

Materials Innovation

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



Message from our Chief Sustainability Officer

As the director responsible for advancing sustainability, I will drive a mindset change throughout the JSR Group



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- JSR Group Profile
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- Post comments and opinions concerning sustainability [here](#).



As the director responsible
for advancing sustainability,
I will drive a mindset change
throughout the JSR Group



Role of the Chief Sustainability Officer

In my position as Chief Sustainability Officer (CSO), the primary role I'm expected to fulfil is integrating sustainability into business strategies. I have joined the ranks of our internal directors — all of whom are capable of seeing the broader business picture in its entirety — as the director in charge of advancing sustainability. I feel this appointment is a manifestation of CEO Eric Johnson's belief that sustainability will be an incredibly important part of business management in the coming years. Adding a CSO to the Board of Directors sends a clear and tangible signal of top management's stance and philosophy on sustainability to audiences both inside and outside the company.

The focus on sustainability and resilience began with CEO Johnson. The concepts of sustainability — meaning "protection" and "preserving the status quo" — along with resilience — a positive and powerful notion — have been brought into the deliberations on the next mid-term business plan. I think the use of these two words together is very significant.

> [CEO Message in the JSR Report \(PDF\)](#) [PDF](#)

Note: Scheduled to be released at the end of November

To me, a resilient organization is a growing organization that is tough, yet flexible. It is an organization that can gather knowledge globally, from both inside and outside the company, and quickly execute optimal strategies for the present moment, even in uncertain times like now when unpredictable events are unfolding. To become a resilient organization, I think it's important to improve our expertise and routinely accumulate knowledge, at both the individual level and the company level. As individuals, we need to foster the practice of always thinking on our own, recognize each other's diversity, listen attentively to the views of others, and, finally, develop the ability to make decisions on our own. As a company, we need regular communication to mobilize these individual competencies into a unified force. Only when this attitude is maintained continually at a high level can we say that a company is truly resilient.

For the JSR Group to be sustainable into the future and valued as indispensable by society, it is important and necessary to accumulate new corporate value in addition to corporate value that stems from outstanding products and a strong financial foundation. I recognize it is my job as CSO to craft a definitive form for this determination to create new corporate value. To begin with, the JSR Group should be a company that employees take pride in. This requires a deep understanding of the relationship between yourself and the company and society. Concrete plans and actions in your everyday work are extremely important, but I believe what's imperative in order to see the value of your work is recognizing your true connection to society by changing your mindset: that is, changing your emotional focus and transforming your thinking. Mindset changes boost individual employees' motivation and bring about work productivity gains. Therefore, I will work to enable as many employees as possible to change their mindsets.

Outcomes of the JSR Sustainability Challenge program and our future vision

JSR has been carrying out the "JSR Sustainability Challenge" program since FY2019 to verify quantitatively our current business activities' impact on society. With the goal of incorporating sustainability in business strategies, the JSR Group had all business segments describe their long-term prospects, including sustainability. One outcome of this was constructing a framework for key people from each business segment to come together and examine sustainability issues. The JSR Sustainability Challenge generated a real diversity of opinions, and the program was able to unearth issues we hadn't placed much emphasis on before and issues to be reconceptualized from new reference points. I feel it is hugely significant that key people at business segments discovered on their own the existence of different perspectives and different benchmarks, even as they pursue the same business.

A planned outcome of the JSR Sustainability Challenge in terms of the next mid-term business plan, which is currently being formulated, is to have business segments express their desire for a mid-to-long-term focus not solely on business and financial aspects but also on sustainability and ESG perspectives. This is likely to happen as business segments come to realize that sustainability and ESG are not at all contrary to financial value and that they can contribute to sustainability in tandem with business results through mindset changes and business reassessments. As CSO, I want first of all to work toward having these requests implemented in the mid-term business plan.

I would also like sustainable indicators adopted in the future as one criterion for decisions on whether a business should be continued, when undertaking business restructuring or consolidating management resources. The JSR Sustainability Challenge program has deepened understanding of this concept among business segments, and I want to keep this trend going. For example, it took a considerable length of time to align business segments with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) regarding climate change. Therefore, as we review the entire company's materiality through such operations, I want to make active use of the SDGs, TCFD recommendations, and other international initiatives as guidelines when selecting our own targets and indicators, such as deciding what priorities to set or what KPIs to establish for the whole JSR Group.

- [Aligning with TCFD recommendations](#)
- [JSR Group's contributions to the SDGs](#)



My policy focus

As the world grapples with the COVID-19 pandemic, JSR is working on a project seeking new ways of working. This project is not limited to expanding telework and similar arrangements; it includes HR systems, personnel evaluation mechanisms, and other measures that accompany new working styles. I view this as an opportunity to revise our systems from the ground up.

People are undoubtedly at the core of turning the JSR Group into a sustainable corporation. For example, even as the times change, our commitment to the importance of our employees and the assurance of workplace safety should be constant and never influenced by the circumstances of the day. Looking just at safety, the highest priority of our company's core priorities, we have been consistently engaging with safety activities for many years. Four years ago, the Philosophy for Occupational Health and Safety was established, and the company is working on fostering a safety culture from a long-term perspective that sets 2025 as the target year. I believe the sound completion of this plan is essential for safety.

After many countries declared a state of emergency in March and April this year, we have heard repeatedly many voices wondering what the JSR Group can do to stop the spread of COVID-19: "Are there any technologies in the R&D pipeline that can be made use of?" "Can we purchase medical equipment that is in short supply through Group companies specialized in procurement and trading?" In order to advance these activities efficiently, we need to delineate our ideas on what social contributions mean for the JSR Group. The Group's corporate mission is "We create value through materials to enrich society, people and the environment", and we take pride that our very calling is to contribute to society. But what social contributions do we make through business activities? Typically, philanthropic contributions are emphasized. The current situation, however, is a chance to rethink what social contributions the JSR Group can accomplish outside of our core business.

Until now, we have always generated ideas and selected options on the basis of whether there will be customers for the idea or option. Moving forward, however, I believe we cannot ignore social contributions as an entry point in many areas, such as selecting R&D themes. This is also relevant to connections between the SDGs and business.

Sustainability elevates corporate value

Another ambition of mine while serving as CSO is making the JSR Group an attractive place to work for our employees, particularly our younger employees, as well as making it an attractive destination for students who are thinking about their future career options. To this end, I want to further raise the Group's engagement with each employee.

Regarding sustainability messaging, although JSR itself is currently providing enhanced information, I think the time has come to review what the Group as a whole should be doing. It is not feasible, of course, for Group companies and affiliates to attempt identical activities, given the site and cultural differences as well as national and regional differences. At the same time, all companies must share the JSR Group's enduring fundamental principles and must ensure their directions are aligned. I feel this necessitates the construction of a network for sustainability communications.

It is not my intention, on assuming the CSO post, to ask people to do unusual or unprecedented things or to come up with novel initiatives. Even within our current initiatives, changing mindsets will significantly change perceptions of value. What I ask is that every employee thinks of sustainability not as a mere ideological proclamation but as something intrinsically connected to real corporate value.

Past JSR Group activities have always contained sustainable components and components that contribute to society and the environment. If we can appreciate the importance of these components just a little more than we have, we can elevate the JSR Group's corporate value, not in theory but in fact. This is my personal belief, and I will fulfil my role as CSO in keeping with this belief.

Mika Nakayama

Director and Senior Officer, Chief Sustainability Officer (CSO)
General Manager of Sustainability Promotion Dept.
JSR Corporation





- ▼ 1. Corporate Mission and Sustainability Philosophy
- ▼ 2. Corporate Mission
- ▼ 3. Management Policies - JSR's Fundamental Pillars of Management
- ▼ 4. Management Policies - Responsibility to Our Stakeholders
- ▼ 5. 4C Course of Action

To create a corporate culture in which sustainable growth is achieved constantly regardless of changes in personnel or organizational form, and to ensure that such a culture permeates across JSR Group, we established our Essential Elements and have been promoting them to be shared among the employees within the Group as common values so that each employee can act with responsibility and confidence. The Essential Elements consists of the Corporate Mission, the Management Policies, and the Course of Action.

1. Corporate Mission and Sustainability Philosophy

We believe that to be a sustainable company, we must continue providing value to all stakeholders while responding to environmental changes. We define sustainability as “contributing to society by creating value through corporate activity.” This way of thinking vis-à-vis sustainability is connected to JSR Group's Corporate Mission and in line with our management policies over the years.

Under our Corporate Mission of “Materials Innovation - We create value through materials to enrich society, people and the environment,” we aim to contribute to the development of a sustainable global environment and society by creating value through corporate activity. And we will advance initiatives that benefit all stakeholders—customers and business partners, employees, society, the environment, and shareholders.



> [JSR Group's Corporate Mission and Materiality_\(PDF 231KB\)](#) [PDF](#)

The scope of JSR Group's business activities is in the process of shifting from a Japan-centric focus to a truly global focus. In order to carry out global business activities, we need to have a deeper understanding of worldwide issues and the problems faced by regions throughout the world.

On the other hand, these issues and problems can be turned into opportunities for new businesses. By actively seeking to identify these business opportunities, we are working to expand the scope of our business.

Participation in the United Nations Global Compact

JSR Group signed the United Nations Global Compact in April 2009. As a signatory, 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.



www.unglobalcompact.org

Eric Johnson
Representative Director and CEO
JSR Corporation

The Ten Principles of the United Nations Global Compact

- 1: 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;
- 4: the elimination of all forms of forced and compulsory labour;
- 5: the effective abolition of child labour; and
- 6: the elimination of discrimination in respect of employment and occupation.
- 7: Businesses should support a precautionary approach to environmental challenges;
- 8: undertake initiatives to promote greater environmental responsibility; and
- 9: encourage the development and diffusion of environmentally friendly technologies.
- 10: Businesses should work against corruption in all its forms, including extortion and bribery.

The Sustainable Development Goals (SDGs)

The SDGs are comprised of 17 goals and 169 targets that all United Nations member states will strive to achieve by 2030 for the purpose of bringing sustainability to the global environment and people's lives. In addition to conventional development goals, such as eradicating extreme poverty and hunger, the SDGs also cover challenges faced by developed countries, among them the promotion of gender equality, creation of a strong employment environment, reexamination of production and consumption, conservation of marine and forest resources, and development of safe communities. JSR Group will do its part to achieve the SDGs by creating value through its corporate activity.

> [United Nations Information Centre "What are the Sustainable Development Goals \(SDGs\)?"](#)

SUSTAINABLE DEVELOPMENT GOALS



As a Global Compact participant, we prepare "Communication on Progress" (COP) reports detailing our fulfillment of the compact's principles.

2. Corporate Mission

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

The corporate mission of JSR Group clearly identifies the company's raison d'être.
By supplying materials that are indispensable to human societies, JSR aims to be trusted.

3. Management Policies - JSR's Fundamental Pillars of Management

Continuous Creation of Businesses

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

Enhancement of Corporate Culture

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

Increase in Corporate Value

Aiming to increase corporate value by creating business opportunities through materials. To this end, we will focus on customer satisfaction and the fulfillment of employees.

4. Management Policies - Responsibility to Our Stakeholders

Responsibility to Our Customers / Business Partners

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

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

Responsibility to Our Employees

All employees should expect:

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

Responsibility to Society

Responsibility to Shareholders

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

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

JSR Group will maintain its responsibility to its shareholders by:

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

5. 4C Course of Action

CHALLENGE

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

COMMUNICATION

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

COLLABORATION

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

CULTIVATION

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





▼ 1. CSR Committee
▼ 2. The Corporate Ethics Committee
▼ 3. The Responsible Care (RC) Committee
▼ 4. The Risk Management Committee
▼ 5. The Social Contribution Committee
▼ 6. Advancement Structure Reorganization (from June 17, 2020)

Under the corporate mission "Materials Innovation - We create value through materials to enrich society, people and the environment," JSR Group aims to build and maintain good relationship with all of our stakeholders and become an indispensable corporate citizen. And we will promote initiatives that benefit all stakeholders—customers and business partners, employees, society, the environment, and shareholders.

1. CSR Committee

JSR has established a CSR Committee that reports directly to the Representative Director to promote JSR Group's CSR. Four committees are set up under the CSR Committee: The Corporate Ethics Committee, Responsible Care (RC) Committee, Risk Management Committee, and Social Contribution Committee. The CSR Committee supervises and guides the four committees and endeavors to strengthen CSR management through regularly scheduled meetings (held four times annually) as well as extraordinary meetings.

Chaired by the officer in charge of CSR, the CSR Committee's meetings are attended by officers responsible for manufacturing, manufacturing technologies, safety and environmental affairs, research and development, human resources development, accounting and financial affairs, corporate planning, corporate communications, legal affairs, general affairs, the Elastomers Business, the Digital Solutions Business, and the Life Sciences Business. Also attending and participating are the offices of the four aforementioned committees. The committee operates with a structure that covers all businesses and functions of JSR Group.

We endeavor to build confidence among our all stakeholders by disclosing information on the content and results of those activities in the Sustainability Report (Name changed from CSR report from 2020).

Moreover, we strive to raise Sustainability Report's reliability and transparency by having the report undergo third-party certification.

> [Third-party certification.\(PDF 698KB\)](#) 



2. The Corporate Ethics Committee

JSR Group practices and promotes corporate ethics by setting down the JSR Group Principles of Corporate Ethics—a code of conduct for fulfilling our "responsibility to our stakeholders," one of the management policies that support the realization of our management philosophy—and establishing a Corporate Ethics Committee chaired by the officer in charge of general affairs.

The Corporate Ethics Committee makes certain that JSR's Course of Action is recognized throughout the organization as a statement demanding compliance in the Group's daily corporate activity. The committee also regularly confirms the circumstances of compliance each year and works to continually improve them.

Our concern for ethics also extends to our internal reporting system. For employees, we have an internal hotline connected to the Corporate Ethics Committee, an external hotline connected to a designated independent attorney, and an external hotline connected to an independent and specialized outside organization that is capable of handling communication in English, Chinese, Korean, and Thai. We have also set up an external hotline for our business partners.

➤ [Click here for details concerning our corporate ethics and compliance-related initiatives.](#)

3. The Responsible Care (RC) Committee

We engage in responsible care based on our belief that "making sustainable development possible" is a form of corporate responsibility. Seeing this as a key issue that is fundamental to management, we are working for the effective promotion of company-wide responsible care-related activities by establishing a Responsible Care (RC) Committee that is chaired by the officer in charge of safety and environmental affairs.

The committee approves plans that concern responsible care and evaluates and verifies the results of related activities. It also works to maintain and improve the level of responsible care practiced in such areas as the elimination of accidents, reduction of environmental burden, chemical management, and product safety.

➤ [Click here for details concerning our responsible care-related initiatives.](#)

4. The Risk Management Committee

We believe that preventing major crises and minimizing their effects on business activities should they occur are important management challenges. Given this, we have formulated Risk Management Policies and established a Risk Management Committee that is chaired by the officer in charge of corporate management.

The Risk Management Committee promotes continuous improvement of response guidelines and response plans for both manifested and potential crises.

➤ [Click here for details concerning our risk management-related initiatives.](#)

5. The Social Contribution Committee

We established a Social Contribution Committee that is chaired by the officer in charge of corporate communications. The committee studies new activities and advances existing activities based on JSR Group's Philosophy for Occupational Health and Safety.

6. Advancement Structure Reorganization (from June 17, 2020)

Following the June 2020 General Meeting of Shareholders, the Group restructured its CSR Committee into a new Sustainability Promotion Committee. This move was made to promote activities that benefit all stakeholders by creating value through not only CSR (corporate social responsibility) but also all areas of corporate activity. Our aim here is to use our Corporate Mission as the basis for building a good relationship with various stakeholders and become a company that is trusted and needed.

Four committees are set up under the Sustainability Promotion Committee: The Sustainability Planning Committee, Environment, Safety and Quality Committee, Risk Management Committee, and Corporate Ethics Committee. The Sustainability Promotion Committee supervises and guides the four committees and endeavors to strengthen management through regularly scheduled meetings (held four times annually) as well as extraordinary meetings.

The Sustainability Promotion Committee is chaired by the President. Participants are the officers responsible for manufacturing, manufacturing technologies, safety and environmental affairs, research and development, human resources development, accounting and financial affairs, corporate planning, corporate communications, legal affairs, general affairs, raw materials and equipment procurement, production and distribution, quality assurance, the Elastomers Business, the Plastics Business, the Digital Solutions Business, and the Life Sciences Business. Also participating are the offices of the four aforementioned committees. The Sustainability Promotion Council operates with a structure that covers all businesses and functions of the Group.

JSR Group's Sustainability Advancement Structure (from June 17, 2020)





JSR Group's Sustainability Materiality to be Addressed by JSR Group

As part of our efforts to integrate our management and CSR, we define our materiality (priority issues) to help realize a sustainable global environment and society. To assist us in this process, we arrange issues using a matrix comprised of two axes; namely, "Importance for JSR Group (Internal Factors)" and "Importance for Stakeholders (External Factors)." We then identify those that have high priority for our Group and for our stakeholders as "Materiality Considered by JSR Group."

In our mid-term business plan "JSR20i9," which started in 2017, we arranged our materiality into three categories --"Social Issues that JSR Group Can Help Resolve," "Social Issues Attributable to JSR Group's Corporate Activity," and "Basic Issues in JSR Group's Corporate Activity" --with a view to advancing our CSR activities. During 2020, we are studying a reexamination of JSR's materiality to coincide with the formulation of our new mid-term business plan. In a dialogue JSR held with experts in 2019, it was pointed out that materiality must be thought of as a dualism by dividing it into "business fields" and "management foundation." Taking note of this, we decided to incorporate this point into our study and reorganize JSR's materiality into "business activity" and "management foundation." We then implemented a "JSR Sustainability Challenge*" to measure JSR's contribution to society, beginning with "business activity."

* JSR Sustainability Challenge: An initiative that interviews five business departments to survey their positives and negatives on society and then summarizes the important positive and negative impacts that arise from JSR Group's business activities.

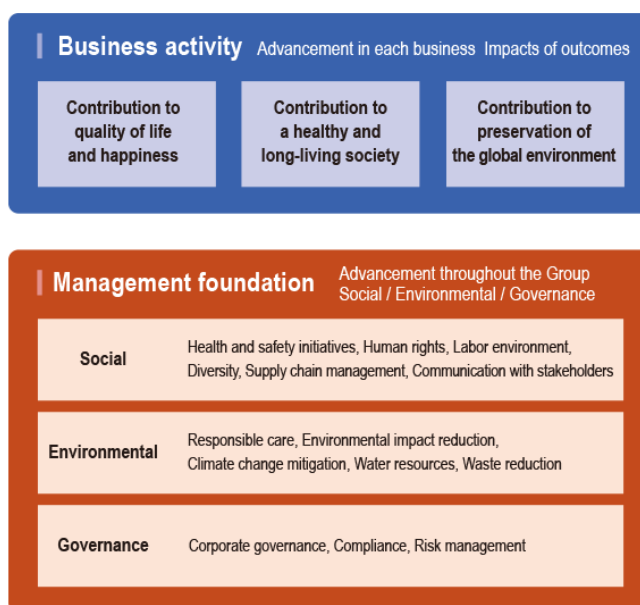
> "JSR Sustainability Challenge", JSR Report 2020

* JSR Report 2020 is scheduled for release on November 30.

In the "JSR Sustainability Challenge," we aggregated impacts of the outcomes that JSR Group can provide through "business activity" into three areas: "contribution to quality of life and happiness," "contribution to a healthy and long-living society," and "contribution to preservation of the global environment." Then we positioned these impacts as materiality in "business activity."

> [Positive and negative impacts of business activity](#)

In the realm of "management foundation," we classified our currently recognized materiality into three areas of social, environmental, and governance (known as ESG). We will closely examine, narrow down, and reorganize the materiality that JSR Group should share and pursue as a whole during the process of formulating the new mid-term business plan. The following chart presents JSR's materiality as we currently see it.



We believe that these areas of materiality will evolve with changes in society's demands on us and in accordance with our various stakeholders' views and needs. We will therefore review and re-specify them through the following operations.

1) We will confirm the issues' validity each year by conducting checks through engagement with experts, employees, responsible care activities, and the like.

2) We will periodically review JSR's materiality while maintaining the transparency and acceptability of the process for specifying it by exchanging views with experts whenever we formulate a new mid-term business plan.

In FY2020, we spoke to Mr. Keisuke Takegahara of the Development Bank of Japan, who gave us his views on our effort to clarify JSR Group's impact on society through the JSR Sustainability Challenge.

We will take Mr. Takegahara's views into account as we explore ways of enhancing activities to promote sustainability. This will include examining the ideal forms of materiality that JSR Group should pursue.

An attempt to measure JSR's impact on society About the "JSR Sustainability Challenge"

During the 2019 dialogue held on the topic of "JSR Group's Materiality and the SDGs," Mr. Keisuke Takegahara, Executive Officer of the Development Bank of Japan, pointed out the "importance of impact." In light of this, we asked Mr. Takegahara to comment on the "JSR Sustainability Challenge," which is an attempt to measure JSR Group's impact on society, and evaluate its results.



Mr. Keisuke Takegahara
Executive Officer,
Development Bank of Japan
Member of METI's "The Study
Group on Environmental Innovation
Finance"
Member of the "TCFD Consortium
Steering Committee"

— What is your view of the "JSR Sustainability Challenge"?

Takegahara: The process, which gets each department involved and is built on layers of interview surveys and discussions conducted over time, is quite impressive. In fact, I don't think many companies can identify their impact cross-organizationally at the same level. Moreover, I was impressed that so many approaches and materials emerged from each department, particularly in the area of positive impacts. I also think the program's attempt to grasp the impact generated by the entire Group—both positive and negative—and not just individual business departments represents a pioneering initiative that will lead to discussion of JSR's business portfolio. I recommend that you disclose what the program's findings on your website wherever possible. This could include the details of discussions in each department and any hints you get from looking at impact from the standpoint of the Group.

> [The positive and negative impacts of business activity.](#)

— What impressions did you have concerning the impacts on society that were identified?

Takegahara: I thought the framework that applies the characteristics of B-to-B by which value (outcomes) is provided to society through client enterprises is a way of doing things that is distinctive of JSR Group, which operates under the banner of creating value through materials. Outcomes tend to be directly attributed to the company providing the final product. However, thanks to this framework, it is easy to see the structure by which many outcomes are actually provided by JSR Group. It is also clear that this shows how the impacts generated by JSR Group have effects on society through final products. So I hope you will present this point in a more concrete manner going forward. And if some of this data is disclosable to the public, I earnestly encourage you to present it. Furthermore, in addition to mentioning products that have positive impacts in resolving social issues that are already evident, such as elastomers and plastics, how about looking at things from the standpoint of the current COVID-19 pandemic? In other words, how about presenting your contributions to society in the "with COVID-19" and "post-COVID-19" eras? It is said that "digital transformation" (DX)—centered on the keywords "remoteization" and "non-contact"—is rapidly accelerating around the world as a result of the pandemic. Its impact on society is likely to be huge. Your company has a history of leading the way in DX. For example, you have focused on quantum computing with an eye to improved productivity and better efficiency in R&D. I felt it may be a good time to explain your impact on a society heading toward a "new normal"—including the value that your Electronic Materials, Display Solution, and Life Sciences Business bring to the world—from a larger Group perspective.

— What do you think is particularly important to bear in mind with the "JSR Sustainability Challenge"?

