### STRONG FINANCIAL FOUNDATION

Ratio of Equity Attributable to Owners of Parent to Total Assets (FY2018)

**58.1**%



### Capital Policy (FY2018)

Dividend (Annual)

(Billions of yen)

**13.22** Billion yen



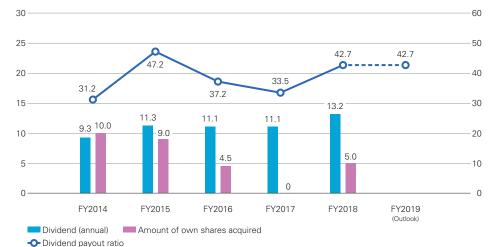
Amount of Own

Dividend Payout Ratio

42.7%



(%)



### Operating Profit Ratio (FY2018)



# ROE (FY2018)

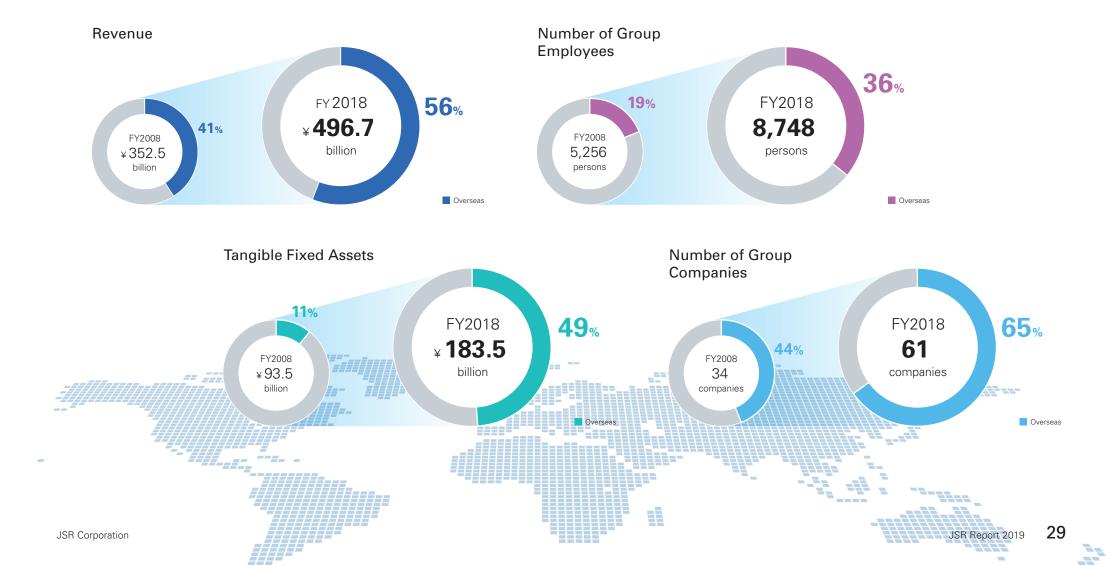


FORCES SUPPORTING CORPORATE VALUE

### **GLOBAL NETWORK**

JSR was established as a national policy concern to pioneer synthetic rubber production in Japan and started production in 1960. Since then JSR has continuously expanded its business and currently four main business segments: Elastomers, Plastics, Digital Solutions and Life Sciences, are conducting business not only in Japan but in the US, Europe, China, Korea, Taiwan, Thailand and others. Our business has increased substantially overseas in the last decade.

# 2008 2018



customers.

The recent rise in environmental awareness has led to the introduction of a labeling system that promotes the wider use of fuel-efficient tires in Japan, EU, Korea, and China, and is expected to be introduced in the United States, India, and other countries. Moreover, technological demands for high performance tires are also on the increase with the spread of electric vehicles, and our solution polym-

erization SBR (SSBR) is set to provide a range of solutions for all the diversified needs of our

### **GLOBAL NETWORK**

## Elastomers Business





JSR Elastomer India Private Limited (India) Sales agency of products such as synthetic rubbers. JSR Elastomer Korea Co., Ltd. (Korea) Sales agency of products such as synthetic rubbers.

> JSR Corporation Head Office (Japan/Tokyo)

JSR (Shanghai) Co., Ltd. (China)



JSR MOL Synthetic Rubber Ltd. (Hungary) Sales and manufacturing of Solution Polymerization Styrene-Butadiene Rubber. (60,000tons)



JSR BST Elastomer Co., Ltd. (Thailand) Sales and manufacturing of Solution Polymerization Styrene-Butadiene Rubber. (100,000tons)



JSR Corporation Yokkaichi Plant (Japan/Mie prefecture) (60,000tons)

# North and Central America

JSR Elastomer America, Inc. (US) Sales of synthetic rubber. OUR STRATEGIES FOR VALUE CREATION

FORCES SUPPORTING CORPORATE VALUE

### **GLOBAL NETWORK**

# **Digital Solutions Business**

[Semiconductor Materials Business]

Target markets where major semiconductor manufacturers are now located have spread to Europe, the United States, Korea, Taiwan, China, and Japan. JSR Group has secured manufacturing bases in each region of the world to develop and provide cutting edge materials that enable the evolution of semiconductor chips in a market driven by innovation in digital technology, such as with the development of IoT and Big Data.



OUR STRATEGIES FOR VALUE CREATION

JSR Micro Korea Co., Ltd.

### **GLOBAL NETWORK**

# **Digital Solutions Business**

### [Display Materials Business]

Our target markets are China, Korea, Taiwan, and Japan, where LCD panel production is thriving. We entered China, where high growth continues, relocating the business' main operating body from head office (Japan) to China. As a comprehensive manufacturer of display materials, we shall continue to provide solutions to our customers.

(China)



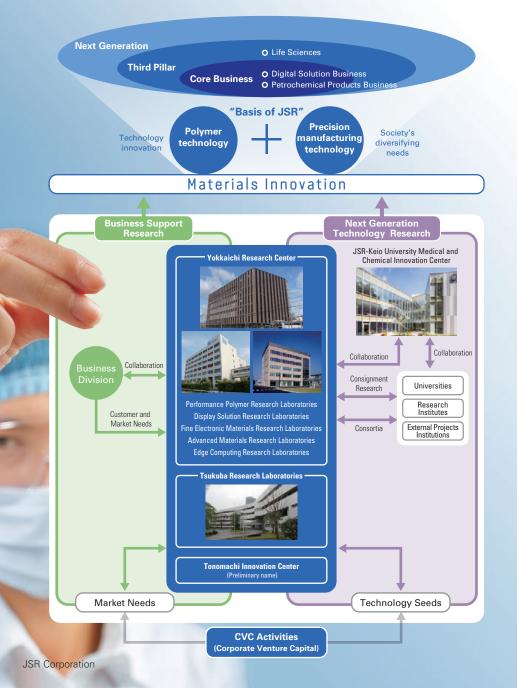
### **GLOBAL NETWORK**

## Life Sciences Business

We are focusing on expanding our business into the biopharmaceuticals field as well as the field of high-precision diagnosis and research reagents with an eye towards the major markets of Europe, the United States, and Asia (China and Japan). JSR Group will provide new value to the pharmaceutical industry while expanding Group companies globally through mergers and acquisitions.



### **EVOLVING TECHNICAL CAPABILITIES**



With deep expertise in its core polymer and precision manufacturing technologies, the JSR Group has widened the scope of its technological domains by integrating technologies from disparate fields such as photochemistry, inorganic chemistry, precision processing, and bio-technologies. In this way, the Group has advanced R&D activities, and its accumulated efforts have enabled it to develop unique strengths relative to chemical companies worldwide, which is our driving force to expand superior materials and technologies globally.

The JSR Group's main R&D centers are located in Yokkaichi City in Mie Prefecture and Tsukuba City in Ibaraki Prefecture. There we carry out R&D activities aimed at tracking swiftly evolving societal needs such as the changes emanating from the digital revolution.

Our R&D mission can be broadly divided in two categories: "business support research" for business domains we are developing, and "next-generation technology research," such as novel and applied research for peripheral fields. In promoting research, we emphasize close linkages in the Group's value chain, ranging from market development to process development and manufacturing technology development, and extending to manufacturing, sales, and distribution. We also promote integration within the system, with researchers themselves making direct contact with customers to uncover their needs. Moreover, we are enhancing technical services in various countries and building a system capable of providing global and timely support for customers' business activities.

For next-generation technology and seed research, it is necessary for R&D to anticipate latent market needs. Particularly in the case of new R&D fields, we promote open innovation such as joint research with universities and research institutions in Japan and overseas. We have established the JSR-Keio University Medical and Chemical Innovation Center (JKiC), a joint research facility on Keio University's Shinanomachi campus, which opened in October 2017. We will create innovation through investigating the wholly-novel concept of fusing medicine and chemistry, which will lead to practical technologies that contribute to global society with people living long and healthy lives.

We are now planning to open a new innovation center in the field of life sciences and materials informatics in the Tonomachi area of Kawasaki city, Kanagawa prefecture to acceralate R&D activities through collaboration with universities and start-ups.

### 1. Advanced Simulation Technology, Machine and Deep Learning

### (1) IBM Q

IBM Q is the name of the quantum computer provided by IBM. The IBM Q Network is the world's largest network consisting of various private companies, universities, and public research institutions with the aim of utilizing quantum computers in different forms. JSR participates in the IBM Q Network as a member company of the IBM Q Network Hub at Keio University and also participates as an IBM Q Network Partner.

