we held a two-day seminar in August 2011 at our head office and Chiba Plant for six school teachers to learn more about a way of thinking when a company promotes its business activities and company efforts to tackle environmental problems. Hoping that the experience of this seminar will be utilized for the education of children and the administration of schools, we will continue to make cooperation for the program.



Fun Lab Class



High-Tech University



Career Experience Program



Teacher training program at a private company

## TABLE FOR TWO (TFT) Program

Since February 2010, the JSR Group has participated in the TABLE FOR TWO (TFT) program at the head office building and in our Yokkaichi area. Under the TFT program, if one selects a healthy dish covered by the TFT program at a company cafeteria or restaurant in a developed country, 20 yen from the cost of the meal will be donated towards providing school lunches for children in Africa, with 20 yen

being equivalent to one school lunch. The JSR Group has so far provided 40,693 school lunches for children in Africa. This is equivalent to school lunches for 184 children for one year. Highly valued for our contribution, we were selected in April 2012 as one of the 20 Gold Supporters from among 500 program participant companies and other organizations, following the selection as a Silver Supporter in 2011.

Hoping to contribute to the achievement of the United Nations Millennium Development Goals (MDGs)\* as much as possible, we would like to continue this effort.



Certificate of appreciation from TFT International

\* Millennium Development Goals (MDGs): eight goals set by the United Nations to be attained by 2015, such as eradicating extreme poverty and hunger, as well as achieving universal primary education.

# Shareholders

Web **CSR Report 2012** > Responsibility to Our Stakeholders > Shareholders

By maintaining and enhancing management efficiency, transparency and soundness, we strive to continuously create corporate value and make ourselves even more attractive to our shareholders.

## Basic Approach

As a company with auditors, JSR monitors and oversees the execution of our operations through the Board of Directors and auditors. In June 2011, we introduced the system of appointing directors from outside organizations. In June 2012, we designated three of the eight directorships as

positions filled by outside directors appointed from organizations independent of JSR. This has made our management more transparent and sound. Meanwhile, we believe that our most important challenge is to strive to strengthen our research and development from a long-term perspective,

and to enhance our competitiveness by developing new businesses and promoting other measures, and hereby improving our business performance on a long-term basis and further increasing our corporate value.

## Investor Relations

We strive to promote investor relations (IR) efforts with due consideration for our shareholders and investors, and to disseminate information regarding our management situation and our corporate policies promptly and accurately.

business conditions are employed to facilitate briefings. By promoting these efforts, we strive to make our shareholders' meetings even more accessible to you.

our company information for individual investors. We strive to provide necessary information in a way easy to understand and in a timely manner.

### Communications with Shareholders and Investors

As well as conducting briefings on our business results each quarterly period, we also participate in seminars for investment institutions and analysts, in addition to holding technology seminars, thereby achieving extensive bi-lateral communication with shareholders and investors.

● **Information Disclosure in Our Annual Reports**  
We publish an annual report (available only in English) every year regarding the relevant fiscal year's financial results and management and business situations.

● **JSR Throughout Society**  
We send to our shareholders *JSR Throughout Society*, which aims to help our shareholders to easily understand that our Group's products are used extensively for a wide range of materials and parts needed in society. The pamphlet illustrates how our materials are utilized for everyday items, such as liquid crystal televisions, mobile phones, and automobiles.

### Communication through Various Forms of Media

● **Information Disclosure on Our Website**  
In order to provide the latest information regarding our financial and business performances, our website contains the section of "Investor Relations." The section includes the latest IR information, news release, and the latest stock price information, which are indicated in a way easy to see. The section also presents various types of IR information, including documents regarding our business results, annual reports, IR news, information related to our stocks, documents regarding our shareholders' meetings, and

Our website providing information regarding our stock price, news, and other topics in a timely manner



Panel exhibition at a shareholders' meeting



Seminar for investment institutions and analysts

# Evaluation by Outside Organizations

## Listed in a Leading SRI Index

In April 2012, JSR was listed for the 9th consecutive year in again in the "FTSE4Good Index Series," an index that measures Socially Responsible Investment (SRI).

The purpose of the FTSE4Good Index Series, an index of the FTSE Group based in the United Kingdom, is to evaluate activities of companies that fulfill their cooperate social responsibilities in terms of the environment, human rights, and other aspects, and to promote investments in such companies. As of April 2012, the number of companies included in the index was 729 in 24 countries around the world, of which 181 were Japanese companies.