Takegahara: Interested in making long-term investments, ESG investors consider whether a company looks at an uncertain future and is ready for various anticipated changes from the standpoints of both risk and opportunity. In other words, they pay attention to the sustainability and resilience of business models. What is important here is to properly grasp issues that could affect a future business model and to present a long-term strategy that sees those issues as opportunity, along with risk management, of course. For example, climate change should present business opportunities for JSR Group. In light of the positive impacts that were identified, we can see a scenario in which the value that your Elastomer and Plastics Businesses provide to society grows as climate constraints become stronger

and stronger. Regardless of how powertrains change and how mobility shifts toward dispersed ownership or sharing, the properties of fuel efficiency and abrasion resistance brought by elastomer products will be extremely competitive. Moreover, demand for the lightweight car bodies that plastics help make possible will undoubtedly continue to grow. It is important to develop these perspectives with respect to various social issues outside of climate change. Even if we look at digitalization, health care, and other themes whose importance will grow during the COVID-19 pandemic and afterwards, I think there are numerous scenarios that will show JSR's strengths.

— If you have any concerns for the future with respect to JSR's sustainability, please tell us about them.

Takegahara: I think that spelling out a "long term perspective" more forcefully will be useful in putting JSR Group's characteristics to use. I think it is important to present a longer-term vision for the Group, one that looks ahead to 2050, for example. Looking at the climate change problem, where positive impacts from your main businesses are anticipated, "net zero emissions" of greenhouse gases by 2050 is already becoming a central topic. Many client enterprises who are your partners in generating impacts on society are beginning to draft visions for the year 2050. I admit that setting specific numerical targets is difficult at this time. However, I still believe that you should present such a vision through your Top Message and other avenues.



- ▼ 1. Philosophy
- ▼ 2. JSR Group Activities

1. Philosophy

JSR Group engages in corporate activity around the world. We believe that to do business globally, we must have a deeper understanding of the SDGs^{*1} and other global issues as well as the social problems faced by our planet's various regions and take action accordingly. We also consider activities to resolve these issues to be new business opportunities that can lead to expanded business fields and enhanced corporate value. JSR Group will do its part to achieve the SDGs by creating value through its corporate activity.

At the same time, we view the SDGs as challenges within the Group's management foundation and therefore promote activities that give attention to them in our internal operations.

^{*1} Sustainable Development Goals (SDGs):

"Transforming our World: the 2030 Agenda for Sustainable Development" was adopted at the UN Sustainable Development Summit in September 2015. The SDGs are comprised of 17 goals and 169 targets that all United Nations member states will strive to achieve by 2030 for the purpose of bringing sustainability to the global environment and people's lives. In addition to conventional development goals, such as eradicating extreme poverty and hunger, the SDGs also cover challenges faced by developed countries, among them gender (sex as determined by social and cultural factors) equality, creation of a strong employment environment, reexamination of production and consumption, climate change mitigation, conservation of resources, and development of safe communities.

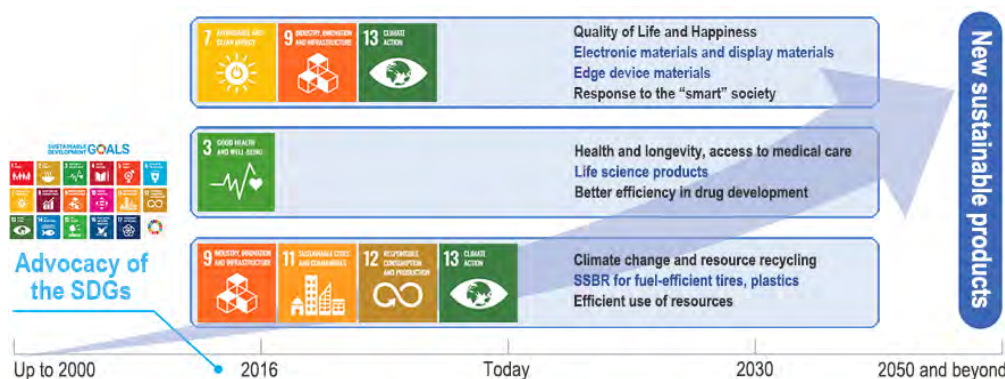
- > [New Year's greeting by the Representative Director and CEO](#)
- > [Positive and Negative Impacts of JSR Business Activities](#)
- > [Dialogue With Stakeholders 2019 JSR Group's Materiality and the SDGs](#)
- > [United Nations Information Centre "What are the Sustainable Development Goals \(SDGs\)?" \(external website\)](#)

2. JSR Group Activities

(1) Business activities that resolve social issues

JSR Group will help resolve various social issues through business activities in line with growth scenarios for individual businesses that are oriented toward an "ideal" Group in 2030, as well as through business activities that seize new business opportunities. We know that we must continue to move quickly in response to changes in society's needs and supply new product lines that help resolve social issues.

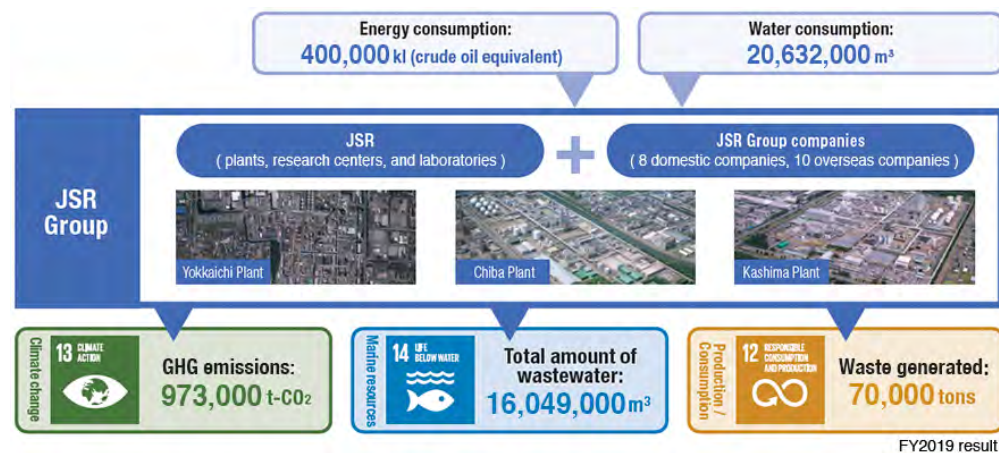
Examples of products that help resolve social issues



(2) Resolving management foundation challenges

JSR Group believes that resolving challenges in the management foundation that supports JSR's business activity is also a path to achieving the SDGs. For example, our product production has an impact on the environment in terms of consuming natural resources (namely energy and water), emitting greenhouse gases, and producing waste. We continue engaging in various activities to alleviate these effects. Moreover, we consider diversity initiatives aimed at broadening our human resources with respect for different values and "work-style innovation" aimed at improving labor productivity to be activities that are linked to achievement of the SDGs. We are thus working to promote them accordingly.

Environmental impact reduction



Activities that support employees' success





JSR Group sees the problem of climate change currently facing society as one of the important issues for the company. We are therefore vigorously implementing activities to reduce greenhouse gas emissions by applying the technical strength we have built through our history. In such circumstances, we view the TCFD^{*1} Recommendations as contributing to the development of a sustainable society toward transition to a low-carbon economy, and we have begun implementing initiatives that are in step with them.

First of all, we are reinforcing our governance system even further by providing oversight by the Board of Directors and we are beginning scenario analyses for the formulation of concrete management strategies, risk management plans, indices, and goals for the future.

Earnestly confronting climate change as a chemical company, we are deepening our understanding of the opportunities and risks our Group's corporate activities affect, taking action accordingly, and striving to proactively disclose our initiatives to the public toward this end.

^{*1} TCFD:

The Task Force on Climate-related Financial Disclosures, established by the Financial Stability Board (FSB). In June of 2017, the TFCF presented recommendations for the disclosure of the effects that climate change risk has on financial institutions, companies, and governments in financial reports. More than 1,000 organizations around the world have endorsed the recommendations (as of February 2020; published data of the TCFD).

- > [TCFD \(Task Force on Climate-related Financial Disclosures\)](#) 
- > [Environment Climate Change Mitigation](#)







JSR Group's Sustainability JSR Group's Mid-Term CSR Plan

JSR Group formulated the following "JSR Group Mid-Term CSR Plan JSR20i9" based on a vision of itself vis-a-vis CSR around the year 2030. The plan is linked to the "JSR Group Mid-Term Business Plan" that came into effect in FY2017.

Responsible Care






Basic Issues in JSR Group's Corporate Activity	Long-term goals (to 2030)	Initiatives under JSR20i9	Goals under JSR20i9	Related SDGs
Responsible Care	Achievement of all goals in RC activities, including those pertaining to environmental impact reduction, climate change mitigation, water resources conservation, waste reduction, health and safety initiatives, and communication with stakeholders	Initiatives set forth in such areas as environmental impact reduction, climate change mitigation, water resources conservation, waste reduction, health and safety initiatives, and communication with stakeholders	Goals set forth in such areas as environmental impact reduction, climate change mitigation, water resources conservation, waste reduction, health and safety initiatives, and communication with stakeholders	

Environment

Basic Issues in JSR Group's Corporate Activity	Long-term goals (to 2030)	Initiatives under JSR20i9	Goals under JSR20i9	Related SDGs
Environmental Impact Reduction	<ul style="list-style-type: none"> Reduced impact on the air environment Steady reduction of chemical substance emissions (VOC, PRTR, etc.) 	<ul style="list-style-type: none"> Continuation of management using per-unit-of-sales index Reduction of chemical substance emissions (VOC, PRTR, etc.) 	<ul style="list-style-type: none"> SOx, NOx, and dust emissions: Continued management using per-unit-of-sales index (not to worsen compared to the present state) VOC emissions, PRTR emissions: Formulation of continuous improvement measures (Clarification of direction of improvement through improvement of material balance precision and screening of reduction measures) 	
Climate Change Mitigation	Continued contribution toward achieving the Paris Agreement's goals and development of a low-carbon society (CO ₂ emissions: Achieve reductions with attention to government goals)	Promotion of lower CO ₂ emissions and energy savings in response to the Paris Agreement	<ul style="list-style-type: none"> Promotion of efforts for reductions with attention to government goals 1% annual reduction in specific energy consumption in line with the Energy Savings Act 	
Water Resources	Impact on water resources is reduced to near zero in all areas and sustainable water use becomes possible.	<ul style="list-style-type: none"> Higher recycling rate and contribution to biodiversity preservation with better water quality preservation technology and facilities Higher water use efficiency 	<ul style="list-style-type: none"> Wastewater: Response to the 8th water use regulations (YP) and continuous improvement in the use-per-unit-of-sales index (COD, total phosphorus, total nitrogen) Intake water: Maintenance of current amount of recycled water 	
Waste Reduction	Reduced total amount of generated waste 15% reduction compared to the FY2013 level by 2030	Reduction of amount of waste generated, including waste discharged from outside worksites	<ul style="list-style-type: none"> Amount of waste for final disposal: Continued landfill percentage of all generated waste of no more than 0.05% Total discharged amount: Continuous improvement toward long-term goal (The target during the mid- 	

			term plan will be roughly 1/3 of the long-term goal.)	
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Society


Basic Issues in JSR Group's Corporate Activity	Long-term goals (to 2030)	Initiatives under JSR20i9	Goals under JSR20i9	Related SDGs
Health and Safety Initiatives	JSR's safety culture is developed, the value of "safety first" reaches all employees, and safe and secure workplaces are maintained.	<ul style="list-style-type: none"> • Safety foundation Reinforcement of the safety foundation for eliminating workplace accidents and process accidents • Safety culture Penetration of safety values and maintenance of personnel 	<ul style="list-style-type: none"> • Shift from "reactive" approach in which action is taken only after something happens • Laying of groundwork for a shift from "dependent" approach (focusing on own tasks only and leaving the rest to others) to "independent" approach (each person takes the lead in safety activity) <p>* Safety culture evaluation indicator based on DuPont's "Integrated Approach for Safety"</p>	
Human Rights	<ul style="list-style-type: none"> • Human rights-related issues that must be addressed in the Group and globally are identified and being addressed. • Human rights issues in major suppliers are understood. 	Promotion of and response to human rights due diligence	<ul style="list-style-type: none"> • Introduction of systematic implementation of human rights training (implemented for three years for all executives and employees) • Implementation of surveys based on an "expanded version of CSR/sustainable procurement" for major suppliers and 100% application of feedback 	
Labor Environment	Highly motivated workplaces where employees have job satisfaction, where pride and morals are shared, and where initiatives that pay attention to pride and responsibility can be executed are maintained and developed.	<ul style="list-style-type: none"> • Promotion of employee health and building of motivation • Promotion of work-life balance • Further enhancement of HR development 	<ul style="list-style-type: none"> • Continuous improvement of a corporate culture based on the results of employee awareness surveys • Promotion of health measures using data analysis • Establishment of PDCA and KPI for health management • Promotion of initiatives for reducing overtime work • Further adjustment of attendance management • Implementation of measures to promote the taking of paid annual holidays • Promotion of work styles that pay attention to productivity (free address, etc.) • Study toward introduction of a telecommuting system • Enhancement of in-house education and expansion of off-the-job training that fit with the career ambitions of individual employees 	
Diversity	Diverse values are created in line with JSR's status as a global company and are accepted	<ul style="list-style-type: none"> • Promotion of employment and appointment of women and people with diverse nationalities • Development of a culture that accepts and applies different values 	<ul style="list-style-type: none"> • Promotion of understanding of the significance of diversity and how it applies to everyone • Promotion of activities to spread the concepts of diversity and inclusion throughout the company • Promotion of increases in the number of female candidates for management positions and utilization of foreign employees • Preparation of daily life guidelines for foreign employees and provision of support for them 	 
Supply Chain	CSR/sustainable	Maintenance of stable	<ul style="list-style-type: none"> • Implementation of surveys 	

Management	procurement is practiced throughout the entire supply chain, and JSR is contributing to the resolution of social issues in cooperation with suppliers.	procurement and quality improvement by promoting CSR/sustainable procurement	based on an "expanded version of CSR/sustainable procurement" for major suppliers and 100% application of feedback	 
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Governance

Basic Issues in JSR Group's Corporate Activity	Long-term goals (to 2030)	Initiatives under JSR20i9	Goals under JSR20i9	Related SDGs
Corporate Governance	A firm management system oriented toward sustainable growth is functioning and trusted by society.	Continued response to the Corporate Governance Code and improved effectiveness	<ul style="list-style-type: none"> Expansion of opportunities to provide information to stakeholders 	
Compliance	Behaviors that are based on pride and responsibility are being practiced by executives and employees throughout JSR Group.	<ul style="list-style-type: none"> Compliance with the laws and regulations of all countries Precise response to legal revisions Reinforcement of monitoring Continued instruction on corporate ethics 	<ul style="list-style-type: none"> Reinforcement of legal compliance in major countries Continued implementation of education on laws and regulations, public announcement of cases of inappropriate behavior within the Group, and stronger awareness of compliance and corporate ethics with the CSR explanatory briefings 	
Risk Management	Responses for reducing risk and preparations for emergencies are ready throughout the entire Group.	<ul style="list-style-type: none"> Risk is understood and shared throughout the entire Group and appropriate measures are established Reinforcement of information security 	<ul style="list-style-type: none"> Identification of risks corresponding to changes and application of PDCA to them Formulation of business continuity plans for domestic Group companies Reduction in the number of information risk cases 	

Communication with Stakeholders

Basic Issues in JSR Group's Corporate Activity	Long-term goals (to 2030)	Initiatives under JSR20i9	Goals under JSR20i9	Related SDGs
Communication with Stakeholders	<ul style="list-style-type: none"> JSR is a manufacturer that is trusted by communities Financial information and non-financial information are appropriately disclosed and communication with shareholders and investors is maintained. 	<ul style="list-style-type: none"> Promotion of social contribution activities that highlight JSR's sustainable orientation (visiting lessons, etc.) Promotion of communication with the communities Appropriate disclosure of financial information and stronger disclosure of non-financial information 	<ul style="list-style-type: none"> Continued implementation of visiting science lessons and lectures, etc. Support for discussions and active communication with plant neighbors Timely and appropriate information disclosure with website renewals 	



▼ Management System

- > [Responsible Care](#)

▼ Environmental Conservation

- > [Environmental Impact Reduction \(Input and Output\)](#)
- > [Climate Change Mitigation](#)
- > [Water Resources](#)
- > [Waste Reduction](#)
- > [Biodiversity Conservation](#)
- > [Environmental Conservation](#)
- > [Environmental Accounting](#)

▶ Security and Accident Prevention

▶ Occupational Health and Safety

▶ Logistics Safety

▼ Chemical and Product Safety

- > [Chemical Management](#)
- > [Product Safety](#)

▼ Communication with Society

Communication with Stakeholders

- > [Customers / Business Partners](#)
- > [Employees](#)
- > [Local / Society](#)
- > [Shareholders / Investors](#)



▼	1. Responsible Care Policy
	(1) Policy
	(2) International Initiatives
▼	2. RC Advancement Structure
▼	3. Environment and Safety Management
	(1) Compliance
	(2) Environmental Management System
	(3) Safety Management System
	(4) Audits
	(5) Environment Distinguished Service Award
▼	4. Stakeholder Engagement
	Dialogue with employees, local communities, customers, and shareholders
▼	5. Disclosure of Legal and Regulatory Violations

1. Responsible Care Policy

(1) Policy

Seeing occupational safety, security and accident prevention, environmental conservation, and product safety as key foundations for its business activities, JSR Group conducts all business undertakings under the following Responsible Care® (RC) policy.

- 1) We will strive to ensure the safety of employees and local communities and to contribute to environmental conservation and a sustainable global environment by ascertaining risks associated with our business activities and executing countermeasures.
- 2) We will strive to comply with laws, ordinances, and voluntary regulations by gathering information on and ensuring the full development of laws and regulations required for business activity.
- 3) We will strive to ensure the safety of our products by developing products with consideration for safety, health, and the environment and providing information about them.

▶ [Responsible Care® \(RC\)](#)

(2) International Initiatives

JSR Signs Declaration Supporting RC Global Charter

The Responsible Care (RC) Global Charter is a voluntary activity policy adopted by the International Council of Chemical Associations (ICCA) and 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.



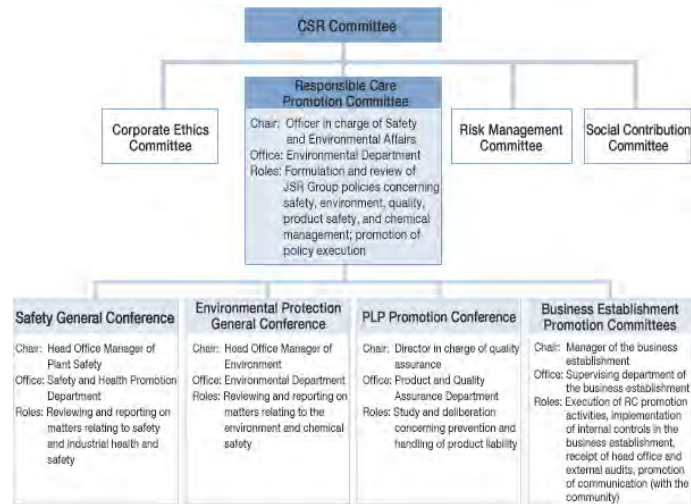
Declaration of support for RC Global Charter

2. RC Advancement Structure

Led by the officer in charge of safety and environmental affairs, the Responsible Care Promotion Committee formulates activity policies and action plans concerning JSR Group's environmental safety, product safety, chemical management, and other matters and manages the results of those activities.

For the execution of concrete operations, the Responsible Care Promotion Committee sets up various meetings and committees and then proceeds according to plans.

Additionally, decisions made by the Responsible Care Promotion Committee are periodically presented to the CSR Committee and are also reported to senior management.



➤ [Details of the CSR Committee and Four Conferences/Committees \(Sustainability Management and Advancement Structure\)](#)

3. Environment and Safety Management

(1) Compliance

When environmental and safety laws are adopted, enacted, or amended, the Head Office distributes information to each business site to keep them fully informed. JSR Group identifies laws and regulations requiring compliance in each country based on compliance regulations and conducts annual self-checks to ensure that business practices conform with laws and regulations.

Additionally, we actively advance efforts to have all plants acquire plant and operator certification under the High-Pressure Gas Safety Act, the Fire Service Act, and Industrial Safety and Health Act in order to strengthen our safety management systems, prevent accidents, and improve our responses to emergencies. We will continue to maintain and upgrade certifications with the aim of improving safety and preventing accidents.

➤ [Security and Accident Prevention "3. Compliance Confirmation and Certification"](#)

(2) Environmental Management System

By 1999, all three main domestic JSR plants had acquired ISO 14001 certification, an Environment Management System that supports environmental management. We have kept our certifications up to date each year since. We proceeded with preparations in response to ISO 14001 revisions that were released in September 2015 and brought all three of our plants in line with them by January 2018.

JSR Group companies, mainly manufacturing companies, have also obtained ISO certification, and are promoting environmental conservation activities using a management system that complies with the ISO14001 standard.

ISO 14001 Certification (Manufacturing Bases)

JSR (3 locations)	Domestic Group companies (5 companies)	Overseas Group companies (9 companies)
Yokkaichi Plant Chiba Plant Kashima Plant	Elastomix Co., Ltd. Emulsion Technology Co., Ltd. Techno-UMG Co., Ltd. Japan Coloring Co., Ltd. JSR Micro Kyushu Co., Ltd.	JSR Micro Korea Co., Ltd. JSR Micro Taiwan Co., Ltd. Elastomix (Foshan) Co., Ltd. PT Elastomix Indonesia JSR BST Elastomer Co., Ltd. ELASTOMIX (THAILAND) CO., LTD. JSR Micro N.V. EUV Resist Manufacturing & Qualification Center N.V. JSR Micro, Inc.

(3) Safety Management System

We develop and operate a safety management system that takes into account notices issued by the Ministry of Economy Trade and Industry. This is part of our process safety management for maintaining the functions and safety of our chemical plants. We also build and manage a health and safety system that is based on the Occupational Health and Safety Assessment Series (OHSAS). The system is designed to manage the industrial health and safety risks to employees and others concerned, continuously improve our industrial health and safety systems, and reduce workplace accidents and health disorders.

➤ [Security and Accident Prevention "1. Management System, Advancement Structure and Policy"](#)

(4) Audits

1) Headquarters Environment and Safety Audits and Certified High-Pressure Gas Establishment Audits

To verify system soundness, JSR Headquarters conducts annual audits of the company's plants and research laboratories, with the President acting as head of the auditing team. When conducting these audits, Headquarters employs a style whereby it shares and discusses issues challenges faced by audited departments. It also sets up dialogues between top management and employees that serve as opportunities for sharing the two sides' thoughts and stimulating environmental and safety activities. Headquarters also conducts audits of certified high-pressure gas establishments.

Looking at FY2019 audits, we verified through our Environment Audits that the applicable laws and regulations of each department are clearly understood and managed appropriately. In our Safety Audits, we verified that awareness of "safety first" has penetrated throughout the organization and that improvements in safety activities have been made. And in our Certified High-Pressure Gas Establishment Audits, we found no cases of non-compliance at any of the targeted business establishments.

Details on the Safety Audits and Certified High-Pressure Gas Establishment Audits are available at the following link.

➤ [Security and Accident Prevention "9. Inspections and Monitoring"](#)

2) Environment and Safety Audits in JSR Group Companies

At JSR, we implement environmental and safety audits using the JSR audit system at our Group companies in Japan that are involved in production, transportation, and engineering processes in order to achieve integrated Responsible Care activities. The audits have allowed us to verify activities in each company and share information on them.

As in past years, the audits conducted in FY2019 allowed us to verify activities in each company and share information on them. And in the case of JSR BST Elastomer (Thailand), an overseas Group company, we conducted an audit that took the form of visiting the company and holding a "safety information exchange" meeting.

Details on these activities are available at the following link.

➤ [Security and Accident Prevention "9. Inspections and Monitoring"](#)

(5) Environment Distinguished Service Award

To further encourage environmental protection activities, we created the Environment Merit Award for employees who have made important contributions to environmental protection through a range of activities that include environmental product and technology development, environmental impact reduction, and assisting local communities with environment-related issues. Eighteen employees received this award for seven areas of excellence in FY2019.