The fastest practical application of quantum computers is expected to be simulations using high-precision quantum chemical calculations. When this technology is perfected it is expected to drastically reduce experimental trial and error testing, having an immeasurable impact on material development. JSR is working on the development and acquisition of quantum chemical calculation technology focused on actual materials

### EVOLVING TECHNICAL CAPABILITIES

through the IBM Q Hub, etc., and is also looking at applications for the tests. It is expected to take several years, possibly more than ten, to put an actual quantum computer into practical use. However, development of algorithms and the identification of major use cases are expected to be completed by then with these being published in papers and patented at the current time.



IBM Q Network Hub at Keio University

### **(2)** MI and Enthought

JSR is pushing forward with cross-organizational efforts in order to promote a digital transformation in R&D based on material informatics (MI).

In addition to various computer experiments and simulations, including first-principle calculation aimed at developing materials through cyberspace experiments as opposed to chemical experiments in the real world, we are working to establish underlying technologies such as advanced analytics, including machine learning. These technologies have been brought about by dramatic improvements in computer capabilities, but in the latter half of the 2020s, as more disruptive technologies, quantum computers and braintype chips become ever more powerful, we believe that completely different methods for developing materials will be achieved.

In collaboration with Enthought, Inc., JSR has been working on the development of a data management system and various simulation

**JSR** Corporation

technologies with an eye towards applications for actual product development. In the data management system, as a platform for data utilization such as machine learning, JSR has built a database of various materials and an automatic management tool for experimental results. By involving engineers with full knowledge of the current development process, in addition to placing importance on how easy the system will be to use in the workplace, we are expecting there to be a number of benefits including a big change in the current development process.

Through these efforts we will promote the development of data science with a business perspective, and not only improve efficiency, but also create real value for business. Furthermore, we will aim to create new businesses in the future.

### 2. Factory IoT

### 1) Drones

Using drones to inspect facilities and for routine patrols dramatically improves our ability to collect information. Drones are able to improve security and reduce workloads by managing information history and automatically assessing equipment corrosion through image analysis.

The Kashima Plant began using drones for equipment inspection in its non-hazardous material area in 2017, and based on the March 2019 guidelines regarding the safe operation of drones at plants issued by the Ministry of Economy, Trade and Industry, the Ministry of Internal Affairs and Communications, and the Ministry of Health, Labor and Welfare, we carried out drone flights to inspect hazardous facilities from above the ground during regular repairs in June. Inspecting high places is labor-intensive with setting up scaffolding, expensive, and highly dangerous work. By continuing to carry out drone inspections, as well as increasing safety by eliminating the dangers associated with inspecting high places, we are promoting smarter work practices and improving visual inspections with more "eyes" to check our facilities.



Inspections using drones

### ② Smart Industrial Complex

The skills and know-how of experienced technicians with their tacit knowledge will, by using digital technology, be converted into explicit knowledge and utilized as such. More specifically, a platform will be built leveraging smart sensors and wireless technology to automatically collect and analyze unstructured data, such as motion images and sound recordings, from plant operation management and maintenance tasks performed by experienced technicians in the chemical products production process. This data



Chiba Plant

will then be combined with data from machine equipment such as distributed control systems (DCS). In the future we will develop a solution that can present operators with more informed decisions using a machine learning algorithm in realtime, and we will continue to demonstrate and implement the functions and foundations required for next-generation smart industrial complexes.

### **③ Virtual Reality**

Since the latter half of the 1990s, automation of plant equipment has progressed, reducing field work and greatly improving safety. The younger generation of workers who haven't had the opportunity to get to know the difficulties or troubles of operating the plant experience simulations of work training, occupational accidents, and equipment accidents using virtual reality headsets.

Unlike paper-based manuals, through these kinds of simulations, workers are able to get an idea of the dangers that can happen in the field ensuring they don't make the same mistakes in real life.



Work training in virtual reality

### 3. Open Innovation

### (1) **JKiC**

The Company and Keio University have established a joint research building, JSR-Keio University Medical and Chemical Innovation Center (JKiC), positioned as a base for collaboration among industry, academia, and medicine.

This kind of collaboration between a university medical school and a chemical materials manufacturer is the first of its kind in the world.

Through close collaboration with researchers from Keio University's medical department and

### **EVOLVING TECHNICAL CAPABILITIES**

hospital, who are developing basic through to clinical medicine and medical care, and JSR chemical materials researchers, who are developing advanced materials and products positioned as a strategic business in the field of the life sciences, we will realize a wide range of needs and advanced ideas in the medical field, conduct research and create businesses that lead to the establishment and spread of new diagnosis and treatment techniques, and medical support technologies that support a society of health and longevity.

At JKiC, where medical viewpoints and knowledge of material development come together, we plan to provide various solutions in the fields of health and longevity research based on new types of diagnosis and treatment techniques, medical support technologies that use digital health and 3D printing, and genome analysis.

While ensuring there is adequate space for promoting collaboration among industry, academia, and medicine, we will establish a department matches medical needs with the seeds of technology, working on new innovations in Japan where the advances of age far exceed those of any other country in the world. By delving into a completely new concept of fusion between medicine and chemistry, we will create innovations and establishing practical technologies that contribute to a world of health and longevity.



### 2 Center of Materials Innovation

The research and development base in the Yokkaichi Plant is made up of 5 laboratories; the Performance Polymer Research Laboratories concerned with the Petrochemical Products Business, the Display Solution Research Laboratories, the Fine Electronic Materials Research Laboratories, and the Edge Computing Research Laboratories concerned with the Digital Solutions Business, and the Advanced Materials Research Laboratories which develops new materials not connected with any existing business with the help of free-thinking researchers. The main purpose of our new research building will be to focus on research to create new businesses. To this end, we will establish a flexible research system, in close collaboration with the five research laboratories, to enable quick response to users' situations by setting research areas that anticipate market needs. Furthermore, in order to enhance our ability to create innovation, which is the source of our sustainable competitiveness, we utilize this new building to create an environment where adventitious communication and collaboration between different fields from each laboratory can flourish and research activities in collaboration with external parties as a base for open innovation can be promoted.



Center of Materials Innovation

### 4. Mass Production Expertise

#### ① SSBR Global Manufacturing

New materials developed by researchers will be scaled up from the laboratory to plant production facilities, and advanced to the commercial production stage. To do this, we must not only realize function and performance but also develop safe and simple processes with low manufacturing costs. Materials with superb performance born in the laboratory cannot enter in the market unless they can be produced stably and economically. There are many things that work perfectly well in the laboratory but not at the scale of commercial production. By combining the materials produced through research and development with the best production processes and the best equipment design, we will surely acquire more business opportunities.

### 2 Precision Manufacturing Technology for Semiconductor Materials and Display Materials

When manufacturing semiconductor materials, such as photoresist, and display materials, such as alignment films, a clean environment is required to prevent contamination of foreign substances. In particular, strict particle control is necessary for semiconductor materials as required pattern size is getting tighter.

Semiconductor materials and display materials are manufactured in a special room known as a cleanroom\*1 where air particles are removed and controlled at very low level. After raw material mixing, filtration\*2 takes place by a fine filter to remove any tiny, invisible foreign substances.

One of the major differences to the production of synthetic rubber is that manufacturing takes place using super pure raw materials in a super clean environment. Products are

automatically filled into shaded bottles at very clean environment. Because semiconductor materials and display materials react when exposed to light, shaded bottles are required. Those bottles are thoroughly washed with ultrapure water\*3 (super DI water), which is free from fine particles and ions.

Considerations must also be given to environment control such as temperature and humidity for storing and transporting products. Temperature control is vital for materials used in semiconductors and LCD TVs to maintain guality. Each product is stored within a specified temperature range and vehicles capable of constant temperatures are used for transportation. One of the strengths of JSR is its ability to consistently mass-produce while carrying out strict quality control.

\*1 Cleanroom

Designed to maintain extremely low levels of airborne particles. In normal air approximately 1 million minute dust particles, that are about 1 / 100th thickness of a hair, are present in 1 cubic foot\*, but at the cutting-edge semiconductor manufacturing site, the number is confined to 10 or less. \* approx. 30 x 30 x 30 cm

\*2 Filtration

The separation of tiny, invisible foreign matter from liquid products.

\*3 Ultrapure water

Water with the highest levels of purity obtained by removing impurities such as ions, organic substances and gases from the water



Cleanroom for photoresist manufacturing

### 1. Philosophy

JSR Group developed its Environment Safety Management Policy promotion items with reference to "Management Policies - Responsibility to Our Stakeholders" and the Japan Chemical Industry Association's "Guiding Principles for the Improvement of Environmental, Safety and Health Conditions." We use these items as the basis for formulating concrete activity plans and advancing our RC activities.

### 2. What is Responsible Care®(RC)? International Initiatives

RC is an acronym for Responsible Care. In the chemical industry, each company handling chemical substances is responsible for ensuring that safety, health, and environmental issues are addressed throughout the chemical lifecycle, from development and production to distribution, use and disposal, publishing the results of their activities and maintaining dialogue and communication with society - all voluntarily. This initiative is called "Responsible Care."

The International Council of Chemical Associations (ICCA) has adopted the Responsible Care (RC) Global Charter, a voluntary activity policy shared by the chemical industry, to enhance and reinforce RC activities around the world.

JSR subscribes to this activity policy, and signed a declaration supporting the RC Global Charter in October 2008. JSR has also signed the

revised RC Global Charter in March 2015. By signing the declaration, JSR has committed itself to making even greater contributions to health, safety, and environmental preservation not just in Japan, but around the world.



the RC Global Charter

### Health and Safety Initiatives

[Non-Financial KPI] **Zero Facility Accidents and Workplace Accidents** 

### 1. Philosophy and Course of Action for **Occupational Health and Safety**

JSR has established a "Course of Action for the Philosophy for Occupational Health and Safety" that present specific actions demanded of the company and each of its employees. It is based the "Philosophy For Occupational Health and Safety" that is spelled out in the "Top Commitment" issued by JSR's top management and which serves as the basis for realizing worksites in which everyone can work "healthily," "safely," and "with peace of mind."