JSR's CSR efforts are highly valued both inside and outside Japan. As of April 1, 2012, JSR is listed also on Ethibel Pioneer & Excellence Label, an international SRI index, and the Morningstar Socially Responsible Investment Index, a well-known index in Japan. As for Ethibel Pioneer & Excellence Label, JSR is the only Japanese company selected from among the Japanese chemical sector.



## Third-Party Opinion

Professor Emeritus of the University of Tokyo

Mr. Itaru Yasui



I believe that not only companies but also individual persons should be strongly aware of ISO 26000, a standard of social responsibilities. This is because activities of human beings have been globalized. A consumption behavior by one individual person now influences the entire earth.

However, on the level of an individual person, it is impossible to foresee all the effects to be generated by his/her behavior; unexpected results always occur. On assumption of this, what should be done? The answer is, not to insist on the rightness of the individual person's behavior, but to show his/her attitude and intention. This applies also to

organizations. If an organization can disseminate its attitude and intention very well, it can obtain trust from people.

When I first read this CSR report, I actually thought that there were a few points to be improved as for details, but overall, I found the JSR Group's consistent attitude and intention in the report. After much deliberation, I thought this was probably because a feeling of trust was emphasized in the CSR report, and there was no clumsy excuse in the report.

I read the report once again from the top. The report begins with the messages from President Koshiba. Although there is no change in the major policies of the E2 Initiative™, the JSR Group seems to have acquired new confidence and conviction regarding trust placed by customers as a result of the Group's providing its materials to them. What makes me think so is the article on synthetic rubbers for fuel efficient tires. In the article, the Group explains the

importance of creating value, which indicates that the Group recognizes the importance of the attitude and intention.

As indicated by RIO+20, green economy is now one of important keywords. Eco-innovation, one of the elements of the E2 Initiative™, is extremely important. Although this innovation may tend to be regarded as a concept contradictory to sustainability, my intuition says that a true sustainability cannot be achieved without eco-innovation. I guess President Koshiba might have a similar idea and have long been working on realizing a true sustainability. Biodiversity, another global problem, is becoming increasingly important. Much more attention needs to be paid to conserve the diversity. The JSR Group has already commenced its wide range of activities to conserve biodiversity on the sites of its business establishments. I look forward to these activities' being promoted on a global level, especially in developing countries.

## Responses to the Survey about the JSR Group's CSR Report 2011

The following are excerpts from responses to the questionnaire for readers of CSR Report 2011.

- I got to know JSR and I was impressed that you are steadily promoting CSR activities. I look forward to your future progress. (70s)
- It was refreshing to read the article about your vigorous educational support as a form of social contribution through your business capabilities. (Office worker, 40s)
- I was very interested in the feature article on an experiment class for children. I think that also in terms of ESD\*, the effort is highly valued. (Office worker, 30s)
- I hope that the experience of the damage inflicted on Kashima Plant will be utilized for your future progress. (Environmental counselor, 70s)
- I hope that you will further promote your efforts to raise the employment ratio of disabled people. Also, I look forward to your promoting further efforts regarding the biodiversity map for the environment, and also to your future progress. (Office worker, 60s)

\*ESD: Education for Sustainable Development

Thank you very much for providing us with you invaluable opinions. We will reflect your responses into implementing CSR efforts and preparing a CSR report in the future.

# Targets and Results

The JSR Group has identified long-term actions in various categories and set targets for each year. Major actions targets and results are described below.