Business establishment	Description
Yokkaichi Plant	Promotion of waste recycling with the operation of a new recycling center
Yokkaichi Plant	Establishment of PCB (polychlorinated biphenyl) treatment and removal technologies
Yokkaichi Plant	Reduction of CO ₂ , AN, and VOC emissions by improving the advanced boiler-turbine control system (DMC)
Yokkaichi Plant	Improvement of work environments and lowering of site boundary densities through blend tank seal gas recovery
Kashima Plant	Improvement of work environments and work efficiency by upgrading waste solvent recovery equipment
Chiba Plant	Improvement of work environments/efficiency and alleviation of wastewater treatment burden by improving butadiene rubber finishing and treatment processes
Chiba Plant	Improvement of work environments by upgrading chemical control technologies for coolants

4. Stakeholder Engagement

By applying the PDCA cycle based on dialogue with our various stakeholders, we identify new issues, make frequent improvements and responses, and contribute to the building of a better society. Please access the links for more details.

Employees: [Corporate culture improvement, employee awareness surveys, activities to ensure penetration of CSR and Responsible Care, etc.](#)

Local / Society: [Dialogue with local communities, social contribution, regional contribution activities, etc.](#)

Customers / Business Partners: Customer satisfaction surveys, responses to CSR questionnaires, communication with business partners, winning of awards, etc.

Shareholders and Investors: Shareholders' meetings, communication with shareholders and investors, information disclosure, etc.

5. Disclosure of Legal and Regulatory Violations

There were no legal or regulatory violations of laws pertaining to the environment, safety, quality, product safety, or chemicals in FY2019.

We are working to prevent recurrence of the types of cases that occurred in the past by continuing preventative measures and providing periodic education on those cases.

What is RC?

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."



Started in Canada in 1985, Responsible Care is practiced in the chemical industries of 62 countries and regions of the world (as of 2017). It has attracted considerable international attention as a unique initiative of a type not seen in other industries, and is even encouraged in an action plan (Agenda 21) for implementation by countries and related international organizations to achieve sustainable development in the 21st century that was adopted at the "Earth Summit" (United Nations Conference on Environment and Development) held in Rio de Janeiro, Brazil, in June 1992.



Environment

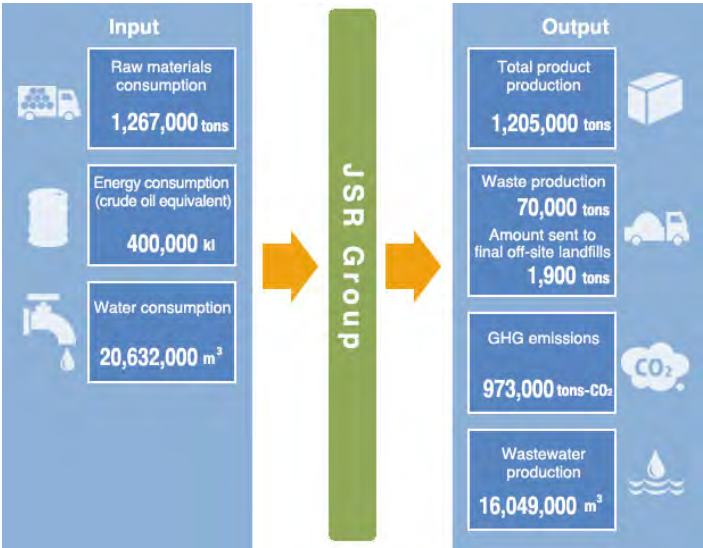
Environmental Impact Reduction (Input and Output)

1. Environmental Impact of Business Activities

JSR Group strives to comprehensively and efficiently reduce its environmental impact by quantitatively ascertaining and closely analyzing its consumption of energy and resources in its business activities (input) as well as its product production, emissions into the environment, waste production, and other data (output).

The chart provides an overview of JSR Group's environmental impact (material balance) in FY2019. It presents totals for three items as input (raw materials consumption, energy consumption and water consumption) and five items as output (total product production, waste production, amount sent to final off-site landfills, greenhouse gas (GHG) emissions, and wastewater production).

> [JSR Group ESG Data](#) [PDF](#)





Environment

Climate Change Mitigation

- ▼ 1. Philosophy
- ▼ 2. Initiatives to Reduce Greenhouse Gas (GHG) Emissions
 - (1) JSR
 - (2) Head Office Building
 - (3) Logistics: Improving Transport Efficiency
- ▼ 3. JSR Group's GHG Emissions and Energy Consumption

1. Philosophy

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. Therefore, with the aim of helping realize a low-carbon society, we strive to lower our GHG emissions by, for example, reducing the amount of energy needed in the various processes of producing and supplying our products.

Amid a global trend whereby businesses are managing GHG (Scope 1 to 3) indirectly emitted from their supply chains and disclosing their emissions, JSR Group calculates and ascertains its emissions based on the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain issued by Ministry of the Environment, Government of Japan.

Scope 1: Direct GHG emissions by sources owned or managed by a company or household (use of fuel: factory, heater, private automobile, etc.)

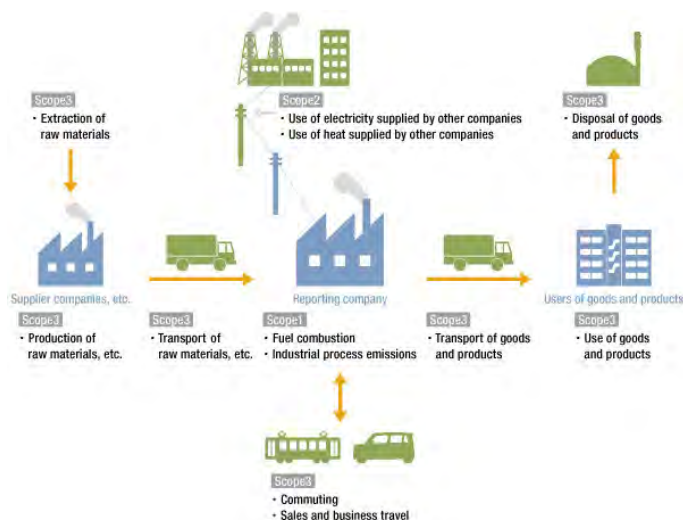
Scope 2: Indirect GHG emissions from the use of electricity, steam, or heat (use of purchased electricity, etc.)

Scope 3: Other indirect emissions besides Scope 2.

("Company" includes the procurement of raw materials, employee business trips, subcontracting of waste disposal, etc.

"Household" includes the purchase of products, travel, subcontracting of waste disposal, etc.)

> [JSR Group ESG Data](#) [PDF](#)



2. Initiatives to Reduce Greenhouse Gas (GHG) Emissions

(1) JSR

Since FY2005, we have been striving to upgrade our energy-saving technologies through various approaches, including installing fuel conversion at the Kashima Plant (South Kashima Power Plant, Inc.) and introducing cogeneration facilities and a sludge dryer system at the Yokkaichi Plant. We thus achieved a significant GHG emissions reduction of 21.6% by FY2013 compared to the FY2005 level.

Although we have continued our efforts to conserve energy in the years since FY2013, our emissions have remained about the same.

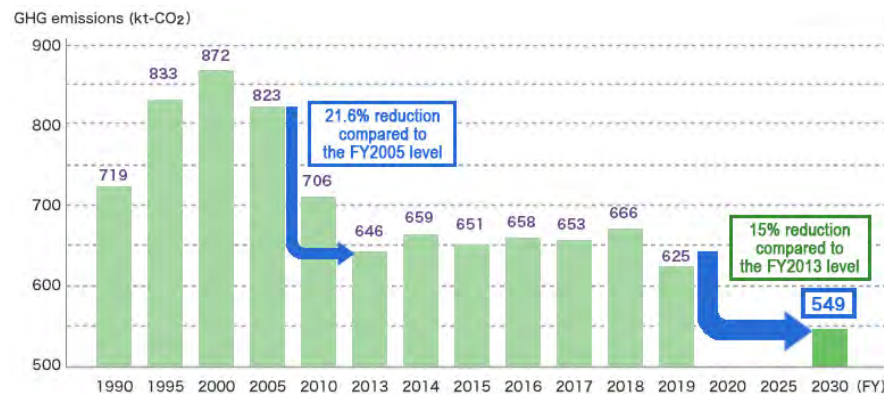
For this reason, in FY2019, we set a long-term goal of "reducing emissions by 15% in FY2030 compared to the FY2013 level" and are endeavoring to further reduce GHG emissions by introducing highly efficient equipment and using renewable energy in addition to our energy consideration activities.

In FY2019, our emissions fell by 3.2% compared to the FY2013 level, in part due to the volume of production.

We currently identifying risks and opportunities with respect to climate change through scenario analyses and formulating medium- and long-term responses as TCFD-related initiatives.

➤ Response to the TCFD Recommendations

GHG emissions (kt-CO₂)



Natural gas-fired turbine cogeneration system (Yokkaichi Plant)

Using natural gas as fuel

Reduces CO₂ emissions compared to coal- or heavy oil-fired steam boilers and condensing steam turbine systems.



Sludge dryer system (Yokkaichi Plant)

Reduces the amount of combustion support fuel (heavy oil) used in onsite incineration by drying high-water-content sludge that is produced by comprehensive wastewater treatment facilities and using it as fuel.

(2) Head Office

The Tokyo Metropolitan Government requires major tenants of a building occupying 5,000 square meters or more in floor area or consuming six million kWh or more of electricity annually to reduce its CO₂ emissions under the Tokyo Metropolitan Ordinance on Environmental Preservation.

Although we are not subject to this obligation, we are promoting energy conservation on our own initiative by voluntarily setting a specific power saving target.

In FY2019, 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.

Power Saving Target

8% reduction compared to the average power consumption from the base years of FY2009 and FY2010

Major Efforts

- Policy of turning off lights and office equipment such as printers when not in use.

- Implemented the so-called "Cool Biz" dress code.
- Introduced a daylight savings time scheme on two days/week from June to September.
- Maintained a proper air-conditioned room temperature that achieves a balance between energy savings and operational efficiency.

Power Consumption at the Head Office



(3) Logistics: Improving Transport Efficiency

As part of our environmental efforts in transportation, we have taken steps to reduce our transport energy use as a designated shipper under the amended Energy Conservation Act. We are working to reduce per-unit transport energy by switching to large-scale transport and making a modal shift from road to rail and water transport.

In FY2019, 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.

FY	2013	2015	2016	2017	2018	2019
CO ₂ emissions (tons)	22,960	23,333	25,495	24,437	24,208	20,211
Category 4 Transportation and delivery of raw materials and other materials	10,489	12,172	14,133	13,177	13,112	10,706
Category 5 Transportation of waste from plants	164	245	206	195	202	193
Category 9 Transportation and delivery of products	12,307	10,916	11,156	11,065	10,894	9,312
Transport volume (million ton-kilometers [*])	492	511	562	534	514	434
Modal shift rate (%)	83	86	87	86	85	85
Energy consumption (kl: crude oil equivalent)	9,026	9,112	9,898	9,899	9,324	7,855
Energy intensity (kl/1,000 t-km)	0.0183	0.0178	0.0176	0.0178	0.0181	0.0181

* Ton-kilometer: Freight Tonnage (ton) x Transport Distance (km)

3. JSR Group's GHG Emissions and Energy Consumption

We also reduced our GHG emissions and energy consumption in FY2019 as a result of lower production volume as well as our various energy conservation activities. (GHG emissions: 6% year-on-year reduction; energy consumption: 7% year-on-year reduction)

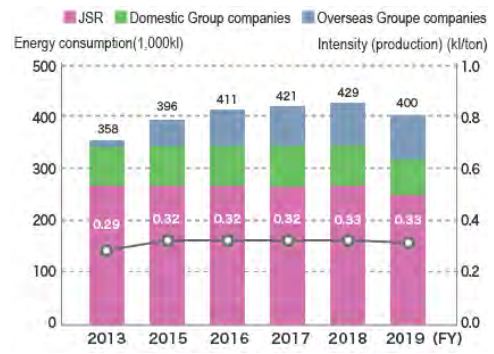
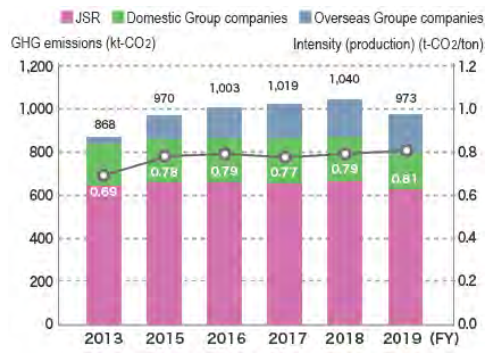
Looking globally, we are seeing overseas growth trends attributable to expanding production bases and other factors.

Because our overseas contribution rate is growing, we will address TCFD-related concerns from a global standpoint.

➤ [Response to the TCFD Recommendations](#)

GHG emissions

Energy consumption





Environment Water Resources

- ▼ 1. Philosophy
- ▼ 2. Breakdown of water consumption (by intake source) and recycling rate
- ▼ 3. JSR Group's Water Consumption and Total Amount of Wastewater

1. Philosophy

Water is an essential resource for living beings. Globally, freshwater, in particular, is an extremely valuable resources. In Japan, as in other countries, water resources are being affected by natural disasters caused by abnormal weather events, some of which are a result of climate change. This makes the appropriate management of water resources a necessity. JSR Group uses such water resources for drinking water, of course, but also as a raw material and coolant in its manufacturing processes. We strive to recycle water in our processes and, after it is used, appropriately purify it before discharging it to rivers.

➤ Environmental load (COD discharges, total nitrogen emissions, total phosphorus emissions) → [JSR Group ESG Data](#) [PDF](#)

2. Breakdown of water consumption (by intake source) and recycling rate

JSR consumed 14,888,000 m³ of industrial water, groundwater^{*1} and tap water in FY2019. Of this amount, 29.3% was recycled in plant processes. We will endeavor to manage our water resources by continuing this effort, with the goal of "maintaining our current recycling rate."

	(x 1,000 m ³ /year)					
FY	2013	2015	2016	2017	2018	2019
Industrial water	14,734	14,190	13,917	13,667	14,790	14,309
Ground water	234	253	354	393	313	408
Tap water	167	158	176	200	172	171
Total Water Consumption	15,134	14,600	14,447	14,259	15,275	14,888
Usage of recycling water	4,496	4,159	4,193	4,250	4,481	4,210
Recycling rate (%)	29.7	28.5	29.0	29.8	29.3	28.3

*1 Groundwater is not used at the Yokkaichi and Chiba Plants.

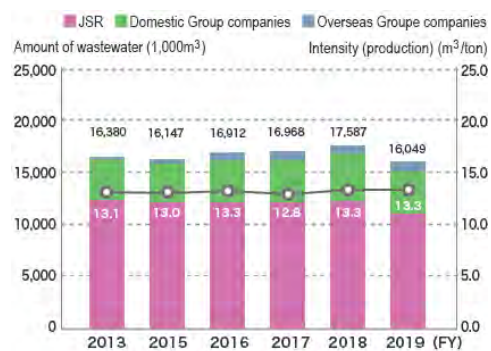
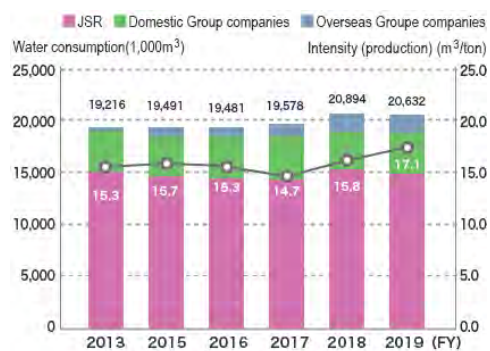
3. JSR Group's Water Consumption and Total Amount of Wastewater

Our water consumption is growing as JSR's production bases grow. Even so, in FY2019, our water consumption stood at 20,632,000 m³ (a 1% year-on-year decrease) and our total amount wastewater was 16,049,000 m³ (a 9% year-on-year decrease).

We will strive to appropriately manage our water resources with recognition of society's growing attentiveness to them.

Water consumption

Amount of Wastewater





▼	1. Philosophy
▼	2. Initiatives to Reduce Industrial Waste (1) JSR (2) Logistics: Application of "3R" (Reduce, Reuse, Recycle) to Packaging Materials (3) PCB Management
▼	3. Industrial Waste Produced by JSR Group

1. Philosophy

In Japan, waste disposal is coming under pressure as a result of waste import regulations in Asian countries. At the same time, demands for a recycling-based society are intensifying globally, as the discharge and emission of plastic waste into the seas are damaging marine ecosystems and environments and becoming a major global environmental issue.

JSR Group is controlling the amount of waste it produces, sorting waste, and searching for recycling locations with the aim of creating an industry-led recycling-based society.

2. Initiatives to Reduce Industrial Waste

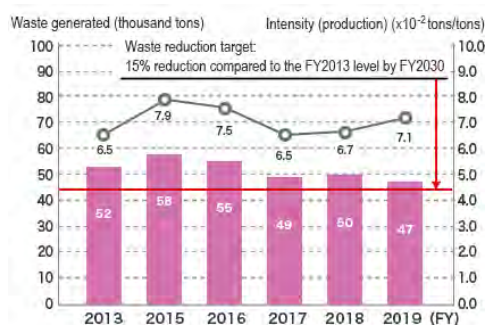
(1) JSR

JSR is taking the following initiatives to create a recycling-based society.

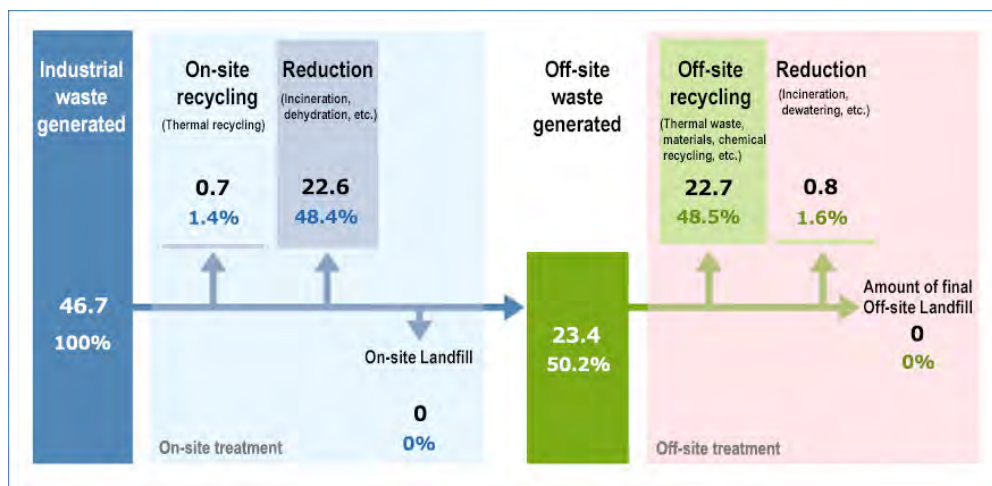
- In the area of generated waste, we set a long-term goal of "reducing waste by 15% in FY2030 compared to the FY2013 level" in FY2018 and are promoting waste reduction and recycling accordingly.
In FY2019, we successfully reduced our generated waste by 10.2% compared to FY2013. We will continue taking steps toward our goal.
- As for promoting waste recycling, we are sorting and collecting complex wastes after putting a new recycling center into operation at the Yokkaichi Plant in FY2018. This is in addition to our promotion of recycling in such ways as converting waste into raw materials for cement.
- For the problem of "marine plastic litter," which has become a global environmental issue in recent years, we established "The FY2030 Goals: 1) 100% recycling (including heat recovery), and 2) 60% recycling (not including heat recovery)" as long-term targets in FY2019. We took this step to further accelerate our recycling of waste plastics in response to the national government's Plastic Resource Recycling Strategy.
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, and participating in coastal cleanups.
Moreover, we became a participant of the Japan Initiative for Marine Environment (JaIME) as a founding member in FY2018.
- And for the amount of waste we send to final off-site landfills, we have set "zero emissions"^{*1} as a goal since FY2000 and taken continuous steps to achieve it 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

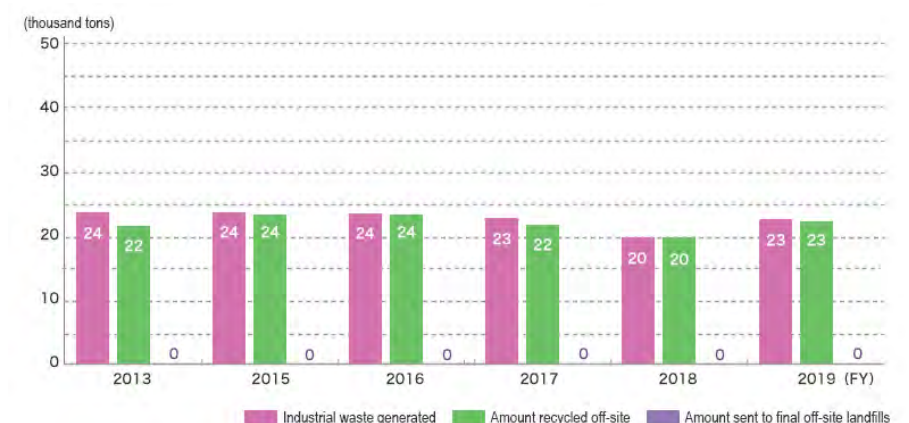
JSR's Waste Generation and FY2030 Reduction Goals



Industrial Waste Processing Flowchart (FY2019 performance in thousand tons/year)



Industrial Waste Generated—Amount Recycled Off-Site—Amount Sent to Final Off-Site Landfills



Waste plastics recycling by JSR and domestic Group companies (FY2019)

The FY2019 waste plastics recycling rate (including heat recovery) was 100% for JSR and 67% for domestic Group companies. We will continue moving forward with activities to further raise our recycling rates in order to achieve our targets.

	Waste plastics		
	Amount generated (thousand tons)	Amount recycled (thousand tons)	Recycling rate (%)
JSR	1.2	1.2	100
Domestic Group companies	4.1	2.7	67

* Recycling includes heat recovery

(2) Logistics: Application of "3R" (Reduce, Reuse, Recycle) to Packaging Materials

JSR has always been serious about environmental measures in its logistics. Therefore, we promote "3R" (Reduce, Reuse, Recycle) to effectively utilize waste-free packaging materials and packaging containers.

Reduce: Reducing the weight of steel box pallets used as packing containers for synthetic rubber and also reducing the amount of waste generated by reviewing waste standards and the weight of external cardboard boxes (two-tier construction

to single-tier).

Reuse: Raising reuse rates by reusing intermediate product containers and preventing the breakage of packaging materials for linked use with customers' cooperation.

Recycle: Promoting a switchover to recyclable materials when selecting packaging materials.

JSR will actively engage in the above 3R activities for packing materials to promote recycling and effective use of resources.

* Packaging materials for linked use: Packaging materials that can be returned by or collected from the customer for reuse

(3) PCB Management

JSR stores and manages PCB waste in an appropriate manner in accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes and systematically carries out detoxification treatment to meet treatment deadlines.