#### <Philosophy for Occupational Health and Safety>

At JSR Corporation, safety is **our highest** priority and the foundation of all of our activities. Accordingly, we will create safe worksites and strive to maintain physical and mental health, with the goal of ensuring a safe return home at the end of each workday.

### <Courses of Action of the Philosophy for Occupational Health and Safety>

- 1. No matter the situation, we will act with safety foremost in mind.
- 2. We will comply with established rules and never fail to act in accordance with safety basics.
- 3. We will maintain safety by identifying and eliminating both actual and potential hazards.
- 4. We will strive to create comfortable work environments and promote physical and mental health.
- 5. Through communication and ingenuity, we will aim to achieve 100% employee participation in all safety activities.

### 2. Occupational Health and Safety Initiatives

### Workplace Accident Record

No lost time accidents nor non-lost time accidents affecting JSR employees occurred in 2018. Among our manufacturing partners, there were no lost time accidents: however, there was one lost time accident.

Among domestic Group companies, there were two lost time accidents and three non-lost time accidents in 2018. Among the manufacturing partners of domestic Group companies, there were no lost time accidents; however, there were two non-lost time accidents. Among domestic Group companies, an increasing trend is seen in terms of both the number of all workplace accidents and the number of lost time workplace accidents. Accidents involving tripping, falling, and entanglement are increasing.

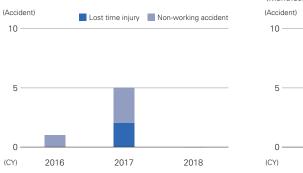
Among overseas Group companies, workplace accidents continue to occur in a manner similar to that seen with domestic Group companies. We

will make pertinent improvements by deepening collaborative safety activities throughout the entirety of JSR Group.

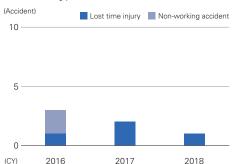


Safety Monument

### Number of Workplace Accidents (JSR)

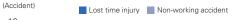


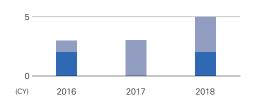
#### Number of Workplace Accidents (Manufacturing partners of JSR)



Number of Workplace Accidents (Domestic group companies)

10





#### Number of Workplace Accidents (Manufacturing partners of domestic group companies)



**JSR** Corporation

### Environmental Impact Reduction

[Non-Financial KPI] Reduce greenhouse gas emissions by 15% in FY2030 compared to the 2013 level.

### 1. Initiatives to Reduce Greenhouse Gas (GHG) Emissions

Environmental problems attributable global warming (e.g., forest fires, droughts, water shortages, rising sea levels, threats of extinction, and impacts on ecosystems) are occurring on a global scale. Such problems are also seen in Japan. They are represented by floods caused by torrential rains, health problems such as heatstroke that result from more and more days of extreme heat, and such impacts on the ecosystems as coral bleaching.

JSR Group recognizes this as an important issue. We therefore strive to reduce GHG

emissions by, for example, reducing the amount of energy needed in the various processes of producing and supplying our products.

### (1) Response by JSR (business establishments)

#### •Actions for Scopes 1 and 2

In FY2012, JSR established its "System to Reduce Total CO<sub>2</sub> Emissions from Three Plants by 6% Compared to FY1990" by upgrading its energy-saving technologies through the introduction of fuel conversion at the Kashima Plant (Kashima South Joint Power Corporation) and a natural gas-fired gas turbine cogeneration system and sludge dewatering system at the Yokkaichi Plant. In FY2018, we reduced our CO<sub>2</sub> emissions by 7.4% compared to the FY1990 level.

Beginning in FY2005, we achieved a significant reduction of 21.6% by FY2013 compared to the FY2005 level by promoting the above-mentioned fuel conversion and making large-scale capital investments. However, since FY2013, our GHG emissions have remained about the same, despite our efforts to conserve energy.

Looking ahead, we will strive to reduce our GHG emissions toward achieving a long-term goal of "reducing emissions by 15% in FY2030 compared to the FY2013 level." In addition to energy conservation activities, we will achieve this by introducing highly efficient equipment and using renewable energy.

At the head office, we are promoting energy conservation on our own initiative by voluntarily setting a specific power saving target.

In FY2018, our power consumption fell below the base year average as a result of the main initiatives described below, and we achieved a 15.6% reduction in our emissions compared to the base year average.

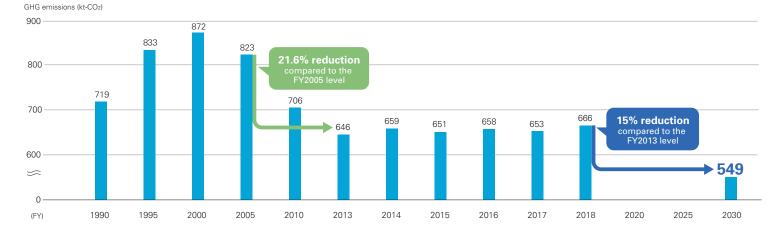
#### • Actions for Scopes 3

We have taken steps to reduce our transport energy use as a designated shipper under the amended Energy Conservation Act.

In FY2018, as a result of policies to transport goods and raw materials by railway and ship, we achieved a modal share of approximately 85%, thus maintaining last year's high level, and successfully held down per-unit transportation energy.

### (2) Response by Global Group Companies

Globally, we emitted 1,078 kt-CO<sub>2</sub> in FY2018. This represented an increase of 2% compared to the previous year. We will promote activities that take a long-term perspective on the global side of our business as well.



### Changes in JSR's CO2 Emissions and 2030 Reduction Target

**JSR** Corporation

### Waste Reduction

[Non-Financial KPI] Maintain achieving zero-emission target

1. Initiatives to Reduce Industrial Waste JSR Group is controlling the amount of waste it generates, sorting waste, and searching for businesses that accept recyclable materials. In FY2018, the Group generated 72,000 tons of waste globally.

### JSR

Since FY2000, JSR has been implementing its goal of "zero emissions" \*1 through activities that include prevention of generation of waste materials, sorting of waste, and the search for recycling locations throughout the company. We have been continuing our zero-emissions efforts since FY2003.

\*1 JSR's definition of "zero emissions": When the volume of final off-site waste buried at third-party landfills is less than 0.1% of the volume of waste generated

Specifically, the Yokkaichi Plant is continuing the following measures targeting (1) sludge and (2) coal ash, which account for about 90% of the total volume of generated waste materials. (1) Transforming sludge into a valuable material (conversion into fuel) with the introduction of

sludge drying equipment Recycling coal ash as cement material

Furthermore, we are an executive member of the Mie Prefecture Industrial Waste Solutions Promotion Committee and endeavor to continually reduce industrial waste and ensure its proper disposal in cooperation with the community.

Moreover, aiming to help create a recycling-based society, JSR is searching for even more recycling locations and taking other measures toward fulfilling the goal of "reducing waste by 15% in 2030 compared to the FY2013 level."

In FY2018, we reduced our generated waste by 4.5% compared to FY2013. We will continue working toward our goal by reducing the amount of waste we generate.

### 2. Responding to the Marine Plastic Litter Problem

JSR considers the problem of marine plastic litter to be an important issue. In light of this, we are participating in the Japan Initiative for Marine Environment (JaIME), an organization that was launched by five chemical industry bodies on September 7, 2018, as a founding member. We are also investigating JSR Group's disposal

processes for plastics in Japan based on the national government's proposed "plastic materials recycling strategy (tentative)" and studying management indices.

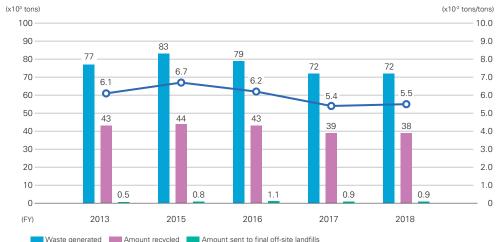
Looking ahead, we will promote further recycling of waste plastics by setting the following two points as long-term targets (FY2030). We will also strive to make a social contribution by, for example, raising awareness of the plastics problem through in-house seminars and explanatory briefings, promoting "3R"-based activities in daily life (e.g., regarding the use of plastic bags and PET plastic bottles), and participating in coastal cleanups.

• 100% recycling (including heat recovery)

60% recycling (not including heat recovery)

#### 90 83 79 77 80 72 72 6.7 70 6.2 6.1 0 5.5 60 -5.4 0 O 50 43 43 44 39 38 40 30 20 10 -0.5 0.8 0.9 0.9 Ω (FY) 2013 2015 2016 2017 2018 Waste generated 🛛 Amount recycled 🗖 Amount sent to final off-site landfills

### Wastes Generated by JSR Group



Intensity (production)





### **Quality Management**

#### 1. Philosophy

JSR Group' Corporate Mission is "Materials Innovation - We create value through materials to enrich society, people and the environment." Moreover, the Group's Management Policies set forth "emphasis on improving customer satisfaction" and "continuous increase in customer satisfaction" as basic policies concerning quality for the entire company. We believe that an important role of JSR Group is to offer innovative materials and excellent products that meet customer needs and contribute to the making of a better society.

### 2. Quality Assurance

### (1) ISO 9001 Certification

JSR Group supplies customers with chemicals and other diverse products and services. To continuously deliver reliable quality in all of our products and services, we give full attention to quality management each day and also continually strive to further improve quality under a management framework that is based on manufacturing and quality management standards (ISO 9001\*1).