Assessment ○: Better than planned ○: As planned △: Improvement needed

	Action	FY 2012 Target	FY 2012 Performance	Assessment	Target for FY 2013 Onward	Implementing Division	
CSR Management	Promote the relevant activities and raise the awareness of the activities across the Group	Promote the activities of the four committees and raise the awareness of the activities	<ul style="list-style-type: none"> <li>Promoted the activities of the four committees (Corporate Ethics Committee, Responsible Care Committee, Risk Management Committee, and Social Contribution Committee) as planned</li> <li>Held the CSR Report Presentation across all the Group's divisions, and increased the dissemination of newsletters and the intranet to raise our employees' awareness of CSR; results were confirmed through</li> <li>Held the first CSR workshops for employee leaders</li> <li>Considerably increased our employees' social awareness after implementing volunteer activities organized and arranged by the company for the first time</li> </ul>	<ul style="list-style-type: none"> <li>○</li> <li>○</li> <li>○</li> <li>◎</li> </ul>	<ul style="list-style-type: none"> <li>◦ Bolster activity implementation and raise the awareness across the entire Group</li> <li>◦ Continue to disseminate messages from CSR Department</li> <li>◦ Continue to implement measures to raise the awareness within the company by holding workshops and other events</li> </ul>	CSR Department	
	United Nations Global Compact (GC)	Use the GC network for CSR activities	<ul style="list-style-type: none"> <li>Used the GC network and reflected its activities in our corporate policies. Engaged in volunteer activities other GC member companies, especially from September 2011 to March 2012</li> <li>Contributed to the activities of the GC Japan Network (GC-JN) as the auditor of GC-JN (until November 2011)</li> </ul>	<ul style="list-style-type: none"> <li>◎</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continuation of current efforts</li> </ul>		
	Reinforce corporate ethics and legal compliance	Conduct a survey on awareness of corporate ethics	<ul style="list-style-type: none"> <li>Improved the method and contents of the survey on awareness of corporate ethics, and implemented the</li> <li>Implemented the survey on awareness of corporate ethics at our overseas business establishments for the</li> </ul>	<ul style="list-style-type: none"> <li>improved version (changed from biennial implementation to annual first time)</li> <li>version in multiple languages (Japanese, English, Chinese, Korean, and Thai)</li> </ul>	<ul style="list-style-type: none"> <li>◎</li> <li>◎</li> </ul>	<ul style="list-style-type: none"> <li>◦ Annually conduct a survey on awareness of corporate ethics and conduct follow-ups</li> <li>◦ Familiarize our employees with the new Principles of Corporate Ethics</li> </ul>	Corporate Ethics Committee
		Revise the Principles of Corporate Ethics and familiarize employees with them	<ul style="list-style-type: none"> <li>Reflected the new Essential Elements into the Principles of Corporate Ethics, and published the revised</li> <li>Implemented e-learning to familiarize our employees with the new the Principles of Corporate Ethics</li> </ul>	<ul style="list-style-type: none"> <li>requirements across the JSR Group, including our overseas companies</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continuation of current efforts</li> </ul>	
		Ensure legal compliance	<ul style="list-style-type: none"> <li>Periodically confirmed the status of legal compliance and conducted improvement activities for the</li> <li>Held explanatory meetings regarding the compliance of Antimonopoly Law many times for JSR and other</li> </ul>	<ul style="list-style-type: none"> <li>business establishments, and identified 13 major company-wide risks</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continuation of current efforts</li> <li>◦ Review and improve the risk management system</li> </ul>	Risk Management Committee
	Reinforce risk management	Periodically operate the company-wide risk management system	<ul style="list-style-type: none"> <li>Operated the company-wide risk management system across the entire Group, including our overseas</li> <li>Commenced the review of the company-wide risk management system</li> </ul>	<ul style="list-style-type: none"> <li>Conducted real-time crisis management training in anticipation of a major earthquake and tsunami</li> <li>Commenced the establishment of BCM to strive for further ensuring business continuity, while emphasizing our existing risk management manuals with the focus on initial responses</li> </ul>	<ul style="list-style-type: none"> <li>○</li> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue to implement and improve the crisis management training</li> <li>◦ Establish BCM</li> </ul>	
CSR procurement*1	Improve CSR procurement	<ul style="list-style-type: none"> <li>Implemented CSR procurement, covering 95% of suppliers for raw materials on a purchasing cost basis (90% in the previous fiscal</li> </ul>	<ul style="list-style-type: none"> <li>year), and extended the coverage of the procurement to our business partners for construction work</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue the activities and incorporate the perspective of biodiversity</li> </ul>	Procurement Department	
RC (Environment, Health, and Safety) Management	Develop products with consideration to the environment and safety	Use LCA*2 in environmental impact reduction activities	<ul style="list-style-type: none"> <li>Currently establishing a scheme to implement LCA from the R &amp; D stage and perform a provisional</li> </ul>	<ul style="list-style-type: none"> <li>calculation regarding CO2 emissions of the relevant product</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue investigation of the use of LCI*3 data in activities to reduce environmental impact</li> </ul>	
	Improve management of chemical substances	Ensure compliance with GHS*4	<ul style="list-style-type: none"> <li>Made progress in labeling products shipped in Japan in accordance with the Industrial Safety and Health</li> </ul>	<ul style="list-style-type: none"> <li>Law, and performed GHS of SDS*5 as planned</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Promptly respond to GHS in accordance with laws and regulations of each country with respect to exported products</li> </ul>	