Treatment of high-concentration PCB

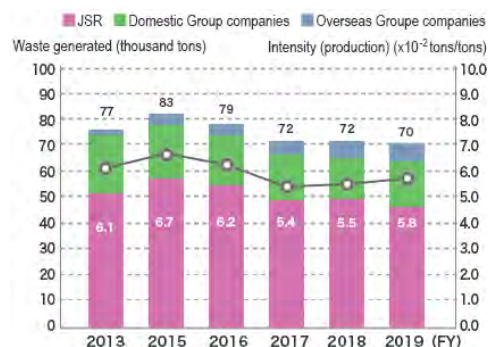
	Cases (devices)	Oil containing PCB (liter)
In storage	0	282
In operation	0	0
Total	0	282
Treatment volume thus far	321	183,140
Current treatment status (%)	100.0	99.8

As of March 31, 2020

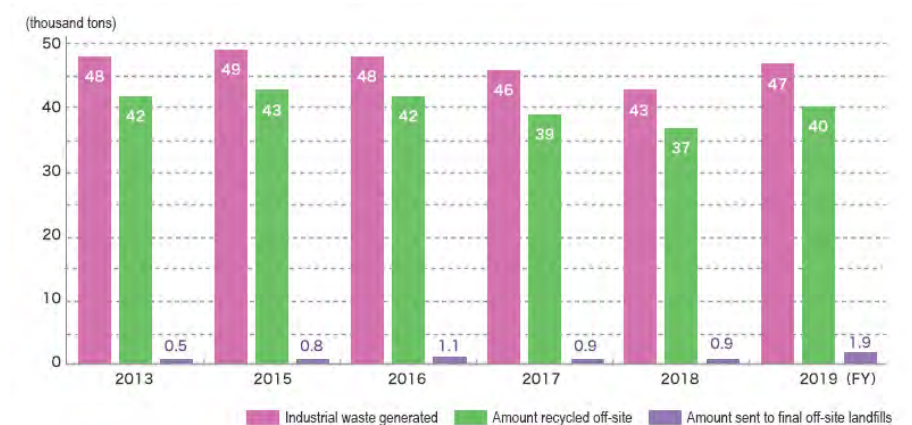
3. Industrial Waste Produced by JSR Group

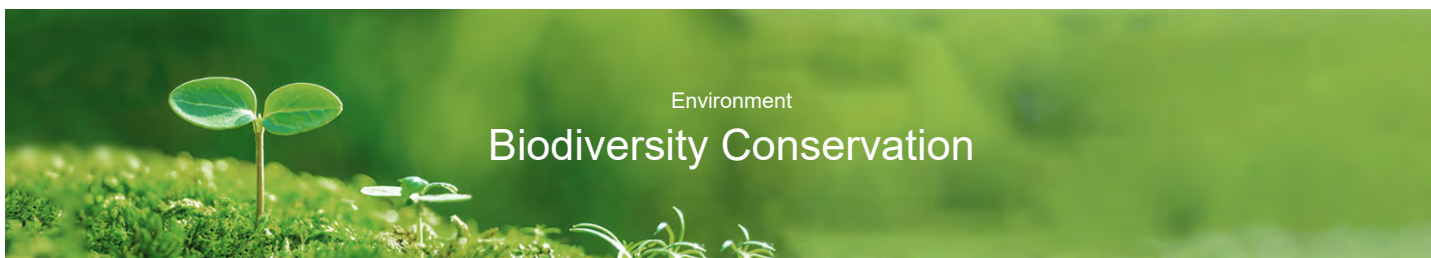
In FY2019, we generated 70,000 tons of waste globally, an amount that was 3% lower than the previous year, and our recycling rate was 86%. We will promote activities that take a long-term perspective on the global side of our business as well.

JSR Group's Waste Generation



Industrial Waste Generated—Amount Recycled Off-Site—Amount Sent to Final Off-Site Landfills





Environment

Biodiversity Conservation

▼ 1. JSR Group Biodiversity Policies

▼ 2. Activity Progress Status

1. JSR Group Biodiversity Policies

JSR Group has formed biodiversity policies in FY2012 based on issues identified through conservation activities conducted in the past. We are currently promoting various activities in accordance with these policies.

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

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

Policy Formulation Process

Utilizing the JBIB^{*1} Business and Biodiversity Interrelationship Map, we have clarified how our business activities depend on and impact biodiversity. We have since established JSR Group Biodiversity Policies on the basis of this clarification.

^{*1} JBIB: Japan Business Initiative for Biodiversity.

2. Activity Progress Status

We investigate the effects that JSR Group's business activities have on biodiversity based on our Biodiversity Policies. As a result, we have not found any significant negative impacts on biodiversity from the raw materials we procure or our production sites. Moreover, we have confirmed that no JSR Group production sites in Thailand, Indonesia, and Mexico, which are considered to be particularly highly biodiversity-sensitive regions, are located within protected land areas, protected sea areas, or important biodiversity regions.^{*2} JSR Group will respect biodiversity and promote conservation activities to the maximum extent possible.

^{*2} Survey using the Integrated Biodiversity Assessment Tool (IBAT)

> [IBAT-JSR Group Plants](#) 

Policy 1 - We prioritize biodiversity conservation in procuring naturally derived raw and processed materials.

1) Investigation to clarify the naturally derived raw materials that may have an impact on biodiversity.

We discovered that there were no items among main raw materials, but there were some such items in some auxiliary raw materials. We conducted an investigation to determine the impact of these materials. We found no impact at this time. We will continue to conduct similar investigations when using raw materials that may have an impact.

2) Sustainable Paper Usage

While not a main raw material, paper is used for copies, publications, envelopes, and packaging material. As such, JSR Group is working toward sustainable paper use and has participated in the Consortium for Sustainable Paper Use, which was established to increase the use of sustainable paper in society, since its establishment in 2013.

We promote activities throughout the Group that prioritize the procurement of company envelopes, copy paper, and other materials made primarily from used paper, or paper with FSC or other forest




sustainability certifications in accordance with the JSR Group Paper Procurement Guidelines, which were established in FY2013 to promote forest sustainability.

Policy 2 - We work to make the green spaces of our business establishments biodiversity-friendly.

By FY2014, we were able to improve green spaces at all JSR plants and the Tsukuba Research Laboratories based on the Green Space Improvement Plan that we created with the cooperation of experts as well as using the results of a green space survey conducted in accordance with the JBIB Guidelines for Sustainable Business Sites. Each office is continuing to conduct similar activities independently.

Yokkaichi Plant	
Overview of Activities	  <p>Nature tour for employees' families led by the curator of a local museum</p>
<ul style="list-style-type: none"> The Yokkaichi Plant is actively using its green spaces as places for communication and environmental education. It holds biodiversity-themed events for employees and their families. It maintains and manages biodiversity spaces at the plant site and company housing. 	
FY2019 Activities	
<ul style="list-style-type: none"> Holding of a nature tour for employees' families led by the curator of a local museum Date: Sunday, November 3 Participants: 45 (16 groups of parents and children) Description: Finding plants and insects living in green spaces using an event card prepared beforehand (Check for all items noted on the card on the day of the event: cast-off cicada skins, red dragonflies, <i>Desmodium paniculatum</i> seeds, acorns, and <i>Sarcandra glabra</i> seeds.) Maintenance and management of biodiversity spaces that were created at the plant site and company housing Expert-led organism survey within biodiversity-friendly green spaces (verification of biodiversity effects) 	
Future Activity Plans	
<ul style="list-style-type: none"> Continued acceptance of tours of biodiversity-friendly plant green spaces (stops during plant tours and tours conducted at the workplace level) Holding of a nature tour for employees' families to be led by the curator of a local museum (Once or twice a year) → Next time in 2021 Maintenance and management of green spaces at the plant site and company housing that have been improved as biodiversity-friendly green spaces Expert-led organism survey within biodiversity-friendly green spaces (planned to be conducted around three times per year) The Yokkaichi Plant creates biodiversity-friendly green spaces and then strives to measure and improve their effects through expert-led organism surveys. 	

Chiba Plant	
Overview of Activities	<ul style="list-style-type: none"> The Chiba Plant has developed the "Ikoi no Hiroba" (Relaxation Garden) that is part of its green spaces into a biodiversity-friendly and uses it as a place for talking about biodiversity.
FY2019 Activities	<ul style="list-style-type: none"> Weeding, cleaning, and other maintenance and management of green spaces on the plant site Establishment of priority areas and reexamination of green space usage "Company and biodiversity seminar" (cancelled due to the COVID-19 pandemic)
Future Activity Plans	<ul style="list-style-type: none"> Development of green spaces in priority areas and promotion of their use

Kashima Plant	
Overview of Activities	 <p>Improved fences and bird netting near the biotope</p>
<ul style="list-style-type: none"> Development of the "pond" area to recreate the local ecosystem on the plant's grounds 	
FY2019 Activities	
<ul style="list-style-type: none"> Planting of fruit-bearing trees (e.g., loquat, persimmon, lemon, and Mandarin orange) around the biotope and green buffer zone (May) Improvement of fences and bird netting near the biotope (March) Weeding of invasive plants (lance-leaved coreopsis) (July) Regular conduct of JBIB Land Use Score Card evaluations (March), and confirmation that biodiversity-friendly green spaces are being maintained with a score that is one point higher than FY2019 	
Future Activity Plans	

- Maintenance of developed biodiversity-friendly green spaces and development of unimproved green spaces

Tsukuba Research Laboratories

Overview of Activities

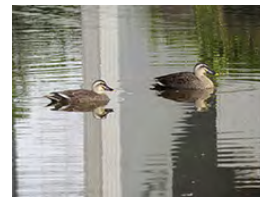
- The facility establishes a biodiversity promotion area and practices wildlife-friendly green-space management.

FY2019 Activities

- In principle, prohibition of the chemical substances (herbicides) within the area
- Creation of soil with fallen leaves and branches (consideration for the cycle of matter)
- Regular monitoring of invasive species

Future Activity Plans

- Establishment of a biodiversity promotion area and wildlife-friendly green-space management



Spot-billed ducks in the pond within the biodiversity promotion area (observed for seven consecutive years)

Policy 3 - We strive to develop biodiversity-friendly products.

We strive to engage in biodiversity-friendly product development by procuring raw materials and developing products that have little environmental impact.

Policy 4 - We emphasize staff engagement and cooperation with local communities.

We hold various events at our offices as part of our business activities

Environment

Environmental Conservation

- ▼ 1. Protection of Atmospheric, Water, and Soil Environments
 - (1) Protection of the Atmospheric Environment
 - (2) Protection of Water Environments
 - (3) Protection of Soil Environments
- ▼ 2. Measures Targeting PRTR Substances
- ▼ 3. Asbestos Measures
- ▼ 4. Improving the Local Environment
- ▼ 5. Investments in Environmental and Safety Equipment

1. Protection of Atmospheric, Water, and Soil Environments

JSR endeavors to protect the environment by complying with such laws as the Air Pollution Control Act, Water Pollution Prevention Act, and Soil Contamination Countermeasures Act and thereby avoid polluting the air, water or soil (including groundwater).

(1) Protection of the Atmospheric Environment

1) Initiatives to reduce emissions of sulfur oxides (SOx) and nitrogen oxides (NOx)

JSR keeps its emissions below regulatory values by implementing various measures, including those described below.

- Installation of flue gas desulfurization equipment (Yokkaichi Plant: in-house power generation)
- Fuel conversion (from heavy oil to public utility gas) (FY2013, South Kashima Power Plant, Inc.)
- Introduction of denitrification equipment and low-NOx burners

We will maintain current levels through full management of the above-mentioned measures.

➤ [SOx and NOx emissions → JSR Group ESG Data](#) [PDF](#)

2) Initiatives for the Reduction of VOCs^{*1} Emissions into the Atmosphere

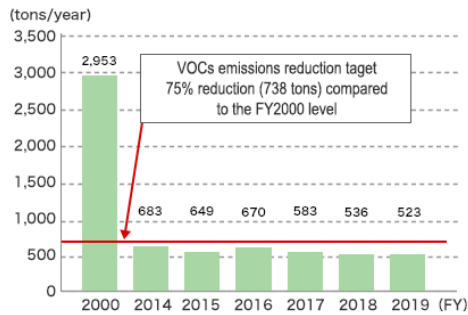
Setting a voluntary target that is even higher than that of the government and Japan Chemical Industry Association (specifically, to reduce emissions of VOCs by 75% compared to the FY2000 level), JSR is making large-scale capital investments and taking other actions to reduce its emissions.

- Installation of regenerative thermal oxidizer (synthetic rubber finishing system flue gas treatment) (FY2006-2009; 5 devices at 3 plants)
- Operational improvements (e.g., enhancing airtightness of release points, using a closed system for chemical sampling)
- Preventing leaks (valves, axle seals, etc.)

As a result, our VOCs emissions in FY2019 were 523 tons (82% reduction as compared to FY2000), and thus we continue to meet our voluntary target. We will maintain our current voluntary target levels through full management of the above-mentioned measures.

^{*1} VOCs: Volatile Organic Compounds.

VOCs emissions



3) Preventing freon leaks

JSR works to control leaks when using Class-1 Specified Equipment, including industrial air conditioners, refrigerators, and freezers, based on the Act on Rational Use and Proper Management of Fluorocarbons.

In order to properly promote efforts to control freon leaks, we prepared management standards that expand the scope of management to include all devices that use freon (including those that are not designated products) and are continuing to manage leaks based on them. Our freon leaks in FY2019 amounted to 215 t-CO₂ after CO₂ conversion (reporting to the government is mandatory for leaks of 1,000 t-CO₂ or more).

In addition, we are introducing a system to electronically manage documents collectively in response to a legal revision (requiring, among other things, the storage of more documents) that was executed on April 1, 2020.

We will continue to appropriately manage leaks and link our efforts to leak control.

(2) Protection of Water Environments

JSR performs rigorous wastewater management at all of its plants, and strives to maintain and improve water quality. JSR has been in full compliance with the 7th Total Pollutant Load Control that was put into operation in April 2012. It should be noted that nitrogen regulations in Mie Prefecture, where our Yokkaichi Plant is located, were strengthened in the 8th Total Pollutant Load Control. We have achieved a level that meets the 8th Total Pollutant Load Control's requirements by continuing to take steps to improve water quality. We will continue to strictly monitor water quality and strive to further reduce our impact on water.

➤ [Environmental Load \(COD emissions, total nitrogen emissions, total phosphorus emissions\) → JSR Group ESG](#)

[Data](#) [PDF](#)

(3) Protection of Soil Environments

JSR regularly conducts fixed-point studies of soil and groundwater (observation wells) at each of its plants. As in previous years, no problems were found in FY2018.

Additionally, whenever we plan construction that involves changing the soil's form and nature over an area exceeding 900 m², we voluntarily conduct a soil survey beforehand.

In FY2019, ordinance-based groundwater benzene densities exceeding base values were detected in a voluntary survey conducted in the Yokkaichi Plant. We notified the authorities of our discovery of contamination and will continue taking appropriate measures in accordance with the law and ordinances.

2. Measures Targeting PRTR^{*2} Substances

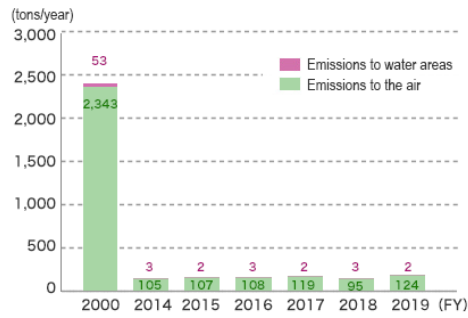
Based on the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof, JSR aggregates the amount of designated chemical substances emitted into the environment (atmosphere, water and soil), transferred by manufacturing, or used in the previous year, and notifies the government of Japan of the results. We have systematically implemented a range of measures primarily for substances that are highly hazardous or are emitted in significant amounts and have a great impact on the environment. Such measures include enhancing the airtightness of substance release sources, rendering substances harmless by incineration, and improving manufacturing processes.

As a result, our atmospheric emissions in FY2018 (95 tons) amounted to a 96% reduction as compared to FY2000.

We will maintain current levels through full management of the above-mentioned measures. We will also proceed with preparations in anticipation of future legal revisions (specifically, a reexamination of the substances subject to notification).

^{*2} PRTR: Pollutant Release and Transfer Registers

➤ [Emissions of main chemical substances → JSR Group ESG Data](#) [PDF](#)



3. Asbestos Measures

JSR conducted a survey of locations sprayed with materials containing asbestos in all of its facilities, including Group companies. For those places that were identified as a result, we undertook removal and enclosure work in accordance with the Ordinance on Prevention of Health Impairment due to Asbestos. This work was completed in FY2006.

In addition, whenever we demolish structures, we take appropriate measures based on the Air Pollution Control Act and Ordinance on Prevention of Health Impairment due to Asbestos to ensure that no workers or others nearby suffer health problems due to exposure to asbestos. We will also take steps to respond to scheduled revisions of the Air Pollution Control Act.

4. Improving the Local Environment

JSR values the opinions of people living near its manufacturing and research bases, and considers high transparency of plant operations to be the key to improving the local environment. With this in mind, we have strived to improve the local environment by implementing monitoring and tours of environmental equipment at regular intervals.

In FY2006 and FY2007, we installed equipment to incinerate dry synthetic rubber dry exhaust (RTO^{*3}) at the Yokkaichi, Kashima, and Chiba plants to prevent foul odors. In FY2008, a ground flare was installed at the Yokkaichi Plant to prevent noise and flashes. Additionally, we are working to further diminish odors by continuing steady improvement activities while also taking such measures as sealing off sources of foul odors and spraying a special deodorant that we developed with a deodorant manufacturer.

We will continue striving to maintain our basic policy of improving the local environment.

^{*3} RTO (Regenerative Thermal Oxidizer): A device that combusts breaks down VOCs into water and CO₂ to make emissions clear



Dried-synthetic rubber waste incinerator (Kashima Plant)



Ground flare (Yokkaichi Plant)

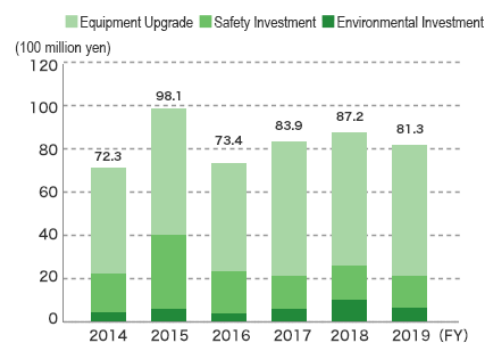
Number of Environmental Complaints (JSR and Domestic Group Companies)

FY		2015	2016	2017	2018	2019
No. of environmental complaints	Odor	0	0	0	0	0
	Noise	0	0	0	0	0
	Vibration	0	0	0	0	0
	Other	0	0	0	0	0

5. Investments in Environmental and Safety Equipment

JSR makes continuous investments in the environment and safety. In FY2019, our investments totaled 8.1 billion yen when investments in safety equipment (e.g., for prevention of workplace accidents and replacement of aging equipment) and in environmental facilities are combined. We will continue actively making investments to maintain and improve the environment, safety, and health

in accordance with our medium-term capital investment plan.



* Equipment upgrade and safety investment after FY2016 are budget figures



▼	1. Policy, Scope, and Underlying Assumptions
▼	2. Environmental Protection Costs
▼	3. Environmental Protection Effects
▼	4. Economical Effects of Environmental Protection Measures -Substantial Effect-
▼	5. Consolidated Accounting

1. Policy, Scope, and Underlying Assumptions

(1) Policy

JSR introduced environmental accounting in FY1999 with the following two objectives

1. To strive to quantify the amount of resources invested into the environment and implement sound measures for the environment.
2. To publish environmental accounting and increase corporate transparency.

(2) Scope

JSR Corporation - JSR Head Office, Yokkaichi Plant, Chiba Plant, Kashima Plant, Yokkaichi Research Laboratories, Tsukuba Research Laboratories, and Nagoya Branch

(3) Target Period

April 1, 2019 - March 31, 2020

(4) Underlying Assumptions regarding Aggregation and Calculation

1. Calculations are performed in accordance with the Environmental Accounting Guidelines, 2005 edition (Ministry of the Environment) and environmental guidelines used in the chemical industry (issued by the Japan Chemical Industry Association and the Japan Responsible Care Council).
2. While the calculation of costs was based mainly on actual results, the calculation of some expenses was based on underlying assumptions.
3. Economic effects were substantial and did not include conversions of risk aversion effects or deemed effects into monetary amounts.

2. Environmental Protection Costs

(Unit: one million yen)

Classification		Content of main activities Figures in parentheses express millions of yen.	Investment		Expense	
			FY2018	FY2019	FY2018	FY2019
(1) Business area costs			1,022	718	4,515	4,512
Breakdown	(1)-1 Pollution prevention costs	Investments: Wastewater treatment facility maintenance, etc. Expenses: Air pollution prevention maintenance and management, etc.	743	544	1,823	1,935

	(1)-2 Global environmental protection costs	Investments: Major on-site power generation equipment upgrades, etc. Expenses: Routine on-site power generation equipment maintenance, etc.	94	69	975	929
	(1)-3 Resource circulation costs	Investments: Sludge dryer system improvement, etc. Expenses: Industrial waste recycling, disposal, etc.	185	104	1,717	1,648
(2) Upstream/downstream costs			0	0	0	0
(3) Management activity costs			25	38	502	522
(4) Research and development costs			0	0	1,116	1,645
(5) Social activity costs			0	0	47	49
(6) Environmental pollution response costs			0	0	0	0
Total			1,047	756	6,180	6,728

3. Environmental Protection Effects

Effect	Index	Unit	FY2018	FY2019	Difference ^{*1}	Related information
Environmental effects related to resources used in business activities	Total energy consumption (crude oil equivalent)	kL	269,400	251,100	-18,300	➤ For more information
	Use of resources designated under PRTR Act	tons	725,700	632,800	-92,900	➤ For more information
	Water consumption	1,000m ³	15,300	14,900	-400	➤ For more information
Environmental protection effects related to environmental impact and waste emitted from business activities	GHG emissions	tons	666,100	624,900	-41,200	➤ For more information
	SOx emissions	tons	4	4	0	➤ For more information
	NOx emissions	tons	308	303	-5	➤ For more information
	PRTR substance emissions	tons	98	126	28	➤ For more information
	Total amount of wastewater	1,000m ³	12,500	11,300	-1,200	➤ For more information
	Chemical Oxygen Demand emissions	tons	479	404	-75	➤ For more information
	Total nitrogen emissions	tons	128	145	17	➤ For more information
	Total phosphorus emissions	tons	1	1	0	➤ For more information
	Waste materials from plants	tons	20,300	23,400	3,100	➤ For more information
	Off-site recycling	tons	20,000	22,700	2,700	➤ For more information
	Reduced volume of waste treated off-site	tons	239	764	525	➤ For more information
	Waste materials from plants disposed of by landfill	tons	0	0	0	➤ For more information
	PRTR materials transported	tons	328	338	10	➤ For more information
Other environmental effects	Products transported	million ton-	514	434	-80	➤ For more information

	kilometer					
During transport GHG emissions	tons	24,200	20,200	-4,000	> For more information	
Number of environmental complaints (Odor, noise, and vibration)	cases	0	0	0	> For more information	

*1 Improvement from previous years has not been corrected in terms of the production volume.

4. Economical Effects of Environmental Protection Measures

-Substantial Effect-

(Unit: million yen)

Effect (for one year)		Benefit	
		FY2018	FY2019
Cost reduction	By saving energy	75	185
	By saving resources	124	119
	By treating waste on-site	343	985
Total		542	1,289

5. Consolidated Accounting

(Unit: one million yen)

	Investments		Expense		Benefit	
	FY2018	FY2019	FY2018	FY2019	FY2018	FY2019
JSR	1,047	756	6,181	6,728	542	1,289
Domestic Group companies total	363	81	2,241	2,066	194	187
Total ^{*2}	1,410	837	8,422	8,794	736	1,476

*2 Total of JSR Corporation and 8 JSR Group companies



Environment

Chemical Management

- ▼ 1. Philosophy and Advancement Structure
Chemical Management Basic Policies, Chemical Management Advancement Structure
- ▼ 2. Compliance
- ▼ 3. Response to Overseas Regulations Concerning Exported Chemicals, etc.
- ▼ 4. Chemical Management within Supply Chain Management
- ▼ 5. Industrial and International Measures

1. Philosophy and Advancement Structure

Under its CSR advancement scheme, JSR Group advances measures pertaining to chemical management based on promotion items and concrete action plans founded on those items that are established by the Responsible Care Advancement Committee.