We acquire ISO 9001 certification at all of our main plants and business establishments (including relevant divisions and indirectly involved departments). Established at each certified business establishment has a Quality Assurance (QA) Advancement Committee that is led by the plant manager or senior management. Items addressed by this committee include activities to improve quality levels, measures to prevent quality deficiencies, development of CS activities<sup>\*2</sup>, and reporting of quality abnormalities. The information the committee collects is stratified and put to use in preventing the recurrence of problems having the same root cause. CS activities receive particular attention. Customer complaints as well as quality issues that did not go so far as to generate complaints are stratified and analyzed, and the results are applied to the prevention of complaints and problems. Constantly grasping and analyzing quality risks is useful in eradicating quality-related complaints and problems. We strive to prevent and stop recurrence and emphasize activities to prevent quality problems through an organization-wide approach. In this way, the process extending from problem discovery to recurrence prevention measures operates as a PDCA cycle.

- \*1 ISO 9001: An international standard for quality management systems that was issued by the International Organization for Standardization (ISO)
- \*2 Customer Satisfaction (CS) activities: Activities to gain customers' satisfaction by meeting their expectations, to create a better relationship with customers and build trust with them, and to link that relationship to sales.

### (2) Global Quality Guidelines

As its development, purchasing, production, and sales all become more globalized, JSR Group recognizes that its philosophy vis-à-vis quality in the continual pursuit of "Materials Innovation" must be shared throughout the Group, and that any divergence from that philosophy must be prevented. For this reason, we are formulating guidelines for the sharing of basic thinking and mechanisms concerning quality management that JSR Group can rely on (e.g., elimination of differences and variations in thinking concerning quality management, application of shared language).

With these Global Quality Guidelines, we are promoting the sharing of basic thinking and mechanisms and presenting examples that illustrate quality management methods that are indispensable to "manufacturing," which is the "soul" of our company. They include responses to quality abnormalities in design reviews for planning (e.g., of business models) and product design, contractor management, test management, logistics management, and global emergency response system. Additionally, we are focused on building a quality management system that includes not only JSR Group's overseas production bases but also contractors and business partners. Such a system will permit us to supply products and services of reliable quality continually and globally throughout the entire supply chain, from product planning, design and development to mass production and customer service. To respond to JSR's push into global and widespread fields, and to respond to supply chain diversification and increasingly sophisticated customers' needs that are occurring as a result, we will continue reinforcing our global quality assurance system.

### (3) Quality Education

We also see education oriented toward improving guality levels and preventing product accidents as an important activity. JSR Group is also working to enhance employee education. In FY2007, we established training centers in our three plants as part of this effort. We are expanding our education program and providing education on quality control and PLP\*<sup>3</sup>, holding QFD\*<sup>4</sup> seminars, and implementing product safety training for specific employee classes (employees with the company between 1 and 3 years, employees with the company between 6 and 10 years, and employees who will be/have been promoted to the rank of manager). JSR Group will continue to promote better awareness of quality among our employees and pour effort into human resources development in order to improve quality control and meet the sophisticated needs of our customers.

\*3 Product Liability Prevention \*4 Quality Function Deployment

#### (4) Quality Audits

Top management-led quality performance audits have been performed annually including reports on plant QA activity concerns such as trends and corresponding solutions of claims and other issues, and activities to improve plant capability. They also include reports on customer satisfaction levels and presentations on quality improvement activities such as Six Sigma training and smallgroup improvement activities.

In addition, we implement internal quality audits and external quality audits for the purpose of improving our quality management system. We strive to improve quality control activities and frameworks in all quality audits with a view to achieving higher customer satisfaction.



A Quality Performance Audit being conducted by top management (JSR Corporation's Yokkaichi Plant)



Presentation of a Quality Performance Audit's "highest excellence" award (at JSR Corporation's Head Office; March 28, 2019)

### HUMAN RESOURCES

### **Human Rights**

#### 1. Philosophy

As a global company, JSR Group supports the thinking behind the UN Universal Declaration of Human Rights (UDHR), the UN Guiding Principles on Business and Human Rights, and the UN Global Compact and accordingly respects the basic human rights and diversity of individuals. Moreover, we will not discriminate nor permit discrimination on the basis of gender, age, nationality, ethnic group, race, origin, religion, beliefs, social status, physical disability, or sexual orientation.

### Participation in the United Nations Global Compact

JSR Group became a participant in the United Nations Global Compact in April 2009. As such, we will more proactively fulfill our corporate social responsibilities with recognition that businesses operating on a global level must make a greater commitment to human rights, labor, the environment and anti-corruption, as

expressed in The Ten Principles of the United Nations Global Compact.



Representative Director, CEO Eric Johnson

### 2. Response to Human Rights Issues

(1) Participation in Global Initiatives The JSR Group is a signatory and supporter of the United Nations Global Compact. We also participate in the Human Rights Due Diligence Working Group of Global Compact Network Japan and, as such, participate in workshops and gather and disseminate pertinent information within the company. As a specific activity in FY2019, we participated in a human rights policy group and presented a model case for newly formulating human rights policy under the theme of "our vision of the ideal framework for human rights policy."

At the present time, we have begun applying knowledge we obtained through this activity in a study toward formulation of JSR Group's human

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

- Businesses should support and respect the protection of internationally proclaimed human rights; and
- 2 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;
- the elimination of all forms of forced and compulsory labour;
- 5 the effective abolition of child labour; and
- Ithe elimination of discrimination in respect of employment and occupation.
- Businesses should support a precautionary approach to environmental challenges;
- Indertake initiatives to promote greater environmental responsibility; and
- encourage the development and diffusion of environmentally friendly technologies.
- Businesses should work against corruption in all its forms, including extortion and bribery.

rights policy with concerned departments in the company.

### (2) Principles of Corporate Ethics

JSR Group respects human rights and prohibits discrimination by establishing the following code of conduct for human rights and labor in the JSR Group Principles of Corporate Ethics.

### <Code of Conduct for Respecting Human Rights>

- We will respect and uphold basic human rights, such as the Universal Declaration of Human Rights and the UN Guiding Principles on Business and Human Rights, declared internationally and protected under constitution and legal precedents of respective countries, and will not infringe basic human rights.
- ② We shall never allow child labor or forced compulsory labor, whether at the JSR Group or in the workplaces of business partners and collaborating companies.
- ③ We will abide by national and international labor codes and respect workers' right of association and right for collective negotiation in the realm of basic labor rights.

### 3. Respect for Human Rights in the Labor Environment

JSR Group respects the human rights of employees by clearly specifying its responsibilities to employees in its management policies.

- 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

### 4. Respect for Human Rights in the Supply Chain

JSR Group clearly specifies its responsibilities to customers and business partners in its management policies.

- Act in good faith and maintain fair and equitable business relations
- Continue to be socially and environmentally conscious throughout the supply chain
- Specifically, we respect the human rights of our customers and business partners through our supply chain management.

### **HUMAN RESOURCES**

### **Labor Environment**

#### 1. Philosophy

We, JSR Group, specify our responsibilities to employees within our management policies.

- 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

#### (1)Human Resource Development

① Human Resource Development Philosophy We are working on human resource development with the understanding that it is the greatest priority for achieving sustainable, long-term corporate growth. In particular, we are promoting human resource development in order to strengthen our organizational capacity by implementing the Course of Action "The 4Cs" - "Challenge," "Communication," "Collaboration," and "Cultivation" - of our Course of Action at a higher level, and with focus on "skill/know-how" and "awareness/motivation."

### (2) Work-Life Management

① Work-Life Management Philosophy JSR is actively promoting its Work-Life Management initiative. Employees are encouraged to not only develop work-related skills, but to also actively participate in social, and personal activities (e.g., social and community groups, family, volunteer activities, self-development, and hobbies). JSR believes that by encouraging our employees to become well-rounded individuals, and by finding a personal sense of self-fulfillment and satisfaction that they will then be able to bring that energy into their work.

JSR encourages all of our employees to closely manage their personal time and maintain a balanced work schedule. We are also working on implementing various systems that support flexible work styles, with special consideration for childbirth, childcare and family-nursing needs.

Work-life management is vital in the implementation of diversity management, because in order to create an organization with a diverse workforce, we must also promote a corporate culture that is open to diverse values and work styles.

#### ② Codes of Conduct

We provide a work environment that facilitates flexible "work-life management" for employees, and strive to improve both productivity and employee satisfaction.

### ③ Work-Style Innovation

At JSR, we are focused on work-style innovation with the goal of realizing sustainable growth for both the company and our employees.

In advancing innovation-oriented activities, we will analyze factors in the workload of each department and then formulate and execute concrete measures to reduce work and alleviate workloads based on prioritization so that each employee can approach it with problem awareness. Management is demonstrating its commitment to these activities by, for example, establishing opportunities for reporting by assigned officer countermeasures proposed by each department.

### Diversity

[Non-Financial KPI] 4.5% of women in managerial positions by the end of FY2019

### 1. Philosophy: Recruitment and Promotion of Diverse Human Resources

JSR Group is rapidly expanding its various business activities around the world, and we believe that harnessing diverse human resources is crucial for the advancement of our wide-ranging business strategies.

We view the promotion of diversity as a fundamental part of our management strategy. In taking this approach, we are engaged in developing management that is focused on individualism and the respect for, and utilization of values through diversity. Furthermore, a corporate culture which is welcoming of new values and work styles is instrumental in our goals of creating a diverse workplace. We are committed to promoting these ideals with our work-life management initiatives.