		Ensure compliance with EU's REACH*6 and CLP*7	<ul style="list-style-type: none"> <li>Communicated information necessary for the compliance with REACH and confirmed the registration status of materials</li> </ul>	<ul style="list-style-type: none"> <li>for the compliance with REACH; affixed CLP labels to products exported to Europe</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue to comply with REACH and CLP</li> </ul>	
		Implement green procurement*8	<ul style="list-style-type: none"> <li>Participated in and conducted trial operation of the JAMP-GP*9</li> </ul>		<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Conduct activities that focus on cooperation within the supply chain</li> </ul>	
	Continue to improve product quality	Implement PLP*10 activities	<ul style="list-style-type: none"> <li>Continued to reinforce measures to prevent quality-related accidents by reviewing quality control systems and</li> </ul>	<ul style="list-style-type: none"> <li>improving quality assessment technologies at the JSR Group including group companies</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Improve quality control across entire supply chains, from raw material procurement through distribution – not just from design to manufacturing</li> </ul>	
	Provide product environmental and safety information	Provide customers with environmental and safety information	<ul style="list-style-type: none"> <li>Used SDS electronic management system to provide customers with appropriate SDS for prototypes and</li> </ul>	<ul style="list-style-type: none"> <li>products</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue to provide customers with environmental and safety information</li> </ul>	
	Eliminate accidents and disasters	Implement preliminary environmental and safety assessments	<ul style="list-style-type: none"> <li>Continued to implement preliminary environmental and safety assessments in accordance with safety and environmental manuals</li> <li>No facility accidents occurred in FY 2012 that required reporting to the government under the Act on the Prevention</li> </ul>	<ul style="list-style-type: none"> <li>when installing new facilities or modifying existing ones and performing non-regular work of Disasters in Petroleum Industrial Complexes and Other Petroleum Facilities.</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Identify potential risks concerning existing facilities, materials and work, and continue countermeasures for them</li> </ul>	
		Introduce systematic measures to prepare for and respond to major earthquakes	<ul style="list-style-type: none"> <li>Continued activities to eliminate dangerous work practices and conditions in order to prevent work-related health and safety</li> <li>Implemented antiseismic reinforcement in anticipation of an earthquake with the epicenter directly below a populated</li> </ul>	<ul style="list-style-type: none"> <li>accidents; in FY 2012, one accident resulting in a JSR employee's absence from work occurred.</li> <li>area, and organized and promoted countermeasures in anticipation of a huge tsunami</li> </ul>	<ul style="list-style-type: none"> <li>△</li> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Eliminate dangerous work practices and conditions, and encourage passing down of skills from experienced to inexperienced workers</li> <li>◦ Implement measures in accordance with the mid-term business plan</li> </ul>	
	Develop highly-trusted business establishments	Conduct reviews to maintain ISO 14001 and ISO 9000 series	<ul style="list-style-type: none"> <li>Passed audits to maintain ISO 14001 and ISO 9001 at three JSR plants</li> </ul>		<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Maintain and continue to operate ISO 14001 and ISO 9001</li> </ul>	Responsible Care Committee
		Maintain certification under security-related laws and regulations	<ul style="list-style-type: none"> <li>Renewed certifications under the High-Pressure Gas Safety Law at Chiba Plant</li> </ul>		<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Renew certifications under safety laws and regulations</li> </ul>	
		Audit environmental and safety performance of Group companies	<ul style="list-style-type: none"> <li>Continued environmental and safety audits of domestic and overseas Group companies</li> </ul>		<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue environmental and safety audits of domestic and overseas Group companies</li> </ul>	
	Reduce environmental impact	Conduct energy conservation measures and anti-global warming measures	<ul style="list-style-type: none"> <li>Investigated measures to achieve the goal of a 6% reduction in total CO2 emissions by FY 2013 compared</li> <li>thousand tons (8%) compared to the FY 1991 level, due to the decrease in production.</li> </ul>	<ul style="list-style-type: none"> <li>to the FY 1991 level. The FY 2012 CO2 emissions reduced by approx. 59</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue energy-saving activities to achieve the target for reducing CO2 emissions</li> <li>◦ Use the intranet to continue to encourage energy saving efforts at our employees' homes</li> </ul>	
Reduce atmospheric release of VOCs*11		<ul style="list-style-type: none"> <li>Reduced VOC emissions by approx. 75% compared to FY 2001 due to the installation of RTO*12 at three</li> </ul>	<ul style="list-style-type: none"> <li>JSR plants.</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Promote activities to maintain the reduction of VOC emissions to achieve the FY 2016 target: a 75% reduction from the FY 2001 level</li> </ul>		