(1) Chemical Management Basic Policies

In light of recent global trends in chemical management, JSR has established the following three policies in its environment and safety management organization by which chemical management is implemented.

1. Instead of hazard-based management^{*1}, we will endeavor to implement risk-based management^{*2}.
2. We will strive to manage our entire supply chain by utilizing a globally standardized method.
3. We will strive to comply with regulations and promote self-motivated initiatives to ensure the safety of our products.

^{*1} Hazard-based management: Management based solely on the hazardous properties of substances

^{*2} Risk-based management: Management based on exposure to the hazardous properties of substances

(2) Chemical Management Advancement Structure

Overview of the advancement structure

➤ [Please see the "Responsible Care" 2. RC Advancement Structure](#)

JSR's chemical management structure revolves around corporate department-driven domestic legal compliance and export compliance, as well as overseas chemical management by local subsidiaries. This has allowed us to pick up early on domestic and overseas environmental changes and trends toward stronger regulation and, thus, to develop and implement a planned response.

Furthermore, in order to bolster our chemical management structure and facilitate greater responsiveness in the face of accelerating regulatory strengthening, new legislation creation and other such developments overseas, in FY2019 we established a specialized Chemical Management Department within the Elastomer Business Division, which has experienced a particularly pronounced global expansion in its customer base. Also, an overseas law and regulation-related administrative structure has been set up which makes use of corporate departments to gather a broad spectrum of law and regulation-related information from industry groups and other sources, and this information is then shared in a timely manner throughout all of JSR, including Group companies and local subsidiaries.

At JSR, we will continue to develop structures and systems that allow us to flexibly respond to domestic and overseas trends, as well as business expansion.

2. Compliance

(1) Response to Chemical Product-related Domestic Laws and Regulations

In 2017, the Chemical Substances Control Act^{*3} was amended, and the revised portion of this Act which is concerned with the confirmation system used for low volume new chemical substances came into effect in 2019. With regard to the new requirements introduced by the revisions, e.g., that use certificates be submitted for each substance, JSR undertook advance preparations, in-house training and took other steps to ensure that there have been no problems with any of our applications since the revisions have gone into effect. In addition, we have made advance preparations and are systematic undertaking measures to ensure compliance with the amended Food Sanitation Act taking effect in 2020, the anticipated amendment of the Law concerning Pollutant Release and Transfer Register^{*4}, and other legislative amendments.

^{*3} Act on the Regulation of Manufacture and Evaluation of Chemical Substances

^{*4} Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

(2) GHS Compliance and Provision of SDS for All Products

1) GHS Compliance

GHS^{*5} is as an international standard for (a) classification of chemical products according to hazard and toxicity; (b) labeling on product packaging and containers; and (c) documentation and provision of details in the SDS^{*6}.

In Japan, the Industrial Safety and Health Act and the Law concerning Pollutant Release and Transfer Register stipulate mandatory application of GHS to the labels and SDS of products containing GHS-designated chemical substances, with GHS classification stipulated under JIS Z 7252 and SDS and other communicated information stipulated under JIS Z 7253. At JSR, we perform GHS-based hazard and toxicity classification and create appropriate labels, as well as provide SDS, for all of our domestic products that contain applicable substances. We will also strive to ensure our compliance with laws concerning this matter that are being enacted in other countries.

^{*5} Globally Harmonized System of Classification and Labeling of Chemicals

^{*6} Safety Data Sheet: Documentation listing the names, respective hazards and toxicities, etc., of substances contained in chemical products in order to ensure their safe handling

2) Provision of SDS for All Products

JSR has voluntarily adopted a policy of providing customers with environmental and safety information by preparing SDS not only for those products which contain hazardous or toxic substances but for all products which contain polymers. All SDS prepared by JSR are in compliance with JIS Z 7253, Industrial Safety and Health Act, the Law concerning Pollutant Release and Transfer Register and the Poisonous and Deleterious Substances Control Act.

Furthermore, in order to provide customers with SDS that contain the most accurate information possible about each product, we were early adopters of an SDS electronic data management system which we have operated since its creation in 2002. This system includes user management, chemical substance database management, creation support, and publication (revision) history, and it allows us to accurately and quickly provide environmental and safety information related to JSR products.

(3) Education on Chemical Substance Regulations

JSR provides in-house training on chemical substance regulations in Japan and abroad. In FY2019, we held domestic law seminars on new chemical substance registration and the amended Chemical Substances Control Act, and we held foreign law seminars on the substance registration systems used in China, Korea and Taiwan. These seminars were held at the head office and business establishments, and Group companies were also invited. A total of 98 people participated.

3. Response to Overseas Regulations Concerning Exported Chemicals, etc.

Countries around the world have been strengthening their chemical products laws and regulations in advance of 2020, as this is the target year for meeting an international goal^{*7}. Different countries have begun introducing new regulations, such as those requiring registration of existing chemical substances, following the EU's enactment of the REACH Regulation in 2007, and JSR has been responding to each of these without omission in a manner that corresponds to business content and characteristics and local subsidiary systems. The legal and regulatory responses being undertaken by JSR for major production and import/export countries are detailed below; however, in addition to these, JSR is also ensuring compliance with the chemical product-related laws and regulations of numerous other countries, including those in ASEAN.

^{*7} WSSD 2020 Goal (long-term goal for chemical substances management that was adopted by the 2002 World Summit on Sustainable Development): Minimization of significant adverse effects on human health and the environment by 2020

(1) EU (REACH Regulation compliance)

The REACH^{*8} Regulation was enacted by the EU in June 2007. Under REACH, all chemical products whose total production or import volume within the EU is one ton or more must register safety testing results and other data for the chemical substances contained in them, regardless of whether they are new or existing substances.

In order to ensure there is no disruption to our EU product production or import, we not only regularly check whether or not the substances JSR utilizes require registration, we also prepare for likely usage restrictions arising from future substance evaluations by sharing information with development departments and taking other steps to anticipate risk once evaluations

commence.

We have also finished implementation of necessary measures, such as REACH agent transfer, accompanying "BREXIT" in 2019. We are ensuring that we are in compliance with British laws and regulations by the time of Britain's withdrawal from the EU at the end of 2020.

*8 Registration, Evaluation, Authorisation and Restriction of Chemicals

(2) United States

In the United States, new chemical substance reporting is overseen by the Environmental Protection Agency under the Toxic Substances Control Act (TSCA) and other related federal laws and regulations. JSR follows all applicable legal procedures with regard to the manufacture and importation within the United States of substances not included on the list of existing chemical substances. Also, in response to the amended TSCA which went into effect in 2016, we work in conjunction with our local subsidiaries to flexibly respond to the new legal requirements, as well as promote responsiveness to regulatory trends accompanying the start of risk assessment.

(3) China

In China, reporting of new chemical substances is governed by the Measures for Environmental Management of New Chemical Substances, which was enacted in 2010. Since the establishment of this law, JSR has followed all applicable legal procedures with regard to the importation within China of substances not included on the "Inventory of Existing Chemical Substances in China." An amended version of this law will go into effect from January 2021, and we are working to ensure we are fully in compliance without any new chemical substance-related omissions.

(4) Korea

In Korea, reporting of new chemical substances is governed by the Korean REACH^{*9} Act and OSHA^{*10} Act. JSR anticipates and follows all applicable legal procedures with regard to the manufacture and importation within Korea of substances not included on the list of existing chemical substances. The Korean REACH Act underwent major revisions in 2019, and, as a result, it is now required that existing chemical substances produced or imported within Korea in quantities of one ton or more must be registered. Reporting had to be completed by June 2019, but because of timely coordination between our business departments and local subsidiaries, JSR was able to successfully complete registration within the short window allowed. We will continue to carefully and systematically handle any and all future phased registration operations.

*9 Act on Registration and Evaluation of Chemical Substances

*10 Occupational Safety and Health Act

(5) Taiwan

In Taiwan, a registration system was introduced based on the Toxic Chemical Substances Control Act^{*11} enacted in 2014. JSR follows all applicable legal procedures established in line with this new chemical substance registration system. Also, as part of efforts to update its existing chemical substances list, Taiwan has instituted "Existing Chemical Substance Nomination," with the first designated target substances registration taking place in 2019. JSR's compliance efforts have been primarily handled by our Taiwan subsidiary while working within a compliance framework appropriate to each business.

*11 (old) "Toxic Chemical Substances Control Act." Amended in January 2019 to expand the scope of controlled chemical substances; the name was also changed to "Toxic and Concerned Chemical Substances Control Act" in order to reflect this expansion.

4. Chemical Management within Supply Chain Management

At JSR, we practice chemical management simultaneously with CSR procurement and green procurement/green purchasing as part of our supply chain management. In particular, from the standpoint of toxic chemicals management, we have introduced chemSHERPA as part of our green procurement practices, as it is the industry standard format for communicating toxic substances information, and this has helped ensure that we are able to smoothly and reliably relay information to suppliers and in-house handling departments, as well as to customers. Please refer to the following links for more information.

➤ [CSR/Sustainable Procurement](#)

➤ [Green Procurement](#)

➤ [Green Purchasing](#)

5. Industrial and International Measures

JSR is a member of the Japan Chemical Industry Association (JCIA) and contributes to its activities. JSR's contribution includes participating in JCIA's working groups, promoting activities of its Long-range Research Initiative (LRI)^{*12} as a voluntary effort by the chemical industry, and providing a part of research funding.

*12 LRI (Long-range Research Initiative):

The Long-range Research Initiative (LRI) is a long-term, international initiative supporting research into chemical substances that have an impact on the environment, safety and health. It was begun as a voluntary global research grant program initiative of the International Council of Chemical Associations (ICCA), and it is currently being advanced through the cooperative efforts of the chemical industries associations of Japan, the United States and the EU. In Japan, the Japan Chemical Industry Association (JCIA) is pursuing research into the following five topics: (1) development and evaluation of the new risk assessment method/development of methods for simple exposure evaluation and alternatives to using laboratory animals; (2) study on the safety of new chemical substances including nano materials; (3) study on the effects of chemical substances on children, the elderly, and gene disorders; (4) evaluation of the impact on ecosystems and the environment; and (5) other issues that require an emergency response.

Society

Security and Accident Prevention

- ▼ Message from the President
- ▼ 1. Management System, Advancement Structure and Policy
- ▼ 2. Promotion of Risk Management (Security and Accident Prevention)
- ▼ 3. Compliance Confirmation and Certification
- ▼ 4. Targets and Planning
- ▼ 5. Education
- ▼ 6. Communication with Local Communities and Society
- ▼ 7. Activity Record
- ▼ 8. Handling of Emergency Situations (Facility Accident Incidence and Analysis)
- ▼ 9. Inspection and Monitoring

Message from the President

Each member of top management within the JSR Group works personally to ensure that employees throughout the Group understand and share the Group's mindset towards security, accident prevention and occupational health and safety, based on the Group's Philosophy and Course of Action for Occupational Health and Safety and Policy for Security Management.

We are uncompromising in our commitment to ensuring the safety and stability of plant operations. Without these elements, we could not survive as a company. They are fundamental to sustainability. We have been, and will continue to, act decisively in addressing the issue of progressive, age-related deterioration identified in some buildings and plant facilities. We remain resolutely committed to ensuring that every employee in our Group, as well as in our manufacturing partners, is happy with the work that they are doing with JSR.

(From the president's 2020 New Year's message)



1. Management System, Advancement Structure and Policy

(1) Safety Management System and Advancement Structure

JSR has developed and operates a "Safety Management System" that establishes regulations and procedures concerning security, accident prevention and occupational health and safety, all of which are based upon the "Security Management Manual" and "Occupational Health and Safety Manual / Health and Safety Manual" created in accordance with JSR's security management regulations.

Internal audits are conducted within JSR's business establishments to confirm the effectiveness of this management system. Additionally, an auditing team led by the president conducts annual Headquarters Environment and Safety Audits in plants and laboratories, and the heads of these plants and laboratories conduct annual management reviews, to verify the effectiveness of each site's health-and-safety and security-management activities according to the management system.

Advancement Structure

Activity policies and action plans related to the JSR Group's occupational health and safety, security management, and other matters are deliberated and formulated by the Responsible Care (RC) Promotion Committee, which is chaired by the officer in charge of environmental and safety affairs. The RC Committee also oversees the results of those activities. Please refer to the following link for more information about the Responsible Care (RC) Promotion Committee.

➤ [Responsible Care "2. RC Advancement Structure"](#)

(2) Security and Accident Prevention Measures, Policy

JSR's security and accident prevention measures treat security and accident prevention as integrally related to health and safety; thus, activities which emphasize the elements of both shared safety culture and safety infrastructure are promoted.

Philosophy and Courses of Action for Occupational Health and Safety

JSR has established a "Course of Action for the Philosophy for Occupational Health and Safety" which presents specific actions demanded of the company and each of its employees. It is based on 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 creating workplaces where 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 workers happily take it for granted that they will return home safely 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.



Basic Policy for Security Management

JSR establishes a "Basic Policy for Security Management" that presents the company's aim to be an accident-free organization, one in which all employees practice autonomous and proactive safety activities by accepting the "Philosophy for Occupational Health and Safety" and "Course of Action for the Philosophy for Occupational Health and Safety."

Policy for Security Management

(1) Extremely Safe Behavior

The Philosophy for Occupational Health and Safety has penetrated through the organization, the Course of Action are established as applying to everyone, and safety competency is improving through independent safety activities.

(2) Enhanced Human Resources and Organizational Strength

High personal skills, organizational ability, and a healthy organizational culture are being maintained with the establishment and execution of the education and training programs needed for organizational management.

(3) Optimal Risk Management and Security Measures

Security measures corresponding to risk importance are being efficiently and effectively implemented using new technologies.



2. Promotion of Risk Assessment (Security and Accident Prevention)

Risk management serves as the foundation for process safety and workplace safety, and an important part of risk management is risk assessment (risk identification and evaluation). At JSR, we incorporate HAZOP^{*1} as part of our plant risk assessment protocols, and, when combined with our conventional risk assessment protocols, this ensures the

completeness of risk identification in terms of security and accident prevention, as well as workplace safety. The identified risks are prioritized according to their potential damage and rate of incidence, and countermeasures for each are developed and introduced into business site planning. In cases where a new and particularly large risk is identified, countermeasures are introduced on an expedited schedule to quickly mitigate the risk and ensure safety.

*1 HAZOP: An acronym for "Hazard and Operability Study." It is a method of safety assessment used to identify the sources of hazards in processes and operations

3. Compliance Confirmation and Certification

(1) Compliance Confirmation

At every business site within the JSR Group, a department is assigned to handle legal and regulatory management, and it is the responsibility of these departments to identify applicable security management and occupational health and safety-related laws, regulations and ordinances, as well as standards and guidelines established for plants, and to then develop and implement procedures for raising awareness of these laws, etc., among employees and for ensuring ongoing compliance.

Please refer to the following link for more information about compliance confirmation.

➤ [Responsible Care "5. Disclosure of Legal and Regulatory Violations"](#)

(2) Certification Renewal

The JSR Yokkaichi Plant and Kashima Plant are scheduled to renew their high-pressure gas certification in FY2020.

Name of Certification	JSR Business Site	Certification Renewal Date
< High Pressure Gas Safety Act > Accredited (Completion, Safety) Inspection Executor	Yokkaichi Plant	Sep. 2015
	Kashima Plant	Mar. 2016
	Chiba Plant	Mar. 2017
< Fire Service Act > Hazardous materials facility construction modification-related business site certification	Yokkaichi Plant	Mar. 2016
	Kashima Plant	Mar. 2016
	Chiba Plant	Jun. 2017
< Industrial Safety and Health Act > Class-1 pressure vessel operational inspection, boiler shut down inspection for periodic certification target site	Yokkaichi Plant	Mar. 2018
	Kashima Plant	Jan. 2017
	Chiba Plant	Mar. 2018

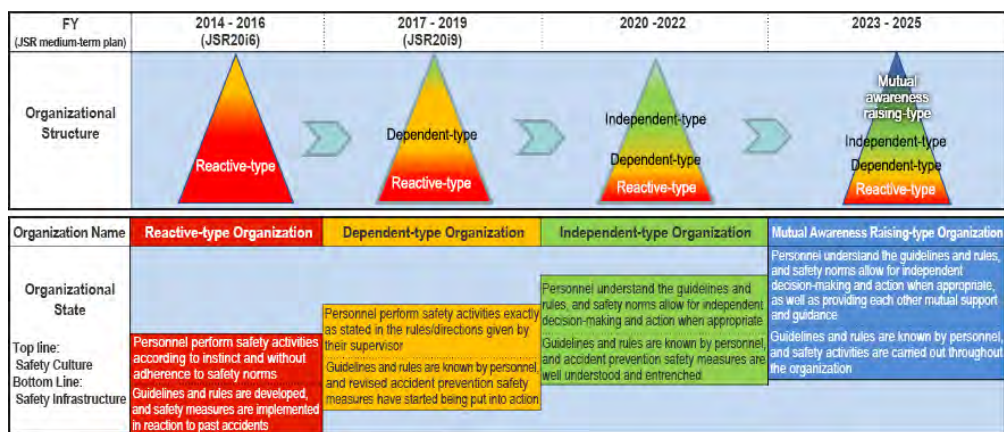
4. Targets and Planning

(1) Medium-Term Plan for Health & Safety and Security Management

JSR uses a two-sided approach comprised of "safety infrastructure" (equipment, organizations, and mechanisms) and "safety culture" (people and climate) to help improve safety activities in our organization, recognizing that "safety infrastructure" + "safety culture" = "safety competency." Towards that end, we have established and put into effect the "JSR Roadmap for Health & Safety and Security Management," which is a medium-term plan to create safe, secure and accident-free workplaces via activities which promote the "re-cultivation of safety culture" and the development of human resources possessing strong safety awareness.

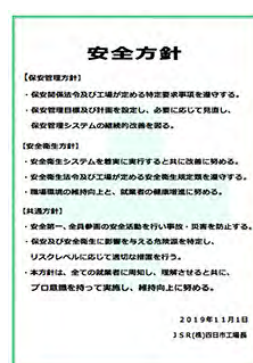
In FY2019, we amended our vision for JSR to include top-to-bottom penetration among all business sites of the "Philosophy for Occupational Health and Safety" and "Basic Policy for Security Management" and implementation of actions and activities based on them; thus, we have created and put into action an updated "JSR 2020 Roadmap for Health & Safety and Security Management" containing easier-to-understand activity goals and more concrete activity content.

JSR 2020 Roadmap for Health & Safety and Security Management

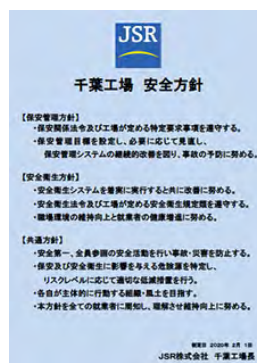


(2) Plant Safety Policy

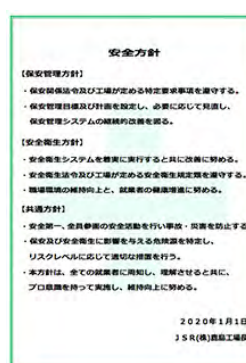
We use the “Philosophy for Occupational Health and Safety” and “Course of Action for the Philosophy for Occupational Health and Safety” as the basis for establishing safety policies in each JST plant that are matched to the individual characteristics of each plant in terms of its organizational makeup, workplace environments, and other traits.



Safety Policy for the JSR Yokkaichi Plant



Safety Policy for the JSR Chiba Plant



Safety Policy for the JSR Kashima Plant

(3) Activity Targets

Based on the “JSR Roadmap for Health & Safety and Security Management,” we conducted safety inspections of our plants using HAZOP and other methods to enhance our management of process accident risks, and we implemented countermeasures to serious/major risks. All of this was carried out with the aim of ensuring “zero facility accidents (i.e. abnormal phenomena stipulated in the Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities)” in FY2019. Additionally, we undertake reviews of our countermeasures to severe natural disasters.

(4) Action Plans

We establish and implement annual action plans at each JSR business site, based on their individual policies and targets.

< FY2020 Activity Policy >

Implementation of focused and progressively intensifying activities which emphasize prioritization and total employee participation

< FY2020 Priorities >

- Promote risk management
- Eliminate unsafe behaviors and conditions
- Cultivate safe human resources

5. Education

(1) Security and Accident Prevention and Health and Safety Education

At JSR, we use hands-on safety and practical-skills courses in technical education, as well as “miniature plant” training, to improve security management-related knowledge, skills and sensitivity. We also work to improve employees’ knowledge, skills and sensitivity by providing education on health and safety as part of new employee training, mid-career employee training, and leadership training, which is in addition to that legally required under the Industrial Safety and Health Act.

In order to ensure the success of our education and training, we review the education and training structure, organize a safety education-related skill map and develop and maintain a safety education curriculum.

1) Implementation of Risk Assessment Training

At JSR, we facilitate the effectiveness of our risk management by conducting risk assessment training at each of our business sites to improve assessment precision, as well as by checking the validity of our safety measures. In addition, for serious risks, we create risk scenarios which we put to use for disaster prevention and damage mitigation.

2) Promotion of Education and Training Tailored to Workplace Accident-prone Job Ranks

At JSR, we implement hazard awareness skills improvement training at each of our business sites; this training is designed for new and inexperienced young workers, as well as for workers transferred from other workplaces. For veteran workers, we carry out physical limitations checks, as well as provide each workplace with an exercise regimen (a video created with health insurance union editorial supervision) which is used to promote good health and prevent injury.

These education and training activities are also introduced and provided to our Group companies as support for their safety activities.

3) Training Center for Skills and Hands-on Training

During FY2019, the JSR Yokkaichi Training Center ran 21 training sessions over 9,553 hours to provide a total of 619 participants (529 from JSR and 90 from Group companies) with education on manufacturing skills common to all plants. Additionally, 19 “miniature plant” training sessions were held at the same training center over 2,240 hours and were attended by 203 employees (159 from JSR and 44 from Group companies). On top of this, we complement the Yokkaichi Training Center training with hands-on training conducted at training centers outside of the JSR Group as well.

4) Introduction of VR Simulation Training

At JSR, we have started to carry out training on operational procedures using an environment simulated with virtual reality (VR). This allows us to simulate “frightening” situations in a way not possible with conventional training, thereby contributing to greater safety awareness and elimination of unsafe behaviors. Additionally, we are expanding VR simulation training to our Group companies and manufacturing partners as part of their safety education.



VR simulation training in action



Example of VR screen image

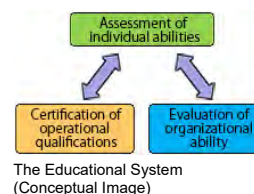
5) Safety Education via e-learning

In order to facilitate greater safety awareness and penetration of the Philosophy for Occupational Health and Safety and Basic Policy for Security Management company-wide, all JSR employees participate in e-learning. And in order to achieve even greater penetration, we develop promotion plans based on the results of e-learning, and then implement these on an ongoing basis.

(2) Organization and Education for Stable Plant Operation

1) Assessment of individual and organizational abilities

We have set desired levels for each rank of the job hierarchy and are striving to provide HR education that allows employees to reliably achieve those levels. We are also conducting assessments of individual employees' ability to operate specific equipment items and processes as well as their comprehensive abilities, and using them to maintain and improve organizational strength.



2) Review of Plant Staff Evaluation Methods

We undertake reviews of our education and training systems and skills evaluation methods in order to ensure ongoing manufacturing-related human resources skills improvement. As part of this, in FY2019, we prepared and began utilizing a human resources development system comprised of an educational curriculum, qualification certification system and skills evaluation methodology that can be used to train staff in how to carry out tasks common to all business sites.