JSR has established a Diversity Development Office to serve as an organization dedicated to the advancement of diversity. The office's mission is to establish and implement initiatives which enable diversity in the workforce. In addition to our emphasis on gender equality initiatives, JSR Group shows its commitment to the future by expanding the scope of our initiatives to include foreign nationals, individuals with disabilities, and individuals in the lesbian, gay, bisexual, and transgender (LGBT community). Furthermore, our initiatives also include intergenerational work-style and mindset understanding programs.

### 2. Promotion Measures and Schemes

Promoting the Active Participation and Advancement of Women in the Workforce As a part of our mid-term business plan, JSR has publicly announced our quantitative targets for the active support of our female employees.

We have also developed an action plan to promote and support the lives of working women within JSR, based on and in accordance with the Act on Promotion of Women's Participation and Advancement in the Workplace (Women's Act). The Women's Acts' second phase is set for April 1, 2018 to March 31, 2020. These targets demonstrate our management's commitment in achieving understanding and cooperation throughout the organization. JSR has also publicly announced each of our action plans to nurture and raise the next generation of children. These plans are based the Act on Advancement of Measure to Support Raising Next-Generation Children (Next-Generation Act), which has been in effect since April 2005. The seventh phase of which is set for March 31, 2018 to March 31, 2020. We have continued to establish, notify, publicly disclose, raise awareness of, and implement action plans throughout the first phase of the Women's Act and sixth phase of the Next-Generation Act while executing initiatives in line with both acts.

JSR's Active Support of Women in the Workforce: Quantitative Targets

(As of April 1st of each fiscal year)

	Target	FY2016	FY2017	FY2018	FY2019
Percentage of women	College graduates, engineering positions: 15-20%	15%	20%	18%	23%
hired annually per position	College graduates, administrative positions: 40-50%	60%	50%	45%	50%
Percentage of women in managerial positions	March 2020: 4.5%	3.6%	3.8%	4.1%	4.3%

### **Strengthening Corporate Governance for Sustainable Growth**

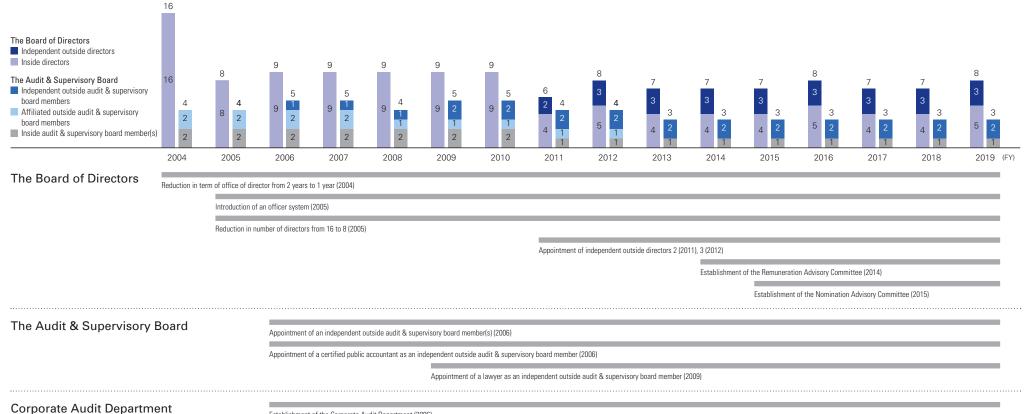
The Company, by enhancing its corporate governance, endeavors to realize its corporate mission, achieve its business plan, and increase corporate value over the medium to long-term

The Company is constantly improving its corporate governance with the aim of obtaining the trust of shareholders and all other stakeholders and building an appealing corporate structure. Even before the Corporate Governance Code was established, the Company had been focusing on the enhancement of corporate governance by, for example, appointing several independent outside directors and establishing the Remuneration Advisory Committee. The Company will continuously strive to strengthen and enhance its corporate governance to ensure transparent and sound management based on rational and prompt management decisions.

#### Governance history since 2004

### Basic Views and Policies on Corporate Governance of JSR Basic Policy

- (1) It is JSR Group's goal to make steady progress in realizing its corporate mission (Materials Innovation: We create value through materials to enrich society, people and the environment). This shall be done through efficient and transparent business management, by sustaining sound and healthy business practices. The Group will also continuously strive to create new corporate values with the hope of becoming an attractive corporation that can earn the trust of, and satisfy the interests of, all our stakeholders.
- (2)The Company therefore has been, and will continue, focusing on the enhancement of corporate governance as an important management challenge.



Establishment of the Corporate Audit Department (2006)

### Four Characteristics of JSR's Corporate Governance Structure

The Company, by enhancing its corporate governance, endeavors to realize its corporate mission, achieve its business plan, and increase corporate value over the medium to long-term.

### All three outside directors have experience in corporate management

Ratio of independent outside directors with experience in management of corporations:



The current Board of Directors consists of eight (8) directors, three (3) of whom are independent outside directors with vast experience and extensive expertise in management of corporations and businesses. In the future, the Company will elect 1/3 (one third) or more independent outside directors with similar experience and expertise in order to enhance corporate value and oversee business management.

Independent outside audit & supervisory board members that are legal and accounting specialists



The current Audit & Supervisory Board consists of three (3) audit & supervisory board members, two (2) of whom are independent outside audit & supervisory board members with extensive and sophisticated expertise; one is a lawyer and the other is a certified public accountant qualified as a certified public tax accountant. In the future, the Company will elect two independent outside audit & supervisory board members with vast experience and extensive and sophisticated expertise in such fields as law, accounting, etc., to effectively audit the execution of duties by directors and management.

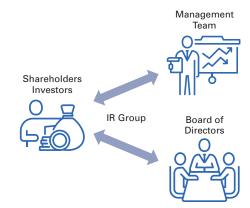
### A lead independent outside director chairs the Nomination Advisory Committee and the Remuneration Advisory Committee



The Company established the Nomination Advisory Committee of which majority of members are independent outside directors and the chair of which is a lead independent outside director to ensure the transparency of the policy and procedures of nominating candidates for directors. The committee deliberates criteria for the size, diversity in breadth of knowledge, experience, and capabilities necessary for the Board of Directors as well as criteria and procedures for nominating and/or identifying candidates for future appointment as CEO and/or president, directors, officers with directorship status (including senior officers), and audit & supervisory board members, and submits its findings to the Board of Directors.

The Company also established the Remuneration Advisory Committee of which a majority of members are independent outside directors and the chair of which is a lead independent outside director in order to ensure the objectivity and transparency of its directors' remuneration framework. The committee deliberates the basic policy of remuneration, the remuneration structure, the mechanism of a performance-based remuneration, the setting of targets, and assessment of performance, and submits its findings to the Board of Directors.

### The Company is keen to reflect the voices of investors and/or analysts in its management



The Company appoints an officer in charge of IR. The CEO, the president or the officer in charge of IR explains, at the explanatory meetings for business results and mid-term business plan for institutional investors and/or market analysts, the business performance, financial positions, and the details and progress of the mid-term business plan.

In addition, the CEO, the president or the officer in charge of IR also holds face-to-face meetings with institutional investors, both in Japan and overseas, to explain the above mentioned business results and progress of the mid-term business plan.

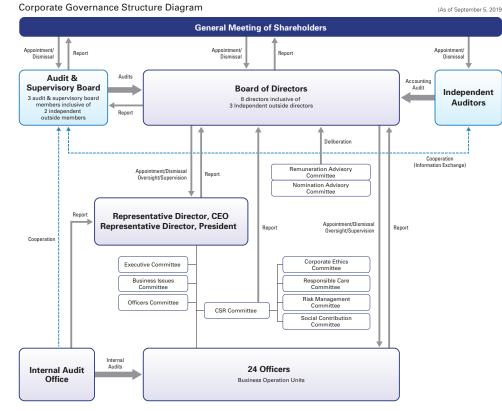
In dialogues with the investors and/or analysts, the Company has strived to appropriately treat insider information and feed back to management and board of directors the opinions and questions expressed by the investors and/or analysts during such dialogues.

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### **Corporate Governance Structure**

- (1) As a company with audit & supervisory board members, the Company principally monitors and oversees the execution of duties by directors and the management through its Board of Directors and audit & supervisory board members.
- (2) The Company has continuously strengthened the function of management supervision, improved efficiency in decision making and execution of business duties, and enhanced the transparency and sound-ness of business management through the introduction of an officer system and the appointment of outside directors and outside audit & supervisory board members, who are independent from the Company and have extensive business experience and a high level of expertise.
- (3) The Board of Directors has established JSR's corporate mission and makes important decisions including those of the Company's business strategies.
- (4) The Board of Directors has developed an environment where management can take appropriate risks and demonstrate entrepreneurship through the introduction of a performance-based director remuneration framework.



(5) The Board of Directors supervises directors and the management through the assessment of business performance and appointment of directors.

Management system is outlined below.

### 1. Board of Directors

The Board of directors consists of eight (8) directors, and three (3) of whom are independent outside directors with independence and extensive experience of business and management and hold meetings once monthly, in principle. The Board discusses and makes decisions on important business matters, including the direction of the Company's business strategy and also supervises directors' and officers' execution of their business duties.

The Board of Directors is chaired by the chairman in principle for the purpose of securing corporate governance by distinguishing the rolls of CEO, and the president and COO of the Company, from that of chairman of the Board of Directors responsible for monitoring and overseeing the execution of the Company's operations. In addition, all three (3) audit & supervisory board members including two (2) independent outside audit & supervisory board members regularly attend the Board of Directors meetings to state their opinions.