Reduce the environmental impact of wastewater, industrial waste, and other impacts		<ul style="list-style-type: none"> <li>Industrial waste: "zero waste" goals have been achieved every year from FY 2004 to FY 2012 (four tons of</li> <li>those to limit the generation of industrial waste, sort waste thoroughly, and search for recyclers.</li> <li>Wastewater: efforts were made to reduce environmental impact (COD, total nitrogen, and total</li> </ul>	<ul style="list-style-type: none"> <li>landfill waste per year), due to various measures taken at all our plants, such as</li> <li>phosphorous) to comply with the 6th Total Pollutant Load Control</li> </ul>	<ul style="list-style-type: none"> <li>○</li> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue to achieve "zero waste" goals</li> <li>◦ Make further impact reductions to comply with the 7th Total Pollutant Load Control</li> </ul>		
Introduce measure to improve local environments		<ul style="list-style-type: none"> <li>Continued to reduce offensive odors by installing RTO*12 at three JSR plants</li> <li>Continued countermeasure to reduce noise and light by installing a ground flare*13 at Yokkaichi Plant;</li> </ul>	<ul style="list-style-type: none"> <li>there were no environmental complaints in FY 2012</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue zero environmental complaints performance</li> </ul>		
Secure the environment and safety in international businesses	Make cooperation for the International Center for Environmental Technology Transfer around the world	<ul style="list-style-type: none"> <li>Cooperated in the International Center for Environmental Technology Transfer (ICETT) and supported training</li> </ul>	<ul style="list-style-type: none"> <li>of environment and safety engineers</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue to make cooperation for ICETT</li> </ul>		
Conserve biodiversity	Adopt specific policies concerning biodiversity	<ul style="list-style-type: none"> <li>Continued to participate in working groups (such as the one for sustainable land use) of the Japan Business</li> <li>Identified relationships between business activities and biodiversity, and investigated our raw materials and</li> <li>Formulated the JSR Group's biodiversity policies and activity plan</li> </ul>	<ul style="list-style-type: none"> <li>Initiative for Biodiversity (JBIB) land use</li> </ul>	<ul style="list-style-type: none"> <li>◎</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continue the working activities at JBIB</li> <li>◦ Promote specific activities in compliance with the JSR Group's policies regarding biodiversity</li> </ul>		
Human Resources	Support work-life balance of employees	<ul style="list-style-type: none"> <li>Promote understanding of sound work-life management and implement</li> <li>measures to increase the understanding</li> <li>Confirm employees' understanding of work-life management programs and</li> <li>implement measures to increase the understanding</li> </ul>	<ul style="list-style-type: none"> <li>Implemented education programs according to position</li> <li>Announced how much overtime work was generated (every month)</li> <li>Held an elderly-nursing care seminar</li> </ul>	<ul style="list-style-type: none"> <li>○</li> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Raise awareness of work-life management and implement measures to promote it</li> </ul>	Human Resources Development Department	
	Ensure diversity in the workplace	Cultivate the diversity as our corporate culture, take concrete measures, and achieve quantitative targets (see "Diversity Promotion Roadmap" of page 20.)	<ul style="list-style-type: none"> <li>Percentage of women among our employees hired in April 2012 – engineering positions for college</li> <li>Percentage of managerial positions filled by women as of April 2012: 3.1%</li> </ul>	<ul style="list-style-type: none"> <li>graduates: 13%; and clerical positions for college graduates: 57%</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Cultivate the diversity as our corporate culture</li> <li>◦ Achieve quantitative targets</li> </ul>	
		Ensure diversity of recruitment	<ul style="list-style-type: none"> <li>Employed 14 employees of foreign nationality; employment ratio for people with disabilities: 1.84% (statutory</li> </ul>	<ul style="list-style-type: none"> <li>quota: 1.8%)</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Ensure diversity of recruitment</li> </ul>	
Social Contribution	Implement social contribution programs	<ul style="list-style-type: none"> <li>Held the first High-Tech University for high school students with their interest in science at Yokkaichi Plant with the</li> <li>developed in the previous fiscal year for elementary school students with the cooperation of people actually engaged in</li> <li>and to participate in the TABLE FOR TWO program.</li> </ul>	<ul style="list-style-type: none"> <li>cooperation of SEMI*14. Continued to hold the Fun Lab Class, which was a program</li> <li>elementary school education, and visiting lectures of science for junior high school students,</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continuation of current efforts</li> </ul>	Social Contribution Committee	
	Implement activities to support the reconstruction of disaster affected areas	<ul style="list-style-type: none"> <li>Used the Leave for Volunteers Activities System to promote volunteer activities among the JSR Group alone in July</li> <li>Contributed to the improvement of living environment in a disaster-affected area, by applying thermal</li> </ul>	<ul style="list-style-type: none"> <li>2011, and with cooperation of other companies from September 2011 to March 2012</li> <li>insulation paint containing our material to temporary housing in the area</li> </ul>	<ul style="list-style-type: none"> <li>◎</li> </ul>	<ul style="list-style-type: none"> <li>◦ Completed the volunteer activities led by the JSR Group. Consider different activities in compliance with the needs of the affected people</li> </ul>		
	Implement activities that will contribute to local communities	<ul style="list-style-type: none"> <li>Implemented various activities at each plant area with the emphasis on communication with the local community, such</li> <li>food fair in the cafeteria of Yokkaichi Plant.</li> </ul>	<ul style="list-style-type: none"> <li>as interactive events with local residents and cleanup activities. Continued to hold a local</li> </ul>	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>◦ Continuation of current efforts</li> </ul>		