6. Communication with Local Communities and Society

JSR is a member of the Japan Chemical Industry Association, Japan Petrochemical Industry Association, Japan Society for Safety Engineering and Japan Safety Competency Center, and we engage in information exchange and information sharing.

both in Japan and overseas, via the following responsible care and safety activities.

- Hold information exchange meetings with administrative bodies
- Hold/participate in disaster drills involving the fire department and nearby companies
- Participate alongside nearby companies in cooperative disaster prevention organizations
- Participate in local Disaster Prevention Councils
- Participate in responsible care community dialogs

In addition, our business sites both in Japan and overseas pursue communication with their local communities in order to facilitate mutual improvement in disaster prevention and safety-related awareness and technology.

Receipt of the Responsible Care Award from the Japan Chemical Industry Association

The Japan Chemical Industry Association presented JSR's Chiba and Kashima plants with the Responsible Care Award in recognition of the contributions to responsible care (RC) which their activities have made.

- FY2018 13th RC Award Excellence Award for "JSR Chiba Plant Safety Culture Cultivation Activities" (JSR Chiba Plant)
- FY2019 14th RC Award RC Special Recognition Award for "Exterior Corrosion Countermeasures Project Promotion" (JSR Kashima Plant)

Fire and Disaster Management Agency (FDMA) of the Japanese government

Presentation of Use Cases Involving Petrochemical Complex Disaster Response-related Advanced Technology

Activities undertaken by the JSR Yokkaichi and Chiba plants were reported as advanced technology use case examples at a meeting of the FDMA of Japan, to investigate advanced technology-driven responses to disasters at petrochemical complexes.

▷ [FDFA - Effective Drone Utilization and Facilities Information Digitization-driven Disaster Information Support Software Development \(Written by Japanese\)](#) [PDF](#)

7. Activity Record

(1) Preparations for Severe Natural Disasters

Since FY1995, JSR has systemically implemented preparations for large earthquakes. And since FY2006, we have carried out seismic construction focused on high-pressure gas facilities in our plants, based on the results of seismic performance assessments. Also, as part of our commitment to putting "human lives first," we have installed earthquake early-warning systems at all JSR business sites.

Moreover, after the Great East Japan Earthquake prompted us to review the size of assumed earthquakes, we formulated safety measures that included enhancement of seismic resistance and tsunami countermeasures. We are currently implementing those measures systematically. Our work on seismic reinforcement of spherical tank braces will be completed in FY2020.

(2) Preparation of a Security Management Manual

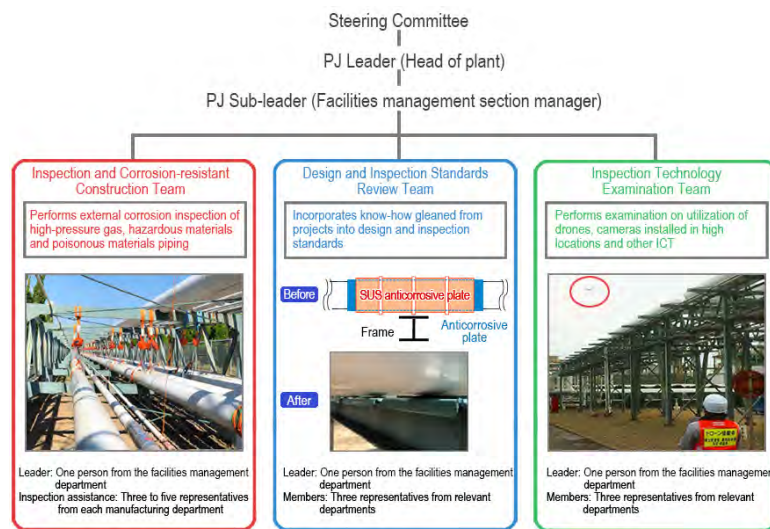
Previously, at JSR, the "Security Management Manual" was contained within the "Health and Safety Manual;" however, following a review carried out to make the systems and structures easier to understand, the content was separated between a "Security Management Manual" and an "Occupational Health and Safety Manual / Health and Safety Manual," and they have been in effect since FY2019.

The information which is common to both security management and occupational health and safety is contained in both manuals to ensure it is not overlooked.

(3) Accident Prevention

With leakage accidents on the rise throughout the JSR Group, measures against facility corrosion and deterioration are of the utmost priority for each business site. We are therefore checking the soundness of relevant facilities and carrying out repairs in order of priority according to the level of leakage risk. In addition, we launched project activities aimed at eliminating leaks by reviewing our inspection and construction methods, putting particular priority on pipe frame contact points, and we investigated the introduction of new technology to strengthen countermeasures against, and prevention of, corrosion due to age-related degradation of facilities and other causes. The results and information obtained have not only been shared with other business sites but have also been externally disclosed as part of our responsible care activities.

Overview of the Pipe Exterior Corrosion Countermeasures Project



(4) Safety Culture Self-assessment

Based on the belief that effective safety relies upon having an effective safety culture and safety infrastructure, JSR is pursuing safety culture innovation with the goal of realizing the vision of the JSR Roadmap for Health & Safety and Security Management (medium-term plan) described above. And as a metric for regular monitoring of the maturation of safety culture, we create and use self-assessment questionnaires. These questionnaires are distributed once every three years, and the results are analyzed to identify potential weaknesses, as well as to facilitate self-review of safety culture maturation and measurement of safety activity results.

➤ [4. Targets and Planning_ \(1\) Medium-Term Plan for Health & Safety and Security Management](#)

(5) Investment in Safety

JSR undertakes ongoing investment in safety. Please refer to the following link for more information about Workplace Accident Prevention, Age-related Equipment and Facilities Degradation and other Equipment and Facility Safety Investment.

➤ [Environmental Conservation "4. Local Environmental Improvement Initiatives"](#)

8. Handling of Emergency Situations (Facility Accident Incidence and Analysis)

The graph below shows the change over time in facility accident numbers, as reported to the government in compliance with the Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities.

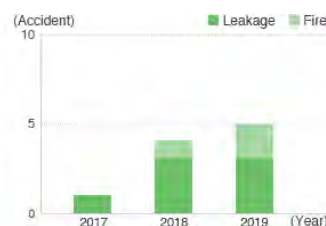
In FY2019, there was one accident (leak) at JSR and five accidents (two fires, three leaks) at Group companies; this is the same level as the previous year. Holes caused by corrosion of pipelines were the main cause of the leaks; however, there were also fumes from chemical substances and fires. In addition to ongoing implementation of measures to counter age-related facility corrosion, we are reconfirming the safety of chemical substances.

As with information on workplace accidents, information on facility accidents that occurred at JSR is quickly and effectively communicated to all employees via the company intranet. The information is also used in cause analyses, with the results being incorporated into education and training so as to prevent occurrence of similar accidents in the future.

Number of Facility Accidents (JSR)



Number of Facility Accidents (Group Companies)



9. Inspection and Monitoring

(1) Auditing of Certified High Pressure Gas Business Sites

As part of FY2019 auditing, all of JSR's certified business sites were checked to ensure that their security management systems were still in conformance.

Additionally, auditing of the certified high-pressure gas business sites of Group companies was also carried out as a cooperative effort to ensure proper operation of these sites' security management systems.

FY2019 Auditing of Certified High Pressure Gas Business Site Headquarters	
JSR (business site)	Yokkaichi Plant, Chiba Plant, Kashima Plant
JSR Group Company (business site in Japan)	Japan Butyl

(2) Safety Auditing

An auditing team led by the President conducts annual Headquarters Environment and Safety Audits in plants and laboratories. From FY2015 onward, stimulation of environmental and safety activities has been promoted by changing to an auditing style which incorporates sharing and discussion of the audited departments' issues and, on top of this, by establishing opportunities for dialog between top management and employees where both sides can share their thoughts with one another.

The FY2019 Headquarters Safety Audit found an improvement over the previous year in the penetration of the "safety-first" mindset and in the level of business site safety activities practiced. In addition, risk assessment activities are becoming more entrenched, and application of their results to prevention training and to the handling of severe natural disasters is starting to be investigated.

Although information sharing between JSR business sites and departments and matching of assessment levels are being pursued, variations are still observed and, thus, improvement efforts are still ongoing.

FY2019 Headquarters Environment and Safety Audit Audited Departments	
JSR (business site)	Yokkaichi Plant, Chiba Plant, Kashima Plant, Tsukuba Laboratory

Cultivating Auditing Personnel

At JSR, we have revised the capability assessments and other criteria for auditing personnel in order to ensure that the results they obtain from dialog-based audits can still be effectively used to improve the audited departments. We continue to work hard to cultivate effective auditing personnel.



A dialog session with President Kawahashi (Tsukuba Laboratory)



President Kawahashi offering auditing-related remarks (Chiba Plant)



On-site inspection



Auditing session



Auditing session

(3) Group Company Safety Auditing

During the safety auditing of Group companies conducted in FY2019, we were able to both confirm the status of activity at each Group company, as well as facilitate the sharing of information. We also introduced productive activities undertaken by JSR. Moving forward, we will continue to provide support for initiatives tailored to the conditions at each Group company. In addition, for our overseas Group companies, we do not adopt a conventional auditing approach; rather, in light of the fact that the conditions, laws and regulations in each country, as well as the challenges for the business sites located in them, are different from those in Japan, our approach is more of a combination of on-site visit coupled with an opportunity for safety information exchange. In FY2019, we visited JSR BST Elastomer (Thailand) and engaged in safety culture-related information exchange.

FY2019 Headquarters Environment and Safety Audit Audited Departments	
JSR Group Company (Japan)	JSR Engineering, Techno-UMG, Kraton JSR Elastomers, JSR Life Science, Medical & Biological Laboratories

FY2019 Overseas Group Company Safety Information Exchange Meetings Implementation Department	
JSR Group Company (Overseas)	JSR BST Elastomer

(4) Internal Auditing and Management Review by Plant and Business Site Heads

At least once a year, the head of each plant and business site conducts an internal audit and management review at his or her respective site. The plant or business site head performs a meticulous review of how well the plant or business site is acting on the findings and recommendations of the JSR Headquarters Safety Audit, described above, and how well it is acting on the site or department-specific challenges and action plans, and then he or she provides concrete guidance to promote further action.

Society

Occupational Health and Safety

- ▼ 1. Management System, Advancement Structure and Policy
- ▼ 2. Advancement of Risk Management (Occupational Health and Safety)
- ▼ 3. Compliance Confirmation and Certification
- ▼ 4. Targets and Planning
- ▼ 5. Education
- ▼ 6. Communication with Local Communities and Society
- ▼ 7. Activity Record
- ▼ 8. Handling of Emergency Situations (Facility Accident Incidence and Analysis)
- ▼ 9. Inspection and Monitoring

1. Management System, Advancement Structure and Policy

(1) Safety Management System and Advancement Structure

JSR has developed and operates a “Safety Management System” that establishes regulations and procedures concerning security, accident prevention and occupational health and safety, all of which are based upon the “Security Management Manual” and “Occupational Health and Safety Manual / Health and Safety Manual” created in accordance with JSR’s security management regulations.

Internal audits are conducted within JSR’s business establishments to confirm the effectiveness of this management system. Additionally, an auditing team led by the president conducts annual Headquarters Environment and Safety Audits in plants and laboratories, and the heads of these plants and laboratories conduct annual management reviews, to verify the effectiveness of each site’s health-and-safety and security-management activities according to the management system.

Advancement Structure

Activity policies and action plans related to the JSR Group’s occupational health and safety, security management, and other matters are deliberated and formulated by the Responsible Care (RC) Promotion Committee, which is chaired by the officer in charge of environmental and safety affairs. The RC Committee also oversees the results of those activities. Please refer to the following link for more information about the Responsible Care (RC) Promotion Committee.

> [Responsible Care “2. RC Advancement Structure”](#)

(2) Occupational Health and Safety Policy

Philosophy and Courses of Action for Occupational Health and Safety

JSR has established a “Course of Action for the Philosophy for Occupational Health and Safety” which presents specific actions demanded of the company and each of its employees. It is based on 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 creating workplaces where 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. Promotion of Risk Assessment (Occupational Health and Safety)

Risk management serves as the foundation for process safety and workplace safety, and an important part of risk management is risk assessment (risk identification and evaluation). At JSR, we incorporate HAZOP^{*1} as part of our plant risk assessment protocols, and, when combined with our conventional risk assessment protocols, this ensures the completeness of risk identification in terms of security and accident prevention, as well as workplace safety. The identified risks are prioritized according to their potential damage and rate of incidence, and countermeasures for each are developed and introduced into business site planning. In cases where a new and particularly large risk is identified, countermeasures are introduced on an expedited schedule to quickly mitigate the risk and ensure safety.

^{*1} HAZOP: An acronym for "Hazard and Operability Study." It is a method of safety assessment used to identify the sources of hazards in processes and operations

3. Compliance Confirmation and Certification

(1) Compliance Confirmation

At every business site within the JSR Group, a department is assigned to handle legal and regulatory management, and it is the responsibility of these departments to identify applicable security management and occupational health and safety-related laws, regulations and ordinances, as well as standards and guidelines established for plants, and to then develop and implement procedures for raising awareness of these laws, etc., among employees and for ensuring ongoing compliance.

Please refer to the following link for more information about compliance confirmation.

➤ [Responsible Care "5. Disclosure of Legal and Regulatory Violations"](#)

(2) Certification Renewal

Please refer to the following link for more information about certification of JSR's three plants according to the High Pressure Gas Safety Act, Fire Service Act and Labor Standards Act.

➤ [Security and Accident Prevention "3. Compliance Confirmation and Certification"](#)

4. Targets and Planning

(1) Medium-Term Plan for Health & Safety and Security Management

JSR uses a two-sided approach comprised of "safety infrastructure" (equipment, organizations, and mechanisms) and "safety culture" (people and climate) to help examine and improve safety activities in our organization, recognizing that "safety infrastructure" + "safety culture" = "safety competency." Towards that end, we have established and put into effect the "JSR Roadmap for Health & Safety and Security Management," which is a medium-term plan to create safe, secure and accident-free workplaces via activities which promote the "re-cultivation of safety culture" and the development of human resources possessing strong safety awareness. Please refer to the following link for more information.

➤ [Security and Accident Prevention "4. Targets and Planning"](#)

(2) Plant Safety Policy

We use the "Philosophy for Occupational Health and Safety" and "Course of Action for the Philosophy for Occupational Health and Safety" as the basis for establishing safety policies in each JST plant that are matched to the individual characteristics of each plant in terms of its organizational makeup, workplace environments, and other traits. Please refer to the following link for more information.

➤ [Security and Accident Prevention "4. Targets and Planning"](#)

(3) Activity Targets

Using the "JSR Roadmap for Health & Safety and Security Management," we implement activities by establishing action plans comprised of annual targets, annual policies, and priority measures that take into account actual performance and activities of the previous fiscal year. In FY2019, we focused attention on the "elimination of unsafe behaviors" and "safety education and awareness-raising activities for accident-prone job ranks" with the aim of finishing the year with "zero workplace accidents (lost time accidents)." We also strengthened the support we provide to Group companies for the safety activities.

(4) Action Plans

We establish and implement annual action plans at each JSR business site, based on their individual policies and targets. Please refer to the following link for more information.

➤ [Security and Accident Prevention "4. Targets and Planning"](#)

5. Education

At JSR, we use hands-on safety and practical-skills courses in technical education, as well as "miniature plant" training, to improve security management-related knowledge, skills and sensitivity. We also work to improve employees' knowledge, skills and sensitivity by providing education on health and safety as part of new employee training, mid-career employee training, and leadership training, which is in addition to that legally required under the Industrial Safety and Health Act. In order to ensure the success of our education and training, we review the education and training structure, organize a safety education-related skill map and develop and maintain a safety education curriculum. Please refer to the following link for more information.

➤ [Security and Accident Prevention "5. Education"](#)

6. Communication with Local Communities and Society

JSR is a member of the Japan Chemical Industry Association, Japan Petrochemical Industry Association, Japan Society for Safety Engineering and Japan Safety Competency Center, and we engage in information exchange and information sharing, both in Japan and overseas, via the following responsible care and safety activities.

- Hold information exchange meetings with administrative bodies
- Hold/participate in disaster drills involving the fire department and nearby companies
- Participate alongside nearby companies in cooperative disaster prevention organizations
- Participate in local Disaster Prevention Councils
- Participate in responsible care community dialogs

In addition, our business sites both in Japan and overseas pursue communication with their local communities in order to facilitate mutual improvement in disaster prevention and safety-related awareness and technology.

7. Activity Record

Safety Ceremony and Safety and Health Activity Forum

The JSR Group believes that safety is linked to the daily lives of all stakeholders and is also the bedrock of business activity for companies. With this in mind, the JSR Group has made it a goal to achieve "zero facility accidents" and "zero lost time accidents". However, a serious workplace accident which claimed the life of an on-duty employee occurred at the JSR Yokkaichi Plant on July 23, 2014. With a pledge to aim for "zero accidents" and keep the lessons learned from this serious workplace accident alive, and with a promise to continue developing a strong safety culture into the future to protect precious lives, we erected a safety monument in front of the Yokkaichi Plant's main building and also hold a safety ceremony

as well as a forum for presenting case examples of safety activities by business sites each year at around the time of the accident.

In FY2019, we held a Safety Ceremony and Safety and Health Activity Forum on July 23. The Safety and Health Activity Forum is an annual event in which we select presentation themes after carefully screening safety activities that were nominated by each business site. The following presentations were made in FY2019.

Also, as this was the five-year anniversary of the Safety and Health Activity Forum, a safety seminar presented by an outside instructor was trialed for the first time. The invited instructor was Dr. Shigeru Haga, Senior Technical Advisor at the Research Institute for Social Safety and Professor Emeritus at Rikkyo University, who spoke on the topic of “Human Error and Accident Prevention.”

Both the ceremony and forum were held at JSR Yokkaichi Plant and a video relay was provided for the JSR Headquarters, Chiba Plant, Kashima Plant, Tsukuba Laboratory, as well as for Group companies JSR Micro Kyushu and JM Energy*. Video and materials from the proceedings were also made available on the company intranet for those who were unable to participate on the day.

* As of July 2019. On April 1, 2020, 80% of the company's shares were transferred to Musashi Seimitsu Industry Co., Ltd.

Safety Vow

To everyone who works for JSR, as well as to their precious families, we promise to provide a safe and secure workplace which is considerate of both the physical and mental wellbeing of workers, and from which workers will return home safely each day.

Towards this end, we commit ourselves to ensuring that this workplace accident is neither forgotten nor repeated, and we vow that all JSR executives, managers and employees shall work as one to put in place an unshakeable infrastructure and uncompromising culture of safety that will endure into the future.



Safety Memorial

Presentation Themes of the FY2019 Safety and Health Activity Forum:

Presenting group	Title	Content
Chiba Plant Manufacturing Dept.	Rebuilding Safety Culture via Improved Communication	The occurrence of a combustion-related accident was used as an opportunity to address the following issues and rebuild safety culture. 1) Participation in a safety consultant seminar and overcoming internal issues 2) Stimulation of safety activities via social activities with other departments
Yokkaichi City Research and Development Dept.	Cultivation of a Climate of Safety via On-site Patrols	The occurrence of a serious workplace accident prompted all of the managerial staff to come together to initiate thorough on-site patrols. Communication increased during patrols, and matters of note were also recorded afterward and communicated to all employees at the daily section staff meetings. The results of daily patrols were used as feedback for clarifying the content of identified matters which, in turn, led to improvements in the on-site safety environment. Also, the change in attitude among management caused a change in thinking among section personnel with regard to safety, and this is steadily producing an environment of where the personnel feel free to identify safety-related matters to one another. This has contributed to cultivation of a “Goodpoint” climate where personnel are grateful to receive help and advice from one another, resulting in better communication.
Yokkaichi Plant Manufacturing Technology Dept.	Strengthening Communication for the Sake of Realizing a Safety-conscious Workplace Environment	Past process accidents and non-lost time accidents, as well as safety performance results and safety culture surveys, indicated a lack of sufficient safety competency within the organization. For the sake of realizing a meaningfully safe workplace, and after assessing the results of observation of workplace shortcomings along with past hard infrastructure measures enacted in response to unsafe conditions, it was determined that (1) the sensitivity of all personnel to safety issues needed to be improved, and (2) stronger communication involving mutual reminders given among personnel was needed. Improvements were then carried out in line with these two objectives. As a result, “people-focused” tools were utilized to help personnel gain a more specific understanding of the specific traits reflected in safety activities, as well as to strengthen communication for the sake of helping personnel feel free to speak up about unsafe activities.
Yokkaichi Plant	Using Two-person Units to Ensure	The plant operates according to a structure featuring two

Manufacturing Dept.	Safety Structure	persons to a single unit. These units revolve around young and inexperienced employees, and their youth and inexperience must be reflected in the training provided them. Such tailored education and training began in FY2017 when some content was changed to put young employees front and center. As a result of addressing the problems which arose from the training, it continues to bear fruit in the form of a high level of safety competency among young employees.
Yokkaichi Plant Manufacturing Dept.	Overcoming Individual Weaknesses via "Single Day Operational Shadowing"	"Single Day Operational Shadowing" involves having an observer accompany an operator all throughout his or her work day in order to point out potential hazards in said operator's work and actions, and to connect them with corrective behaviors, e.g. efforts aimed at diagnosing "operator" and "workplace" common sense. Details of this shadowing performed on six young employees in FY2018 are introduced, and the results obtained and challenges involved in maintaining this activity are reported.
Kashima Plant Facilities Management Dept.	Project to Eliminate Pipe Frame Contact Point Leakage Accidents	Leakage accidents have been on the rise, and they have all been from pipe rack frame contact points located high up. Among other things, the results of causal analysis of the accidents revealed that (1) the leakage sites have not been updated with the current type of corrosion-resistant piping currently in use, and (2) the inspection methods used have been inadequate. A project structure was therefore developed and implemented in order to promptly address the situation so that there will be no recurrence and to facilitate waterside development.

Safety Initiatives of Comprehensive Disaster Prevention Councils

Within each plant of JSR and domestic Group companies, a Comprehensive Disaster Prevention Council (normally referred to as "Disaster Prevention Council") is set up with manufacturing partners that carry out construction and various operations in company facilities. The two sides team up to smoothly promote occupational health and safety activities.

Introduction of Disaster Prevention Councils' Safety Activities

• Council-organized safety education

Disaster Prevention Councils provide group education to safety instructors of member companies using workplace accident case studies. They also provide hands-on safety education and hazard-prediction training (KYT).



• Activities timed with National Safety Week

Disaster Prevention Councils raise safety awareness during National Safety Week by holding safety conferences, presenting safety activity reports prepared by subcommittees and member companies, and presenting awards for safety slogans. They also urge employees to engage in safe behavior by organizing active communication campaigns in the workplace.



• Special patrols

Disaster Prevention Councils conduct "special patrols" led by council executives during periodic repair work.



8. Handling of Emergency Situations (Workplace Accident Incidence)

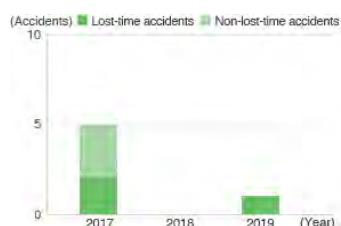
Among domestic Group companies, an increasing trend is seen in terms of both the number of all workplace accidents and the number of lost time accidents. Accidents involving tripping, falling, and entanglement are increasing. Among overseas Group companies, workplace accident incidence continues to resemble that of domestic Group companies. We will make pertinent improvements by deepening collaborative safety activities throughout the entirety of JSR Group.