#### 2. Executive Committee

The Executive Committee holds extensive discussions on items relating to fundamental management initiatives, management policies and management plans, along with important matters concerning the execution of business activities in each department. The committee thus gives direction in relation to these issues or receives reporting. As required, certain items submitted to this committee are passed on to the Board of Directors for further discussion.

This committee is made up of the CEO, the president, officers with directorship status, and officers appointed by the president, and responds to important business execution with the aim of expediting decision making and improving the efficiency of such operations. As a rule, this committee meets once a week, and is chaired by either the CEO or the president. The standing audit & supervisory board member also attends these committee meetings.

### 3. Business Issues Committee

The Business Issues Committee engages in broad-ranging debate about items related to fundamental management strategies and policies, basic policies behind specific projects, and changes to business strategies. It also shares information to ensure a common understanding of such matters and discusses the company's direction. Its findings are reflected in deliberations of the Board of Directors and the Executive Committee. The Business Issues Committee, which meets twice a month in principle, consists of the CEO, the president and officers with directorship status, and is chaired by CEO or the president.

### 4. Officers Committee

This committee consists of the CEO, the president and all officers and aims to ensure members' thorough understanding of business conditions and important business matters.

#### 5. Audit & Supervisory Board and audit & supervisory board members

The Audit & Supervisory Board, consisting of a total of three (3) audit & supervisory board members, and holding meetings once monthly in principle, as stipulated in the Regulations of the Audit & Supervisory Board, receives reports on important matters, holds discussions, and makes decisions. The two (2) outside audit & supervisory board members are independent, a lawyer and a certified public accountant qualified as a certified public tax accountant, and conduct audits from a standpoint independent from the Company using their professional expertise.

In accordance with standards for audits by audit & supervisory board members, the audit & supervisory board members attend meetings, of the Board of Directors, and other important meetings, including Executive Committee meetings to monitor how important decisions are reached and business activities are executed. The audit & supervisory board members also receive reports from the independent auditors, directors, and employees. Through these activities, audit & supervisory board members holds deliberations in order to form auditing opinions.

### 6. Outline of audit by audit & supervisory board members, Internal Audit, and Independent Auditors

(1) Audit by audit & supervisory board members

The details of audit conducted by the audit & supervisory board members are stated as in the above 5. Audit & Supervisory Board and audit & supervisory board members.

(2) Internal Audit

JSR has established the Corporate Audit Department to improve the effectiveness of the JSR Group's internal control systems. In accordance with the internal audit plan, the Corporate Audit Department regularly conducts internal audits, such as compliance audits and business operation audits, at its divisions and departments as well as its Group companies both in Japan and overseas and reports the audit results to CEO, the president, related departments, and audit & supervisory board members.

(3) Independent Auditors

JSR's independent auditor is KPMG AZSA LLC. The audit & supervisory board members work closely with the independent auditors. The audit & supervisory board members interview the independent auditors about the audit plan and receive reports on the audit results. Furthermore, the audit & supervisory board members and independent auditors exchange information and opinions as necessary throughout the course of each fiscal year.

### Directors and Audit & Supervisory Board Members (As of September 5, 2019)



Representative Director, CEO **Eric Johnson** North America Business President of JSR

North America Holdings, Inc.



Representative Director, President, COO, and CTO

Nobuo Kawahashi Research & Development



Representative Director, Chairman of the Board Mitsunobu Koshiba



Executive Managing Officer

### Koichi Kawasaki

Procurement, Logistics, Manufacturing and Technology, Product Safety & Quality Assurance, Safety and Environment Affairs, Human Resources, Diversity Development President of Japan Butyl Co., Ltd.



Director, Managing Officer

Hideki Miyazaki

Accounting, Finance, Corporate Communications



Standing Audit & Supervisory Board Member Atsushi Kumano



Outside Director

Yuzuru Matsuda



Outside Director

Shiro Sugata



Outside Director

Tadayuki Seki



Outside Audit & Supervisory Board Member **Hisako Kato** 



Outside Audit & Supervisory Board Member

Sumio Moriwaki

### 7. CSR Committee

Through the JSR Group's Corporate Social Responsibility (CSR) policy, the Company is committed to behave faithfully as a good corporate citizen and meet the expectations of our stakeholders. It has established the CSR Committee to promote CSR. Under the CSR Committee, there are the following four committees: the Corporate Ethics Committee, the Responsible Care (RC) Promotion Committee, the Risk Management Committee, and the Social Contribution Committee. The CSR Committee integrates and guides the activities of the above four committees and meets four times each year, along with special meetings as necessary, to further strengthen the management the Company's CSR and proceed CSR activities.

### Independent Outside Directors (As of September 5, 2019)

The Company has appointed 3 independent outside directors to further strengthen the functions of the Board of Directors to supervise management and make decisions in a timely and appropriate manner.

By appointing independent outside directors with a broad range of corporate management experiences and an independent perspective as outside personnel, the Company ensures fair and reasonable business judgement and transparent and sound management.

### Yuzuru Matsuda

Mr. Matsuda served as the President and Chief Operating Officer of KYOWA HAKKO KOGYO CO., LTD and Kyowa Hakko Kirin, Co., Ltd as well as an Advisor to Kyowa Hakko Kirin. He has vast experience in corporate management for global companies especially in the field of medical products and biochemical. He also possesses an independent perspective as outside personnel. He has utilized his experiences and independent viewpoints to help the Company in making crucial decisions, to supervise the performance of duties at the Board of Directors level, and to strengthen the Company's fair corporate governance through enhancement of fair and reasonable business judgment and transparent and sound management, thereby continually contributing further to the enhancement of JSR Group's corporate value. He is therefore appointed again as an outside director.



### Shiro Sugata

Mr. Sugata served as the Representative Director and President of USHIO INC., where he currently serves as an advisor. He also served as Vice Chairman, Executive Director at the Japan Association of Corporate Executives. He has vast experience in corporate management of global companies, especially in the field of optical application products and industrial machineries, and also has experience obtained through activities in the business community, and possesses the perspectives as an independent outside personnel. He has utilized his experiences and independent viewpoints to help the Company in making crucial decisions, to supervise the performance of duties at the Board of Directors level, and to strengthen the Company's fair corporate governance through enhancement of fair and reasonable business judgment and transparent and sound management, thereby continually contributing further to the enhancement of JSR Group's corporate value. He is therefore appointed again as an outside director.



### Tadayuki Seki

Mr. Seki served as the Representative Director and Executive Vice President and thereafter as an Advisory Member at ITOCHU Corporation. He has vast experience in corporate management of a general trading company which operates a global trading business and possesses the perspectives of independent outside personnel. He has utilized his experiences and independent viewpoints to help the Company in making crucial decisions, to supervise the performance of duties at the Board of Directors level, and to strengthen the Company's fair corporate governance through enhancement of fair and reasonable business judgment and transparent and sound management, thereby continually contributing further to the enhancement of JSR Group's corporate value. He is therefore appointed again as an outside director.



### Independent Outside Audit & Supervisory

Board Members (As of September 5, 2019)

The Company has appointed 1 standing audit & supervisory board member and 2 independent outside audit & supervisory board members to further strengthen the functions of monitor the management of the audit & supervisory board members as well as the Audit & Supervisory Board.

The Company appoints a certified public accountant and lawyer, both of whom possess a high level of expertise, broad experiences and independent perspectives as outside personnel, as independent outside audit & supervisory board members in order to ensure fair and reasonable business judgement and transparent and sound management.

### **Hisako Kato**

Ms. Kato has a range of professional knowledge and vast experience in financing and accounting matters as a Certified Public Accountant both in Japan and the US, and a Certified Tax Accountant by providing necessary and appropriate advices. She has been utilizing her vast experience, knowledge, and sophisticated expertise, as well as her viewpoint as an independent outsider, to audit the Directors' decision-making and execution of duties as well as to enhance fair and reasonable judgment for, and accountable and sound management of, the businesses of the Company.



#### Sumio Moriwaki

Mr. Moriwaki has vast legal expertise and experience as a lawyer. He has utilized his experience, knowledge, and sophisticated expertise, as well as his viewpoint as an independent outsider, to audit the directors' decision-making and execution of duties, as well as to enhance fair and reasonable judgment for, and accountable and sound management of, the businesses of the Company.



### Officers (excluding those who concurrently serve as directors) (As of September 5, 2019)

### Managing Officer Hayato Hirano

Elastomer Business, Plastics Business General Manager of Elastomer Div. President of Techno-UMG Co. 1 td

### Managing Officer

### Katsuya Inoue

Corporate Planning, Business Planning and Investment, Digital Solutions Business, Emerging Business, Office of the CEO General Manager of Corporate Planning Div. General Manager of Office of the CEO Chairman of JSR Micro (Changshu) Co., Ltd.

### Managing Officer

Tadahiro Suhara Digital Solutions Business

### Senior Officer Takao Shimizu

Office of the President, IT Strategy, Cyber Security Management, Business Process Renovation General Manager of Office of the President Genoral Manager of Office of Business Process Renovation

#### Senior Officer

### Tsuyoshi Watanabe

China Business Chairman of JSR (Shanghai) Co., Ltd. Chairman of JSR Display Technology (Shanghai) Co., Ltd.

#### Senior Officer

### Kazumasa Yamawaki

Elastomer Business (deputy) Deputy General Manager of Elastomer Div. General Manager of Business Management Dept., Elastomer Products Vice President of KRATON JSR ELASTOMERS K.K. Director of JSR Elastomer Europe GmbH

Senior Officer

Makoto Doi

Legal General Manager of Legal Dept.