\*1 CSR Procurement: measures aimed at procuring materials from suppliers who are environmentally compliant and strive to be socially responsible in their corporate behavior, when hiring employees, etc.  
 \*2 LCA (Life Cycle Assessment): a method of quantitatively analyzing and assessing a product's environmental impact in all lifecycle stages, including raw materials, manufacturing, use, and disposal.  
 \*3 LCI (Life Cycle Inventory): in LCA, the compilation of data on the flow of resources, energy, and environmental impacts of a product.  
 \*4 GHS (Globally Harmonized System of Classification and Labeling of Chemicals): a system aimed at creating a global standard for chemical classifications, labeling, and SDS submission.

\*5 SDS (Safety Data Sheet): a form that is attached to chemical substances when they are shipped to other businesses to provide safety information  
 \*6 REACH (Registration, Evaluation, Authorization and Restriction of Chemicals): a European Union regulation requiring registration of safety testing data for all chemicals that are manufactured or imported in volumes of 1 ton or more annually.  
 \*7 CLP (Classification, Labeling and Packaging of substances and mixtures): a European Union regulation regarding classification, labeling and packaging of hazards of chemical substances and mixtures based on GHS.

\*8 Green Procurement: measures aimed at procuring materials from suppliers who implement comprehensive management of substances that have the potential to harm human health  
 \*9 JAMP-GP (Joint Article Management Promotion-Consortium Global Portal): global portal site for the Joint Article Management Promotion-Consortium, with the functions to support its member companies to manage, disclose, and transmit information regarding chemical substances contained in products.  
 \*10 PLP (Product Liability Prevention): activities designed to prevent the manufacture of defective products  
 \*11 VOC (Volatile Organic Compounds): organic compounds that are highly volatile, which are a source of atmospheric pollution

\*12 RTO (Regenerative Thermal Oxidizer): a device that combusts VOCs and breaks them down into water and CO2 to make emissions cleaner  
 \*13 Ground Flare: a device that combusts waste gases in a cylindrical furnace placed on the ground; ground flares have a lower impact on the surrounding environment compared to conventional flare stacks  
 \*14 SEMI (Semiconductor Equipment and Materials International): an international industrial organization for companies providing manufacturing equipment, materials and other related services regarding semiconductors, FPDs and other items.

Materials Innovation



With chemistry,  
we can.

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