Number of Workplace Accidents in FY2019

		Fatal accidents	Serious workplace accidents	Lost-time accidents	Non-lost time accidents
JSR	Employees	0	0	1	0

	Manufacturing partner employees	0	0	0	4
JSR Group Companies in Japan	Employees	0	0	3	4
	Manufacturing partner employees	0	0	2	3

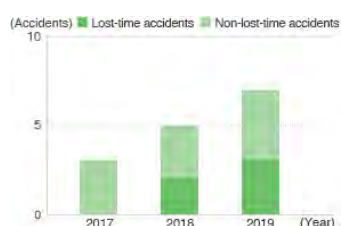
Number of Workplace Accidents (JSR)



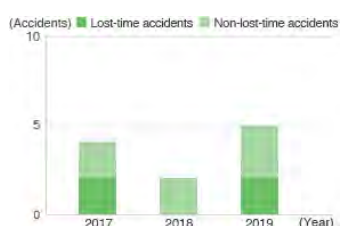
Number of Workplace Accidents (Manufacturing Partners of JSR)



Number of Workplace Accidents (Domestic Group Companies)



Number of Workplace Accidents (Manufacturing Partners of Domestic Group Companies)



9. Inspection and Monitoring

JSR uses an auditing team led by the President to conduct annual Headquarters Environment and Safety Audits in plants and laboratories. From FY2015 onward, stimulation of environmental and safety activities has been promoted by changing to an auditing style which incorporates sharing and discussion of the audited departments' issues and, on top of this, by establishing opportunities for dialog between top management and employees where both sides can share their thoughts with one another.

Please refer to the following link for more information.

> [Security and Accident Prevention "9. Inspection and Monitoring"](#)

Society Logistics Safety

- ▼ 1. Policy
- ▼ 2. Safety Initiatives
- ▼ 3. Accidents in FY2019

Cooperation that goes beyond JSR's business establishments to include the entire supply chain is important in maintaining and improving the environment, safety, and quality in logistics. JSR Group makes various efforts to ensure the safe and environment-friendly transport of products.

1. Policy

Each year, JSR executes activities to manage risks and ensure safety after formulating a health and safety promotion plan at each plant based on the Philosophy and Course of Action for Occupational Health and Safety.

We formulate these plans based on actual results and issues from the previous fiscal year from the standpoint of the PDCA cycle and then implement activities with the aim of eliminating logistics and workplace accidents.

> [Philosophy and Course of Action for Occupational Health and Safety, which includes items pertaining to logistics safety.](#)

2. Safety Initiatives

(1) Identification and Improvement of Risks

We strive to improve the safety of our logistics sites by identifying risks for logistics and workplace accidents in terms of both the human and infrastructure sides-such as hazardous operations and locations within worksites-and making improvements. One way we do this is through regular patrols by managers.

(2) Cultivating and Spreading Safety Awareness

We provide hazard prediction training (KYT) to raise awareness of potential risks without carelessness or overconfidence, even in routine and familiar tasks, and improve sensitivity to hazard prediction. We also broadly solicit safety slogans from logistics partners to cultivate and instill safety awareness in each worker.

(3) Enhancing Education and Training

In addition to horizontally-implemented preventative education on logistics and workplace accidents that includes examples from other companies, we strive to improve employees' ability to respond to crises and safety awareness by jointly providing training that envisions major disasters and logistics accidents with logistics partners. Additionally, whenever points requiring improvement arise after training, we enhance the quality of our education and training by revising crisis management manuals, incorporating improvements into subsequent training, and the like.

(4) Maintaining Transport Safety and Environmental Standards

JSR outsources the distribution of its products to outside logistics partners. To maintain environmental and safety standards during transport, we have drivers carry a "Yellow Card" imprinted with special measures and telephone numbers in case of emergency, in addition to having logistics partners train them on specific safety issues.



Example of a Yellow Card

(5) Reinforcing Health and Safety Collaboration with Logistics Partners

We share logistical challenges concerning quality, safety, and the environment and manage the progress of improvement activities by holding quarterly meetings with logistics partners through our logistics subsidiaries. We also verify, assess, and guide health and safety activities by conducting annual audits of our logistics partners.

3. Accidents in FY2019

Logistics-related workplace accidents: 0

Traffic accidents resulting in injury to others: 0

Traffic accidents resulting in injury to JSR employee: 0



Society Product Safety

- ▼ 1. Philosophy and Advancement Structure
- ▼ 2. Product Safety
 - (1) Product Liability Prevention (PLP) Guiding Principles
 - (2) Product Liability Prevention (PLP) Activities

1. Philosophy and Advancement Structure

Under its CSR advancement scheme, JSR Group advances measures pertaining to product safety based on promotion items and concrete action plans founded on those items that are established by the Responsible Care Advancement Committee.

> [“Responsible Care” 2. RC Advancement Structure](#)

2. Product Safety

JSR strives to offer quality products and services that both meet customer requirements and ensure user safety based on this product safety policy: “Verify safety at all stages, from raw materials to finished products, protecting the health and property of all individuals involved.”

(1) Product Liability Prevention (PLP) Guiding Principles

Maintaining respect for humanity, JSR does business with based on the following PLP Guiding Principles

- Social mission:
The company’s social mission is to pursue safety in the products it supplies and to ensure the safety and health of those who use them.
- Customer trust:
Activities that unflinchingly execute PLP and continually supply safe products lead to customer trust.
- Prevention:
The essential point of PLP is to take all possible preventative measures to ensure that product accidents do not occur.
- Company-wide activity:
PLP activities are executed through collaboration among concerned departments and with the combined strength of JSR and JSR Group.

(2) Product Liability Prevention (PLP) Activities

In 1994, JSR enacted its Product Liability Prevention (PLP) Standards to reinforce product safety efforts. Since then, JSR has taken steps to prevent PLP risk by making revisions to the standards as necessary and establishing regulations for each part of the supply chain; namely, design and development, manufacture, sales, and distribution.

As we expand our business categories to include the elastomer business, which includes tire materials; the digital solutions business, which includes semiconductor materials and display materials; and the life sciences business, we have become a materials manufacturer that meets the demands of a diverse range of customers who have different needs. As such, we focus on reviews at the design stage.

At the design and development stages, we work to prevent the occurrence of PLP risk by conducting ordinary design reviews and also preparing a “PLP check sheet.” With this PLP check sheet, we are building a system whereby we conduct multifaceted safety checks on new products to be introduced to the market that start at the product design stage. A product only goes on the market after it has been approved by the department manager. For us, PLP activities are the basis upon which we grasp the standards our customers demand and raise the reliability of our products. Group companies are currently taking similar steps.

To prevent accidents related to our products, we also strive to improve quality management throughout our supply chains- everything from raw materials procurement to distribution-by acquiring information through communication with our customers and by strengthening our efforts to prevent product accidents, such as by revising our quality management system and updating assessment technologies.

We use safety data sheets (SDS) to provide customers with information on the dangers and toxicities of our projects.

➤ [Safety Data Sheets \(SDS\)](#)



Society Quality Management

JSR Group is committed to building a quality management system and quality assurance with the aim of providing customers with products of reliable quality that they can use with peace of mind.

▼	1. Philosophy and Advancement Structure
	(1) Philosophy
	(2) Structure and Persons in Charge
▼	2. Quality Assurance
	(1) ISO 9001 Certification
	(2) Global Quality Guidelines
	(3) "Building in" Quality
	(4) Quality Improvement
	(5) Quality Audits
	(6) Quality Education
▼	3. Looking Ahead

1. Philosophy and Advancement Structure

(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) Structure and Persons in Charge

JSR Group has established a "Group-wide Quality Policy Committee" as an organization charged with formulating quality policy and quality assurance promotion plans. The Group proceeds with business based on these plans.

Group-wide Quality Policy Committee
Chair: Director in charge of quality assurance
Office: Product Safety & Quality Assurance Department
Roles: Study and deliberation of matters concerning quality policy and quality assurance promotion plans.

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,^{*2} 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.

ISO 9001-certified plants (as of May 7, 2020)

Japan (10 companies, 17 business establishments)	Certification No.	Date of certification (date of renewal)	Date of expiry
JSR Corporation	-	-	-
Yokkaichi Plant	JQA-0396	February 9, 1994 (February 9, 2019)	February 8, 2022
Chiba Plant	JQA-QMA14571	May 11, 2012 (September 1, 2017)	August 31, 2020
Kashima Plant	JQA-QMA14580	May 18, 2012 (December 8, 2018)	December 7, 2021
JAPAN COLORING CO., LTD.	NQA-16100028A	March 19, 1996 (February 21, 2020)	March 18, 2023
Techno-UMG Co., Ltd.	-	-	-
Yokkaichi Plant	JCQA-0700	May 15, 2000 (May 15, 2018)	May 14, 2021
Ube Plant	JCQA-1508	July 19, 1994 (July 19, 2018)	July 18, 2021
Otake Plant	JCQA-1508	July 19, 1994 (July 19, 2018)	July 18, 2021
Japan Butyl Co., Ltd.	-	-	-
Kawasaki Plant	0105	November 28, 1995 (January 27, 2018)	January 26, 2021
Kashima Plant	0105	November 28, 1995 (January 27, 2018)	January 26, 2021
JSR Life Sciences Corporation	JP13/062551	November 23, 2010 (November 23, 2019)	November 23, 2022
ELASTOMIX Co., Ltd.	-	-	-
Yokkaichi Plant	JCQA-1699	February 24, 1997 (February 24, 2018)	February 23, 2021
Tokyo Plant	JCQA-1699	February 24, 1997 (February 24, 2018)	February 23, 2021
Shiga Plant	JCQA-1699	February 24, 1997 (February 24, 2018)	February 23, 2021
JSR Logistics & Customer Center Co., Ltd.	JQA-0396	February 9, 1994 (February 9, 2019)	February 8, 2022
KRATON JSR ELASTOMERS K.K.	JCQA-0897	April 16, 2001 (April 16, 2019)	April 15, 2022
JSR Micro Kyushu Co., Ltd.	JQA-3163	March 12, 1999 (January 13, 2018)	January 12, 2021
Emulsion Technology, Co., Ltd.	NQA-16050168A	November 30, 1998 (October 21, 2019)	November 29, 2022

Overseas (9 companies, 9 business establishments)	Certification No.	Date of certification (date of renewal)	Date of expiry
ELASTOMIX (THAILAND) CO. LTD. (Thailand)	TH11/5778	June 17, 2011 (June 17, 2017)	June 17, 2020
JSR Micro Korea Co., Ltd. (South Korea)	FM 88265	October 11, 2004 (September 28, 2019)	September 27, 2022

JSR Micro, Inc. (U.S.A.)	10305	April 17, 1998 (March 18, 2019)	March 17, 2022
JSR Micro N.V. (Belgium)	BE91/03002	October 1, 2004 (October 12, 2019)	September 30, 2022
Tianjin Kuo Cheng Rubber Industry Co., Ltd. (China)	80117002/1	September 2002 (March 14, 2018)	March 13, 2021
Kumho Polychem Co., Ltd. (South Korea)	42395-2008-AQ-KOR-RvA	December 2, 2008 (November 20, 2017)	November 20, 2020
JSR Micro Taiwan Co., Ltd. (Taiwan)	TW18/00169	March 14, 2007 (February 26, 2018)	February 26, 2021
JSR BST Elastomer Co., Ltd. (Thailand)	10102215	June 9, 2014 (June 16, 2018)	June 8, 2020
PT.ELASTOMIX INDONESIA (Indonesia)	2016-1-0181	January 2016 (September 7, 2018)	September 6, 2021

(2) Global Quality Guidelines

As its development, purchasing, production, and sales all become more globalized, JSR Group recognizes that its philosophy vis-a-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) “Building in” Quality

JSR Group builds in quality by conducting verifications and tests using quality control methods matched to product characteristics in each of the steps of development and design, manufacture, and quality assurance. For example, we use Quality Function Deployment^{*3} (QFD) as a means of managing product quality. In addition, when starting the production of a new product or making changes or improvements to a manufacturing process, we make it a point to begin actual work only after conducting verifications that predict abnormalities using Failure Mode and Effect Analysis^{*4} (FMEA) to ascertain risks. In this way, we repeatedly analyze risk while making verifications of prevention—for example, we ask, “Are we providing the quality demanded by the customer?” and “Can quality be maintained in mass-production?”—so that we can be sure that no product defects will occur. Moreover, we strive to achieve quality consistency in manufacturing by using Statistical Process Control (SPC).

^{*3} Quality Function Deployment (QFD):

A design approach aimed at making quality assurance possible by bringing the design quality of a supplied product to the manufacturing process.

^{*4} Failure Mode and Effect Analysis (FMEA):

A systematic method for analyzing potential accidents and defects in order to prevent accidents and defects.

(4) Quality Improvement

JSR Group adds the “Six Sigma methods.”^{*5} a quality control approach that reduces product defect rates based on statistical data analyses, to its traditional quality control (QC) methods. The Group is steadily producing results by promoting the use of both in quality improvement activities. Moreover, the Six Sigma methods also form the foundation for cultivating a culture of data-driven thinking in preparation for coming digitalization. We are working to build each employee’s awareness of this point.

^{*5} The Six Sigma methods:

A quality improvement method that was developed by Motorola of the United States in the 1980s. It seeks to suppress quality deficiencies and improve quality by controlling variability with focus on the processes by which variability occurs.

(5) Quality Audits

As a manufacturer, JSR Group has responsibilities to meet the quality, cost, and supply requirements of its customers. To fulfill these responsibilities, top management-led quality performance audits have been performed annually since FY2012 in place of the previously conducted head office quality audits. These audits include 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 small-group improvement activities. The eighth Quality Performance Audits were conducted at JSR's three plants in January and February of 2020 with the specific aims of pinning down the true causes of quality problems and achieving the best possible balance among quality, cost, and stable supply.

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 Kashima Plant; April 8, 2020)

FY2019 Quality Performance Audits

Place	Date
Yokkaichi Plant	January 30, 2020
Chiba Plant and Kashima Plant (together)	February 6, 2020

(6) Quality Education

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, holding QFD 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). We also see education oriented toward improving quality levels and preventing product accidents as an important activity. 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. Looking Ahead

With "emphasis on improving customer satisfaction" and achieving a "continuous increase in customer satisfaction," we will continue optimizing our quality management system and improving the quality of our products and services to stay in step with business transformations taking throughout JSR Group. By doing so, we will stay true to our aims of offering innovative materials and excellent products that meet customer needs and contributing to the making of a better society.


Society

Human Rights

- ▼ 1. Philosophy
- ▼ 2. Advancement Structure
- ▼ 3. Response to Human Rights Issues
- ▼ 4. Respect for Human Rights in the Labor Environment
- ▼ 5. Respect for Human Rights in the Supply Chain

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.

- > [The Ten Principles of the United Nations Global Compact](#) 
- > [Compliance](#)

2. Advancement Structure

We promote respect for human rights as an activity guideline of the Corporate Ethics Committee. The Corporate Ethics Committee is charged with formulating and executing plans to promote human rights and verifying their progress.

- > [Sustainability Management and Advancement Structure](#)

3. 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, which affords us opportunities to participate in workshops, group work activities and the like, through which we gather pertinent information that we then disseminate within the company.

As part of these group work activities, 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 rights policy with concerned departments in the company.

- > [Corporate Mission and Sustainability Philosophy](#)

(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

- 1) 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.

4. 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

> [Labor Environment](#)

> [Diversity](#)

5. 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

> [Supply Chain Management](#)



Society

Labor Environment

- ▼ 1. Philosophy
- ▼ 2. Advancement Structure
- ▼ 3. Organization and Personnel
- ▼ 4. Human Resources Development
- ▼ 5. Flexible Working Style Support Benefits
- ▼ 6. Employees Healthy Mind and Body
- ▼ 7. JSR Workers' Union

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

2. Advancement Structure

We advance initiatives to maintain appropriate labor environments as an activity guideline of the Corporate Ethics Committee.

> [Sustainability Management and Advancement Structure](#)

3. Organization and Personnel

(1) Philosophy

JSR Group drives its organization and personnel based upon the following measures:

- Develop mechanisms and a corporate culture with a healthy balance of 'Freedom' and 'Discipline,' guided by the Course of Action's 4Cs to enable managers and junior staff to grow together, help all employees accurately perceive and solve issues in order to foster a JSR that not only maintains its organizational capacity, but ensures its future growth.
- Promote the globalization of JSR corporation employees while developing a globalized workforce within JSR Group as well as train and manage the Group's human resources on a global level.
- Generate synergies which take full advantage of the increasing range of diversity (in terms of nationality, culture, gender, values, etc.) throughout JSR Group's vast human resource pool.

(2) Codes of Conduct

- We shall ensure the fair treatment of employees, based on each person's tasks, roles, and level of commitment.
- We shall respect the diversity of our workforce and make efforts to create a workplace environment that enables every employee to make the best use of their abilities and to find a rewarding sense of satisfaction in their work.

- We shall respect the human rights and diverse characteristics of all individuals, and shall not discriminate against gender, age, nationality, race, ethnic group, origin, religion, beliefs, social status, physical disability, sexual orientation, or other relevant conditions when determining employment status and/or working conditions.
- We shall not force religion and/or belief on others.
- We shall provide a workplace free from sexual harassment and any harassment arising from positions of power. In addition, we will not engage in or make verbal comments with sexual connotations that will make counterparts feel uncomfortable.
- In the event that a staff member reports the violation or possible violation of the law and/or the Principles of Corporate Ethics to his/her superiors and/or internal/external hotline, we shall fully protect the said staff member's identity and protect him or her from unfavorable treatment.

(3) Rank System

We have established an ability-based grade system that sets capability grades that correspond to employees' abilities. Moreover, for employees of higher ranks, we also apply a job rank system that establishes ranks that correspond to given duties (i.e., responsibilities in the organization and performance responsibilities).

(4) Assessment System

We conduct assessments fairly by employing two systems. One is an "ability assessment system" that specifies the specific behavioral characteristics of abilities required for each capability grade in individual occupational categories and then assesses demonstrated abilities based on those standards. And the other is a "objective management system" that assesses the degree to which a person has achieved objectives were determined at the beginning of the fiscal year.

(5) Philosophy concerning Wages and Working Hours

JSR Group strictly complies with the legally-established minimum wage of each country and region and provides wages that are based on fair assessments to employees. JSR Group naturally strives to be legally compliant in terms of working hours. We also endeavor to provide appropriate labor management with the aim of avoiding long working hours and to help employees enjoy a proper work-life balance.

4.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."

Human Resources = Skill and Know-How x Motivation

As a key goal, we will also strengthen our employees' international communication abilities.

(2) Mechanisms and Specific Measures Relating to HR Development

- Continue to implement programs to realize early development of the leaders of tomorrow through the Next Leaders Development Committee
- Implement OJT and Off-JT training with a greater emphasis on motivation, a critical ingredient for the development of employee skills and knowledge
- Enhance language and cultural programs in international communication such as intensive language courses in China and abroad.
- Continue and expand training to support the passing on of technological expertise and development of manufacturing skills common to all Group plants
- Continuation of specialized skill training for young employees
- Provide training programs with common content between Group companies

(3) Training Programs

JSR conducts a variety of training programs to raise the skills of its employees.

In FY2019, the total annual training time per JSR employee was 18.7 hours.

This total was calculated by including technology and skill training, stratified training programs, and other training organized by human resources departments. It therefore does not include hours spent in education provided independently by departments or external education. Additionally, it does not include internet-based training hours.

Position	Rank-based training	Job-based Training					Objective-based Training				
		Manufacturing	Production and technology	Research and development	Planning, managing and administration	Marketing and development	Common across all areas	Promoting internationalization	Business skills	Life planning	Assistance to applicants for career transfer
General Manager, Plant Manager	Training the leaders of tomorrow (JSR Business School)	Pre-management training Safety, environmental preservation, quality control, facility management, personnel management, cost management			Specialized knowledge courses External courses on management strategies Accounting and finance, etc.	Specialized knowledge courses Marketing and other external courses	Course on handing down technological expertise	Study-abroad program / trainee program / job training course in China English and Chinese language courses, etc. Champion, Black belt, Green belt, Guide seminar	Logical thinking and presentation skills training, etc. MBA and MOT programs, etc.	Career and life planning development support seminars	Career-development seminars and education assistance benefits
Manager, Team Leader	Middle management training New supervisor and management training										
Project Leader Section Manager Group Leader	Subsection chief training Group leader training New supervisor training										
General Employees	Mid-level employee training New employee follow-up training New employee training	- General technical skills training - Safety and environmental training - Quality control training - Public certification training	Basic knowledge training (polymer chemistry, chemical engineering, and chemical processes) Understanding of JSR's unique technologies Quality control (levels: introductory and intermediate) Chemical management, environmental preservation intellectual property, contracts		External courses (for graduates) Accounting, finance, marketing and other external courses Correspondence course (for graduates) English, accounting, finance, marketing, legal affairs, and other correspondence course technical skill courses conducted by individual department						

Making the best use of the training centers we have established near our plants to support the continuing education of our employees, we focus on further refining our strengths in technology and human resources by passing on technical skills at manufacturing sites and expanding employee education programs.



Yokkaichi Training Center



Chiba Training Center



Kashima Training Center



Miniature Plant in Yokkaichi Training Center



Head Office Training Center (JSR Roppongi Club)

(4) Career Development Program (CDP)

We have established the Career Development Program (CDP) to work in conjunction with other training programs in the development of human resources and the next generation of JSR.

With CDP, recent graduates will work temporarily in different departments for their first few years as part of their development.

We believe that this kind of rotation forms the basis of human resources development. Since first introduced in 1988, we have continued to improve and refine this method of training. Each employee must work in at least three different departments during their first 10 years of employment. This program produces highly capable employees that have excellent efficiency and inter-departmental communication skills due to their understanding and awareness of the relationships between upstream and downstream processes.

CDP Committee members individually interview employees that will enter CDP before forming individual rotation plans at a

general CDP meeting. The Human Resources Department runs the CDP Committee, and each Division Director is a committee member.

5. Flexible Working Style Support Benefits

(1) Flexible Working Style Support Benefits

Child-rearing and nursing care are situations that have significant impacts on life. Because of this, JSR has a variety of systems designed to create an environment that helps employees balance work and caretaking duties. Additionally, JSR distributes a guidebook detailing the various support programs available for balancing work and caretaking (including those within the company and without) to make them known among employees.

We are taking various initiatives to support employees' diverse working styles from FY2019. They include changing the system to allow many employees to work from home, not just those who do so for child-rearing and nursing care, by relaxing work-from-home requirements; starting a by-the-hour annual paid leave system that allows employees to take their annual paid leave in one-hour increments; extending the time employees can work shortened hours for child-rearing and nursing care; and adding more annual paid holidays for young employees (14 days in the first year of employment).

➤ [ESG Data \(PDF 1.5MB\)](#) [PDF](#)

JSR's Flexible Working Style Support Benefits

Life Stage	Available Support	Description
Prenatal (Fertility treatment, prenatal care etc.)	- Shortened working hours	During pregnancy, employees may reduce their working hours up to two hours per day. Employees engaged in fertility treatments can reduce their working hours by up to four hours per day, or up to 44 hours per month.
	- Work from home	Employees can work from home one day per week or five days per month, even in cases not related to child-rearing or nursing care.
Before and after childbirth	- Maternity leave (prenatal & postpartum)	Employees can take maternity leave starting six weeks before, and extending eight weeks after childbirth.
	- Special paid paternity leave	Male employees can take four days of special paid paternity leave anytime from one week prior to two weeks after the birth of their child.
	- Extended childcare leave	Employees are able to take an extended leave of absence until their child turns 18 months of age.
	- Extended childcare leave counseling	Upon request by employees taking extended childcare leave, counseling sessions between the employee and their supervisor are held. In these sessions they discuss and aim to resolve any worries or issues that could hinder a smooth transition back to working life.
Balancing work and childcare	- Shortened working hours	Employees with non-working spouses can shorten their working hours until the child is three years of age. Additionally, employees with working spouses can reduce their working times until the child is in their sixth year of elementary school.
	- Work from home	Employees can work from home one day per week or five days per month, even in cases not related to child-rearing or nursing care.
	- Family-care leave	Employees can take up to ten days of leave in half-day units per year to provide nursing care for family member's that live in the same household. Uses include, accompanying family members to the hospital, medical examinations, vaccinations etc.
Balancing work and nursing care	- Shortened working hours	Employees providing nursing-care for family members can reduce their working hours by up to four hours per day, or up to 44 hours per month.
	- Work from home	Employees can work from home one day per week or five days per month, even in cases not related to child-rearing or nursing care.
	- Family-care leave	Employees can take up to ten days of leave in half-day units per year to provide nursing care for family members that live in the same household. Uses include, accompanying family members to the hospital, medical examinations, vaccinations etc.
	- Nursing-care leave	Employees providing nursing-care for family members can take up to 20 days of leave in half-day units annually.
	- Extended nursing-care leave	Employees providing care for family members can take up to 24 months of extended nursing-care leave.