### Senior Officer Yoshikazu Yamaguchi

### Display Solution Business

Representative Director of JSR Micro Korea Co., Ltd.

### Senior Officer

Kazushi Abe

President of ELASTOMIX CO., LTD. President of ELASTOMIX (FOSHAN) CO., LTD. The Chief Director of JSR Group Corporate Pension Fund

### Officer

#### Eiichi Kobayashi Executive Vice President of JSR NORTH

AMERICA HOLDINGS, INC. JSR Micro, Inc. JSR Life Sciences, LLC

### Officer Yoichi Mizuno

Edge Computing Business General Manager of Edge Computing Div.

### Officer Mika Nakayama

General Manager of Intellectual Property Dept.

#### Officer

Koichi Saeki

Yokkaichi Plant Yokkaichi Plant Manager

#### Officer

### Seiji Takahashi

Manufacturing and Technology (deputy) General Manager of SSBR Global Manufacturing & Technology Management Dept.

#### Officer

#### Yasufumi Fujii

General Affairs, Secretarial Office, CSR General Manager of General Affairs Dept. General Manager of Secretarial Office

#### Officer

### Mikio Yamachika

Lithium Ion Capacitors Business President of JM Energy Corporation

### Officer

### Tim Lowery

Life Sciences Business General Manager of Life Sciences Div. President of JSR Life Sciences, LLC

### Officer

### Koichi Hara

Executive Vice President of JSR North America Holdings, Inc. General Manager of Life Sciences Business Planning Dept.

#### Officer

### Junichi Takahashi

Electronic Materials Business General Manager of Electronic Materials Div. General Manager of Taiwan Branch., Electronic Materials Div.

### Officer

### Keisuke Wakiyama

General Manager of Display Solution Business Div.

### Officer

Ichiko Tachibana General Manager of Support Dept., Emerging

### Business Officer

### Toru Kimura

General Manager of Research & Development

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### **Director Remuneration**

Based on the understanding that remuneration for directors is one of the important pillars supporting the Company's corporate governance, the Board of Directors deliberates and makes decisions based on the discussions and reports of the Remuneration Advisory Committee within the scope approved by the General Meeting of Shareholders in accordance with the basic policy, remuneration governance, remuneration scheme and decision-making procedures.

### **Basic Remuneration Policy**

Based on the fulfillment of responsibility to explain to all its shareholders, the Company has established the following basic policy with its aim to firmly execute management plans and business strategies, for the purpose of sustainable development and improving corporate value over the medium to long term.

- (1) A remuneration system that can attract, secure, and reward diverse and talented human resources regardless of nationality, in order to build and improve the Company's competitive advantage, and to further promote global management.
- (2) In order to motivate management to achieve business objectives in line with the Company's business strategies with the aim of sustainable development of the Company, the remuneration system shall develop a healthy spirit of entrepreneurship in management through incentives that reflect the potential risks of achieving these objectives.

(3) A remuneration system that improves corporate value over the medium to long term by actively sharing the interests of shareholders and management through increased shareholdings during the director's tenure.

### **Types of Remuneration**

The Company's director remuneration is comprised of a basic remuneration as fixed basic remuneration, an annual bonus linked to the attainment of business performance in each fiscal year, a mid-term bonus linked to the attainment of medium and long-term business performance, and a remuneration which grants restricted shares for the purpose of quickly promoting shared value among all shareholders. However, in view of their roles, remuneration for outside directors and Audit & Supervisory Board members is limited to basic remuneration only.

### Remuneration Governance and Remuneration Decision Making Procedures

#### Discussions and reports of the Remuneration Advisory Committee

- Director remuneration survey data from external expert
   organizations
- Benchmarks (Similar enterprise concerning business size, type, and conditions)

Decision made by Board of Directors

Potential risks associated with achieving performance targets

### Appropriate involvement and advice from independent outside directors

Audit & Supervisory Board member remuneration is determined through discussions between Audit & Supervisory Board members

### Remuneration System

			Perl				
		Basic Remuneration	Annual Bonus	Mid-Term Business Performance-Linked Bonus	Remuneration which Grants Restricted Shares	<ul> <li>Basic Remuneration</li> <li>Performance-Linked</li> <li>Remuneration</li> </ul>	
Directors (not including outside directors)	CEO	100	100	approx.133	approx.67	100:300	
	Chairman and President	100	30	50	25	100:105	
	Executive Managing Officer / serving concurrently as Managing Officer	100	25	30	15	100:70	

\*Performance indicators for consolidated company-wide performance use consolidated revenue and consolidated operating profit. Based on the assumption that payout rate is 100% when attained level for targets set at beginning of fiscal year is 100%, payout rates may vary within the range of 0 to 200% depending on the level of attainment for each specific target.

\*\*The average consolidated ROE (return on equity) over three years is used as a performance indicator. Based on the assumption that payout rate is 100% when attained level for targets set at beginning of each fiscal year is 100%, payout rates may vary within the range of 0 to 150% depending on the level of attainment for target.

### **COMPLIANCE / RISK MANAGEMENT**

### Compliance

#### 1. Philosophy

JSR Group has been endeavoring, by building up and maintaining good relationship with all our stakeholders, to become a trustworthy and indispensable corporate citizen. We have been vigorously performing our Code of Conduct in order to materialize "Our Responsibility to our Stakeholders", an essential part of our Management Policies, as well as to ensure compliance with the relevant laws and regulations during the course of our business.

### 2. JSR Group Principles of Corporate Ethics

JSR Group is advancing corporate ethics activities in an integrated manner at all Group companies both at home and abroad. To achieve this, we have formulated the JSR Group Principles of Corporate Ethics as a concrete guideline for globally-shared corporate ethics that reflects our "Essential Elements." The principles serve as a Code of Conduct that all directors and employees (full-time, contract, part-time, and temporary employees as well as employees on short-term contracts) of JSR companies should comply with in order to develop our corporate activities while fulfilling the management policies spelled out in "Our Responsibility to our Stakeholders."

JSR Group shall never require directors and employees of Group companies to act in violation of this Codes of Conduct. Additionally, JSR Group shall not disadvantage any director or employee who refuses to execute an order to perform an act that is in violation of the Code of Conduct because of that refusal.

### 3. Corporate Ethics Activities

(1) Corporate Ethics Awareness Survey JSR Group works to grasp and improve corporate ethics-related issues by conducting annual surveys on corporate ethics awareness that target the directors and employees of JSR Group companies in Japan and overseas. The results are reported at the Corporate Ethics Committee and then to an Officers Committee. They are subsequently fed back to employees by being posted in a summarized form on the company intranet together with a message from the assigned officer explaining issues and other matters gleaned from the results. Some overseas Group companies also strive to build awareness of corporate ethics and legal compliance among their employees, including their locally hired employees, using methods that are appropriate for the local culture.

### (2) Hotline (Internal Reporting Channels)(1) Hotline for Employees

The JSR Group has introduced a system of internal reporting channels called the "Corporate Ethics Hotline " The "internal hotline" is connected to the Corporate Ethics Committee in JSR or the relevant Group company. The "external hotline" is set up to connect to two contact points. One is a designated independent attorney and the other is an independent and specialized outside organization capable of handling communication in Japanese, English, Chinese, Korean, Thai, and Indonesian. This system is designed to facilitate use even by overseas employees. Reports made to the external hotline are also simultaneously reported to full-time auditors, and independence from management is ensured. We encourage our employees to use these hotlines through promotions via internal newsletters and other media, and strive to build trust in the hotlines by ensuring confidentiality and prohibiting unfair treatment of hotline users.

For each report that comes in, the office of the Corporate Ethics Committee in the company concerned asks the relevant department to ascertain the facts. The office then discusses and decides on responses based on the department's findings, and later follows up on the results. If the reporter desires feedback, the contact point that initially received the report contacts him or her with the results as well as the responses taken.

Six reports were received during FY2018. Of them, four involved abuse of power. Suitable responses are being implemented in all cases.

### State of Use of JSR Group's Hotline (Number of reports)



#### ② Hotline for Business Partners

JSR employs at its Procurement Department a "Suppliers' Hotline," an external reporting channel for business partners, namely suppliers and services providers, with whom domestic Group companies do regular business. It receives reports from business partners to quickly discover and resolve violations of the law as well as actual and possible violations of corporate ethics in business transactions. Hotline services are entrusted to the same outside organization employed for the employees' hotline. Efforts are being made toward improving reliability, by thoroughly enforcing strict secrecy of reports and prohibiting handling of reports that would be disadvantageous to those reporting something. Since its introduction in FY2014, there have been no reports made using the Suppliers' Hotline.

### 4. Legal Compliance Measures

Every JSR Group member defines legal compliance regulations that form the basis of its legal compliance. Each company then uses the regulations to solidify its compliance through regular review and improvement as well as legal training to increase awareness of laws and regulations and instill commitment to compliance. JSR Group identifies laws and regulations that are particularly relevant to the execution of business as Overall Significant Laws and Legal Regulations, and concentrates on establishing individual systems to ensure compliance with these critical laws and regulations.

### Approach to Preventing Bribery and Unfair Competition

JSR has formulated "Rules on Complying with Anti-Corruption Laws" and "Standards for Gift-Giving and Entertaining" that specify necessary items for all executives and employees to comply with the Japanese Unfair Competition Prevention Act, U.S. Foreign Corrupt Practices Act, U.K. Bribery Act and other anti-corruption laws when performing their tasks, based on the JSR Group Principles of Corporate Ethics and laws and regulations that require compliance.

In addition, JSR has also formulated "Rules on Antimonopoly Law" (Japan), "Rules on Complying with U.S. Antitrust Laws", "Rules on Complying with the EU's Antitrust Laws and "Rules on Complying with Korean Fair Trade Laws" that specify items necessary for complying with each country's antimonopoly (antitrust) laws.

### **COMPLIANCE / RISK MANAGEMENT**

### 5. Protection of Personal Information

JSR Group recognizes the importance of protecting personal information under the circumstances of highly advanced information and communication technologies. We have therefore formulated a Privacy Policy and Rules for Handling Personal Information that sets out our approach to the acquisition, use, and management of personal information based on the Act on the Protection of Personal Information. We have also established Rules for Handling Specific Personal Information in response to the introduction of Japan's Individual Number system. Moreover, in accordance with relevant laws and our privacy policy, we ensure the appropriate handling of specific personal information in the company by defining precautions and security standards necessary to ensure the proper use and protection of this information at each of the stages of acquisition, storage, use, provision, disclosure, correction, suspension of use, and deletion.

Furthermore, for Group companies that will handle personal data covered by the EU's General Data Protection Regulation (GDPR), we are providing support for the development and operation of a GDPR compliance system to be applied to the acquisition, processing, and transfer of covered personal data.

### **Risk Management**

### 1. Philosophy

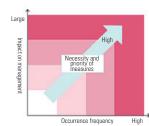
JSR Group believes that preventing a major crisis from occurring and minimizing its impacts on business activities is an important management role. The Group has formulated Risk Management Policies and established a Risk Management Committee through which it actively pursues risk management activities.

### 2. Risk Management Measures

(1) Identifying Risks and Selecting Important Risks

Since FY2009, JSR Group has fulfilled group-wide annual risk management procedures using its unique risk management system under the initiative of the Risk Management Committee. For each division of JSR Group companies in and outside of Japan, we identify and evaluate all potential risks, and formulate measures to control such risks.

Utilizing a risk map that represents level of business impact and frequency of occurrence, we identify risks that could have a significant impact on business continuity and organize them risks into the JSR Group Risk Factors. By monitoring and regularly reviewing risks that senior management has personally ascertained, we are building



and maintaining a system for prevention and crisis preparedness.

#### (2) Crisis Management Training

JSR has formulated BCM procedures that summarize the BCM/BCP\* systems in place for both peacetime and emergency situations. These procedures define the BCM organization and the actual BCP, which includes stipulations on target recovery times, and BCP activation and cancellation standards. They also define the organizational structure that takes effect during activations of the BCP, and corresponding priority businesses and operations.

We also systematically conduct disaster drills and evacuation drills at our plants and offices to improve our crisis responsiveness and minimize impact.

As for our physical infrastructure, we are proceeding with step-by-step seismic reinforcement. In particular, we are conducting seismic retrofitting at our production bases and manufacturing facilities after establishing independent standards that are even stricter than those required by law.



The headquarters for accident and crisis control during the crisis management training



General disaster drill conducted jointly by plants and offices in the Kashima District (JSR, Japan Butyl, and Kraton JSR Elastomers)

### (3) Enhancing Information Security

JSR Group adopted an Information Security Policy and is working to implement appropriate information management by informing all personnel of the policy.

#### <Information Security Policy>

- The JSR Group, by complying with laws and regulations and by observing other social norms relating to the handling of information, will protect information that belong to the JSR Group, its customers, business partners and other third parties.
- The JSR Group will strive to develop and actively use its information assets for the efficient execution of its business. The Group's officers and employees will only use these information assets for the purposes of their work and within the scope of their authority.
- The JSR Group will improve organizations and systems, provide education on information security, thoroughly disseminate this policy and related regulations, and implement measures to ensure information security.
- The JSR Group will implement appropriate human, organizational, and technological measures and work to prevent unauthorized access to information assets from outside the company, as well as leaks, falsification, loss, theft and destruction of information assets.
- If an information security-related problem occurs, the JSR Group will promptly identify the cause and take measures to minimize damage and prevent recurrences.
- The JSR Group will periodically assess and review its information security measures to respond appropriately to changes in external environments.



### SUPPLY CHAIN

### Supply Chain Management

#### 1. Philosophy

We believe that an important role of JSR Group is to offer innovative materials and excellent products that meet customer needs and contribute to the making of a better society. We are able to respond to social issues through our business partners and supply chain management.

### 2. Supply Chain Management

### (1) CSR/sustainable procurement

JSR Group supply chain management has a unique feature of a chemicals manufacturer supplying materials to various industries and supporting society. Specifically, that is our ability to deliver products of discernible quality to our customers reliably and without interruption.

Supply chain management is specific to each of our businesses and so is different in the Elastomers Business, Plastics Business, Digital Solutions Business, and Life Sciences Business. The JSR Group Purchasing Policy states that when making purchases, JSR will give sufficient consideration to legal and regulatory compliance, resource protection, environmental conservation, safety, human rights, biodiversity, and other factors that lead to a sustainable society. With suppliers' understanding, and through communication, mutual understanding, and cooperation, we can continue engaging in effective initiatives. Based on our Purchasing Policy and CSR/ sustainable procurement initiatives implemented in FY2010, we surveyed the social and environmental considerations of our suppliers using a questionnaire. When an issue was detected, we dispatched the person in charge of procurement to the supplier to work on solving the issue together. We were able to survey the suppliers that represent 99% of our purchased materials by FY2013. We will continue to conduct the same process as we establish new suppliers in the future.

Additionally, amid recent globalization of the supply chain, issues such as forced labor, child labor, environmental destruction, global warming, and corporate scandals have occurred, and boy-cotts and demand for improvement are being seen. Such developments are beginning to significant impacts on corporate activities. In response, we revamped and expanded the questionnaire items used for surveying CSR/sustainable procurement in FY2017. We are now conducting the second round of the survey using this revised questionnaire.

Moreover, understanding that engaging in supply chain management in this way brings mutual prosperity to both JSR Group and our business partners, we rearranged the items that JSR Group wants business partners to comply with that appear on the revised questionnaire and newly formulated the "JSR Group CSR/Sustainable Procurement Policy" in December 2018. We are sequentially distributing the new policy to our business partners and asking them to make it known to their organizations and to practice it.

### (2) Green procurement of raw materials

JSR has long been committed to green procurement, a policy that puts the highest priority on goods with minimal environmental impact when purchasing raw materials. In response to the growing industry trend in managing chemicals in the supply chain, JSR joined the Joint Article Management Promotion-consortium (JAMP)\*1 in October 2008, and reviewed of its Green Procurement Guidelines\*2. JSR will continue to practice green procurement with an emphasis on disseminating information through the supply chain.

\*1 The Joint Article Management Promotion Consortium (JAMP) was established as an inter-industry organization in September 2006 to support activities that aim to create and expand specific systems for the proper management of information on chemicals in articles (components, products, and so on) and to facilitate the disclosure and dissemination of information within supply chains. JSR conducts activities that contribute to the practice of these principles through its participation in JAMP.

#### \*2 Green Procurement Guidelines: JSR began formulating its Green Procurement Guidelines in 2000 and has been promoting environment-friendly "green procurement" based upon them. In 2008 JSR joined JAMP and revised the guidelines to bring its managed substances and format in line with JAMP MSDSplus. We again revised the guidelines during a switch from MSDSplus to chemSHERPA (a new format led by the Ministry of Economy, Trade and Industry for communicating information on chemical substances) in 2018. We will continue advancing green procurement with an emphasis on the dissemination of information

so we can effectively manage chemical risks in our supply chains.

### **CSR PERFORMANCE**

### **Evaluation by Outside Organization**

The JSR Group is highly regarded for its CSR activities and other non-financial initiatives, as reflected by its inclusion in international socially responsible investment indexes and investment universes. Also, the JSR Group has been selected for inclusion in the FTSE Blossom Japan Index and MSCI Japan Empowering Women Index (WIN), S&P /JPX Carbon Efficient Index, these of which are ESG indexes selected by the Government Pension Investment Fund (GPIF).

Inclusion in ESG indexes, socially responsible investment (SRI) indexes and investment universes (Current as of July 1, 2019)



### FTSE4Good

(England)

For 16 consecutive years since 2004 we have been selected by FTSE Russell as a constituent of the FTSE4Good Index Series.



### **SNAM Sustainability Index**

(Japan)

In recognition of our standing as a company with a high ESG (Environment, Social, and Governance) evaluation, we are reconfirmed by Sompo Japan Nipponkoa Asset Management Co., Ltd. (SNAM) as a brand for investment to be included in the SNAM Sustainable Investment Fund.



### EURONEXT Vigeo Eiris World 120 (France)

We are reconfirmed for inclusion in the EURONEXT Vigeo Eiris World 120 Index as a global company with outstanding ESG (environment, social, governance) performance.



### ETHIBEL PIONEER & EXCELLENCE Investment Registers (Belgian)

On June 30, 2017, we were reconfirmed for inclusion in the Ethibel Pioneer & Excellence Investment Registers, which is an international SRI universe.



### FTSE Blossom Japan Index

(Japan)

We were selected as an investment brand of the "FTSE Blossom Japan Index" for being a Japanese company with excellent consideration for ESG (Environment, Social, and Governance)



MSCI Japan Empowering Women Index (WIN)

### MSCI Japan Empowering Women Index (WIN) (Japan)

We were selected by MSCI as an investment brand of the "MSCI Japan Empowering Women Index (WIN)" for being a company with excellent gender diversity.



### "White 500" — 2019 Certified Health & Productivity Management Outstanding Organizations Recognition Program (Japan) We were selected by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi as one of the top 500 companies in Japan in terms of outstanding health and productivity management practices.

The JSR Group has continually been ranked in the Global Compact 100 since FY2013.