	Extended leave can be broken down into as many as three periods for up to two years.
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* Per employee request, mobile devices with remote access to the company network are provided under these benefits.

JSR also provides a discretionary labor system for employees in R&D, as well as a "no-core" flextime labor system for its non-shift based employees. Employees who need time off for community service activities can take up to a total of five days paid leave per year as volunteer leave.

JSR and JSR Micro Kyushu are Accredited with the "Kurumin" Next-Generation Mark



In August 2007 and April 2012, JSR received the Next Generation Mark accreditation (nicknamed "Kurumin") issued by the Minister of Health, Labor and Welfare. Kurumin designates enterprises that provide superb parenting support. JSR Micro Kyushu also received the mark in May 2017.

(2) JSR Original Support Benefits

In addition to compensation benefits available during paid leave periods via Health and employment insurance, JSR employees are provided with the following original benefits. These benefits aim to aid employees in maintaining a healthy work-life balance.

➤ [ESG Data \(PDF 1.5MB\)](#) [PDF](#)

- Childbirth Lump-Sum Allowance

Women enrolled in JSR's health insurance program are eligible to receive a 100,000 yen per child Childbirth Lump-Sum allowance in addition to the government mandated childbirth allowance.

- Extended Childcare Leave Allowance

Employees on extended childcare leave are eligible to receive their base salary with an additional 50% bonus for the first five days. This allowance is funded via the JSR Mutual Aid Association.

- Post Childcare Leave Reinstatement Allowance

For employees who have returned back to work for a continuous six months following maternity leave or extended childcare leave (of at least one month) are eligible to receive an allowance of 200,000 yen per child. This allowance is funded by the JSR Mutual Aid Association for the purpose of recognizing employees past service, and continued dedication.

- Daycare Allowance

In households where both parents work, employees are reimbursed half the cost of baby sitter services that are required on working days. Costs are reimbursed via the JSR Mutual Aid Association with an annual limit of 400,000 yen per eligible employee.

6. Employees Healthy Mind and Body

(1) Philosophy for Physical and Mental Health

JSR feels that a healthy mind and body are extremely important for employees and their families to live happy lives. We also feel that they are imperative in the creation of a productive and vibrant workplace. Because of this, we have adopted various measures to help our employees work in good health, both mentally and physically.

(2) Codes of Conduct

We shall strive to maintain and improve safety and hygiene levels for all relevant parties, based on our belief that "safety is of utmost importance to everyone working in manufacturing and the bedrock of business activities." Additionally, we shall pay sufficient attention to the maintenance of the mental and physical health of ourselves and those we work with.

(3) Health and Fitness: JSR Health Promotion

JSR will advance "JSR Health Promotion" as an activity to support our work-style innovation activities and promote health and fitness among our employees, who are the foundation of organizational activity. First, we explain the importance of fitness in the company's Top Message. Specifically, we incorporate two approaches in the management of employees' health --a "high-risk approach" (i.e., individual attention when an employee is ill) and a "population approach" (i.e., risk reduction/prevention for all). In doing so, we address specific issues that include prevention of lifestyle-related diseases, ensuring that employees receive health checkups and follow-ups, mental health, and prevention of secondhand smoke. At the same time, JSR Health Insurance Society has introduced a portal site (KenCoM) as a tool to help maintain and promote employees' health. KenCoM provides services that support health with the aim of making fitness-related activities fun. We will continue working to strengthen our use of ICT in employees' health management.

JSR was recognized under the 2020 Certified Health and Productivity Management Organization Recognition Program.

JSR was recognized by the "2020 Certified Health and Productivity Management Organization Recognition Program" (Large Enterprise Category), a scheme run by the Ministry of Economy, Trade and Industry (METI) and Nippon Kenko Kaigi. This designation acknowledges our standing as a listed company that practices outstanding health and productivity management.

Moreover, five members of JSR Group --JSR Micro Kyushu Co., Ltd.; Japan Coloring Co., Ltd.; Elastomix Co., Ltd.; Emulsion Technology Co., Ltd.; and JSR Health Insurance Society --were recognized under the 2020 Certified Health and Productivity Management Organization Recognition Program (SME Category).

The "Certified Health and Productivity Management Organization Recognition Program" examines large enterprises, SMEs and other organizations engaging in initiatives for overcoming health-related challenges in regional communities or for promoting health-conscious activities led by the Nippon Kenko Kaigi, and recognizes those enterprises engaging in particularly outstanding efforts for health and productivity management.

Seeing the health and fitness of each and every employee as vital to sustainable corporate growth, JSR Group will continue regarding employee health as a management issue and take proactive steps in executing measures to maintain and promote health and reexamining how our employees work.

* The "Certified Health and Productivity Management Organization Recognition Program" examines large enterprises, SMEs and other organizations engaging in initiatives for overcoming health-related challenges in regional communities or for promoting health-conscious activities led by the Nippon Kenko Kaigi, and recognizes outstanding enterprises engaging in efforts for health and productivity management.

(4) Physical Health Assistance

JSR supports its employee's physical health by providing general physical screenings, special examinations required by law, such as chemicals examinations and VDT screenings, lifestyle disease checkups, and gynecologic cancer examinations. Subsidies are also provided to employees who receive complete medical screenings and brain scans such as MRIs. Since 2008, the JSR Health Insurance Society has promoted lifestyle disease prevention screenings (diabetes, high blood pressure, and obesity) paired with health guidance and counseling to achieve promising results. Moreover, we actively work to ensure employees' health through various means, among them providing education on ways to prevent lifestyle-related diseases through the industrial health staffs of our business sites, individual counseling at health exams, and safety and health advice through workplace visits.

Additionally, in addition to providing its own sports facilities as well as memberships in sports clubs through welfare service contracts, each JSR business site hosts sporting events, such as softball games, and bowling tournaments to improve health through physical activity and facilitate communication among employees. These programs have received positive feedback from employees who do not normally have the opportunity to participate in physical activities.

Examples of JSR sports facilities



Health management center (exterior) and training room, Yokkaichi Plant



JSR athletic ground next to the Kashima Plant

(5) Mental Health Assistance

JSR has taken measures to improve employee mental health since the issue first began drawing attention. JSR takes a four-point approach in providing mental health support, "Check," "Organizational Analysis," "Consultation," and "Training."

Checks and organizational analysis include a biannual employee mental health JMI Health Survey conducted by JSR since FY1998. The data from these checks is used in a variety of ways. It helps individual employees understand their own mental stress levels. It also helps JSR to understand the stress levels of all employees throughout the organization. Furthermore, it is used in the implementation of various companywide policies. Since FY2012, we have been conducting web-based stress diagnostics throughout the JSR domestic group. Stress diagnostics are conducted annually via our e-Stress Diagnosis System.

Consultation includes the establishment of a program to provide counseling for employees at a location of their choosing. Counseling is conducted through a third-party professional, Human Frontier Counseling. This program has been established at each of the JSR domestic group companies as a part of our mental-health counseling support efforts. In efforts to provide stable and quality mental health counseling, occupational health professionals are present at all of JSR Corporation's offices and plants.

Training includes a variety of mental health care programs, such as self-care and line-care that properly reflects each level of JSR's organizational hierarchy.

(1) Thinking vis-à-vis Workers' Union Activities

We strive to maintain a relationship with the JSR Workers' Union whereby we can routinely conduct constructive dialogues through regular labor-management councils, meetings concerning the revision of labor agreements, and other opportunities. We also work with the JSR Workers' Union to build better workplace environments with attention to union concerns—namely, “wage policy,” “labor environment policy,” “welfare policy,” “leisure time, public relations, and volunteerism policy,” and “organizational policy.”

(2) Codes of Conduct

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) Communication between JSR and the JSR Workers' Union

JSR and the JSR Workers' Union have entered a labor agreement based on workers' union regulations.

The president, directors in charge of individual business segments, and worker's union representatives have regular discussions with the workers' union to exchange opinions and conduct QA sessions regarding the working environment, business conditions, major company policies, and workers' union activities. The JSR Workers' Union discloses the content of these discussions with union members. Moreover, through frequent labor-management councils at the employee and plant levels, local labor-management councils, and Safety and Health Committee meetings, we endeavor to deepen mutual understanding and trust as well as to maintain and strengthen sound labor relations. In FY2019, we endeavored to create work-friendly environments through repeated discussions concerning methods for taking and managing the by-the-hour annual paid leave system, support measures for employees posted away from their families, and other matters.

(4) Dialogue between the Workers' Union and its Members

Union members at each plant represent plant workers' opinions. They also act as a conduit between union leadership and the union members. Workplace discussions and questionnaires are conducted to ensure the ideas and opinions of union members are incorporated into union activities.

(5) JSR Workers' Union Membership

➤ [ESG Data \(PDF 1.5MB\)](#) [PDF](#)



- ▼ 1. Philosophy
- ▼ 2. Advancement Structure
- ▼ 3. Codes of Conduct
- ▼ 4. Main Activities

1. Philosophy

At JSR, we are focused on work-style innovation activities to improve competitiveness and realize sustainable growth for both the company and our employees.

To reach this goal, the company must encourage the success of diverse employees, departments must develop systems capable of achieving their organizations' "ideal form," and employees must work vigorously and in good health while balancing their work and home life. With this in mind, we analyze our operations and fundamentally review how we work while applying digital capabilities. And we promote initiatives for realizing diverse work styles while dramatically improving productivity.

2. Advancement Structure

A team dedicated to work style innovation promotes the formulation of basic policies and the planning and execution of related measures. Under the Work Style Innovation Team's leadership, departments discuss the "ideal form" of their organization, identify challenges, and execute concrete measures with the participation of each employee. Management is also committed to these activities. For example, management establishes opportunities for assigned officers to report on the measures that departments propose.

3. Codes of Conduct

JSR Corporation provides a work environment that facilitates flexible "work-life management" for employees and strives to improve both productivity and employee satisfaction. Work-life management is also an essential part of diversity management that strives for an organization with a diverse workforce. We will therefore pursue diversity simultaneously, as we know that it leads to a corporate culture that is open to diverse values and work styles.

4. Main Activities

Each department considers and executes "work styles" that bring it closer to the "ideal form" it prepared for its organization. Once a year, the Corporate Audit Department and Diversity Development Office conduct a detailed interview with each department to ascertain its circumstances, thereby identify problems within the department as well as cross-organizational problems, and then report to management.

At all levels—from management on down to rank-and-file employees—we promote discussion of not only schemes for fostering diverse work styles and the advancement of IT, but also of what constitutes the best "work style" for each person, which includes mental aspects.

Examples of initiatives undertaken in departments

- Improved labor efficiency in regularly-scheduled repairs in plant districts
- Study of high-location inspections with drones^{*1} in plant districts

- Use of a chatbot^{*2} function for responding to common inquiries
- Promotion of IT democratization^{*3} by systems departments and use of simple web systems that can be created with knowledge of Excel

*1 A small unmanned aircraft that can be operated by remote control

*2 An automatic conversation program that uses artificial intelligence

*3 Improvement activities conducted together with systems strategy department members to help employees in charge of practical operations improve their productivity with IT

We're testing the use of drones to inspect equipment at high altitude in a factory.

On November 2019, an inspection was carried out to make an over-the-air inspection of the operating high pressure gas/hazardous materials plant at the Yokkaichi plant. This was the first time in Japan to conduct a verification over an operating plant and the relevant government agencies (fire department, Mie prefecture (departments related to high pressure gas), and the city of Yonkyo) also witnessed the verification.

So far, various risk assessments have been carried out at the company's Kashima plant, including tests on the possibility of drones falling onto plant equipment, and the fact that we have accumulated flight results led to this verification.

The use of drones in a plant can be expected to increase the efficiency of facility inspections, which have been carried out using manpower and manpower, and expand the scope of inspections to include higher areas, as well as reduce inspection costs and enable quicker on-site inspections in the event of a disaster.

JSR aims to promote the safe and effective use of drones to further improve the security of plants.



Photo taken by a drone at an altitude of 60 m.

The image on the left was taken by an RGB camera and the one on the right was taken by a thermal imaging (IR) camera.

The temperature of the fluid inside the plant can be determined.



Society Diversity

- ▼ 1. Philosophy: Recruitment and Promotion of Diverse Human Resources
- ▼ 2. Advancement Structure
- ▼ 3. Advancement Measures and Schemes
 - (1) Promoting the Active Participation and Advancement of Women in the Workforce
 - (2) Promoting the Active Participation of Employees Providing Nursing Care
 - (3) Promoting the Reactivation of Resigned Employees
 - (4) Activation of Foreign Nationals
 - (5) Employment Opportunities beyond Retirement
 - (6) Support for Employees with Disabilities

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.

➤ [Work-style Innovation](#)

2. Advancement Structure

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, we provide support to employees who are balancing work with care and illness.

3. Promotion Measures and Schemes

(1) 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' third phase is set for April 1, 2020 to March 31, 2022. 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 eighth phase of which is set for April 1, 2020 to March 31, 2022. We have continued to establish, notify, publicly disclose, raise awareness of, and implement action plans throughout the second phase of the Women's Act and seventh phase of the Next-Generation Act while executing initiatives in line with both acts.

➤ [Act on Promotion of Women's Participation and Advancement in the Workplace: Action Plan for Promoting the Active Participation and Advancement of Women in the Workforce \(PDF 28KB\)](#) [PDF](#)

- [Act on Advancement of Measures to Support Raising Next-Generation Children: Action Plan for Advancing Measures to Support Raising Next-Generation Children \(PDF 40KB\)](#) [PDF](#)

Active support of Women in the Workforce: Quantitative Targets

	Target	FY2016	FY2017	FY2018	FY2019	FY2020
Percentage of women hired annually per position	College graduates, engineering positions: 30%*	15%	20%	18%	23%	26%
	College graduates, administrative positions: 50%*	60%	50%	45%	50%	55%
Percentage of women in managerial positions	March 2022: 6%	3.6%	3.8%	4.1%	4.3%	4.1%

* As of April 1st of each fiscal year

* Set from the ratio of male and female students.

- [ESG Data \(PDF 1.5MB\)](#) [PDF](#)

1) Creation of Systems to Actively Support Women in the Workplace

- [Labor Environment](#)

2) Developing Programs that Support Working Women

The following programs are held with special consideration for female employees, and managers, in order to increase female employees' ownership of their career development at JSR.

- Career Development Seminar for Assistant Manager-Level Female Employees
- Work Communication Seminar: Managers improve their diversity management skills
- Career Track Transfer Seminar: Employees brainstorm about career possibilities and skill development after changing career tracks within JSR.
- General Career Development Seminar: Non-managerial, general employees develop efficient internal communication skills.
- Communication Seminar: Manufacturing employees improve their communication skills.

Other seminars focusing on specific themes are also held as appropriate.

JSR received “Eruboshi” certification as a company making outstanding efforts to promote women’s participation.

On October 28, 2019, JSR earned the “Eruboshi (Stage 2)” designation after being certified by the Minister of Health, Labour and Welfare as a company making outstanding efforts to “promote women's participation” based on the Act on Promotion of Women's Participation and Advancement in the Workplace.



(2) Promoting the Active Participation of Employees Providing Nursing Care

Today, Japan has what is called a “super-aging society”^{*1}. It is reported that about one in four people in Japan aged 75 or older requires nursing care, and it is thought that the number of employees who are faced with providing such care will increase. JSR offers a variety of support measures that allow employees who provide nursing care to balance that care with their work.

*1 Super-aging society: A society in which the share of the elderly population aged 65 years or older within the total population exceeds 21%.

- [Labor Environment](#)
- [ESG Data \(PDF 1.5MB\)](#) [PDF](#)

(3) Promoting the Reactivation of Resigned Employees (Career Re-Entry System)

JSR instituted its Career Re-Entry System to enable employees who voluntarily left JSR and the workforce due to marriage, childbirth, nursing care responsibilities, the transfer of a spouse, or other personal reasons to register for rehire in accordance with company needs and the former employee's desires.

- [ESG Data \(PDF 1.5MB\)](#) [PDF](#)

(4) Activation of Foreign Nationals

Sixty percent of JSR Group's revenue comes from overseas, and one-third of its employees are not Japanese. We therefore engage in corporate activity that is founded on the leadership of a CEO who is well acquainted with circumstances in Japan and abroad. Moreover, to secure personnel who can succeed on the global stage, we promote the development of

workplace environments within which employees of different nationalities, religions, and lifestyles can work together while demonstrating their own unique characteristics.

> [ESG Data \(PDF 1.5MB\)](#) [PDF](#)

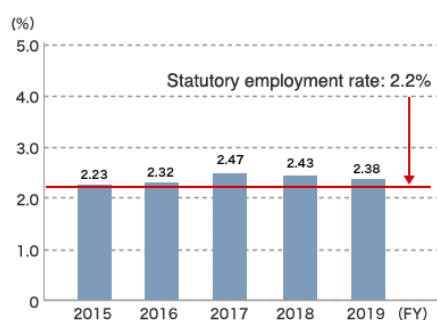
(5) Employment Opportunities beyond Retirement

In accordance with the Act on Stabilization of Employment of Elderly Persons, JSR has systems in place that enables employees who have reached the mandatory retirement age to stay in the JSR workforce. Prior to retirement, employees complete a survey concerning their desire to continue employment. All of those who wish to continue working are re-employed.

(6) Support for Employees with Disabilities

As of the end of FY2018, JSR's employment rate of individuals with disabilities was 2.38% (the statutory employment rate is 2.2%). By discussing their strengths, and the details of their disability, we are able to find a work style that best suits each employee's situation. Although there are still few employees with disabilities working in areas where hazardous materials are handled, such as manufacturing and research laboratories, we are working on ways to ensure safety while expanding employment opportunities.

Employment rate of individuals with disabilities



Scope of aggregation: JSR Corporation



- ▼ 1. Philosophy
- ▼ 2. Supply Chain Management
 - (1) CSR/sustainable procurement
 - (2) Assessment of business partners
 - (3) Initiatives concerning conflict minerals
 - (4) Education and training of employees in charge of procurement
 - (5) Participation in initiatives concerning CSR/sustainable procurement
- ▼ 3. Green Procurement and Purchasing
 - (1) Green procurement of raw materials
 - (2) Green purchasing of office equipment and supplies

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 boycotts 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.

> [JSR Group CSR/Sustainable Procurement Policy \(PDF 123KB\)](#) [PDF](#)

(2) Assessment of business partners

We regularly confirm that our business partners satisfy assessment standards that we demand. This confirmation takes place when beginning new business with a partner as well as during ongoing business with existing partners. When assessing candidates for new business, we evaluate them based on certain criteria concerning the status of their financial affairs and level of quality management. We also conduct an onsite audit prior to the start of business to verify items concerning safety, the environment, and quality. At the same time, we also reassess business partners with whom we have a continuing business relationship using similar criteria when starting a new transaction with them. With regard to important raw materials that are difficult to procure in an emergency due to issues concerning availability or scarcity, for example, we strive to secure stable availability for our customers by conducting regular supplier audits and onsite confirmation of items pertaining to supply continuity and providing proposals and guidance for quality reliability.

(3) Initiatives concerning conflict minerals

Our policy based on the above-mentioned Purchasing Policy is to never permit the use of conflict minerals, either directly or indirectly. We continuously verify that we use no conflict minerals with our business partners' cooperation. In FY2015, we conducted an investigation concerning the use of conflict minerals and confirmed that none of the targeted suppliers used them. Since then, we have investigated the use of conflict minerals when acquiring new raw materials or using a new supplier, and have maintained a system that guarantees we do not use conflict minerals.

(4) Education and training of employees in charge of procurement

We recognize that educating and training purchasing department personnel who promote CSR/sustainable procurement, deal with conflict minerals, and handle other actual operations is important for guaranteeing sound supply chain management. We therefore provide introductory education to procurement personnel that are newly assigned to purchasing departments to ensure that they fully understand the JSR Group Purchasing Policy. We also encourage them to acquire the Japan Management Association-accredited Certified Procurement Professional certification (CPP; a qualification certifying that a person has acquired expertise in the purchasing and procurement field) to deepen their understanding of CSR/sustainable procurement and promote their acquirement of more advanced knowledge. We support them in this endeavor by paying the costs of workshops and examination fees.

(5) Participation in initiatives concerning CSR/sustainable procurement

JSR participates in Global Compact Network Japan's Supply Chain Working Group. We utilize knowledge obtained through dialogues with stakeholders to strengthen our CSR/sustainable procurement activities. For example, we apply this knowledge when formulating the JSR Group CSR/Sustainable Procurement Policy and reflect it in questionnaire items used when surveying business partners.

3. Green procurement and purchasing

(1) 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.

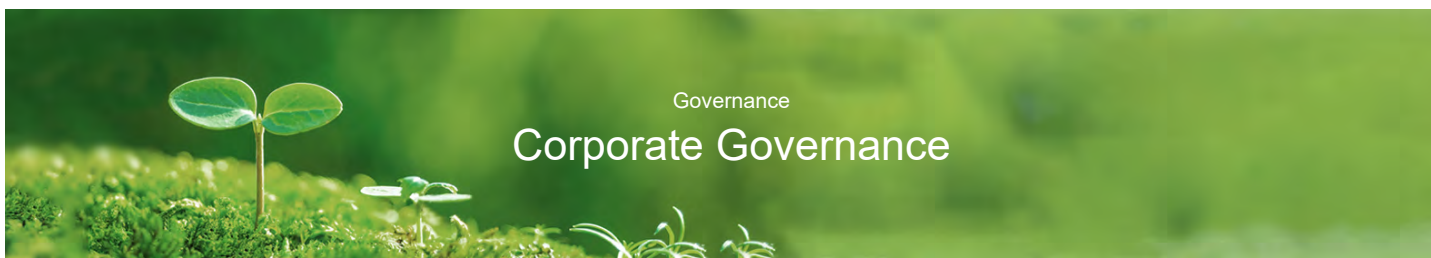
^{*2} Green Procurement Guidelines:

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.

(2) Green purchasing of office equipment and supplies

JSR defines green purchasing as the purchasing of environmentally friendly office equipment and supplies not directly related to its products or manufacturing. Green purchasing is distinguished from the green procurement of raw materials for products, packaging materials, and manufacturing facilities.

The Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (commonly referred to as the Green Purchasing Law) was enacted in 2000, and Japan's basic policy on the law was announced in 2001, when the law came into effect. Based on this policy, JSR strives to prioritize equipment and supplies with energy-saving features and high recycled content. In FY2019, green purchasing represented 206,871,000 yen out of a total of 245,218,000 yen in purchases at all business sites. This is equivalent to a green purchasing rate of 84%.



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.


To this end, we strive to expand and enhance our corporate governance as a key issue in our business operations.

Reports detailing our philosophy and operations in corporate governance are available below.

> [Integrated Report \(JSR Report\)](#) 

* JSR Report 2020 is scheduled for release on November 30.

> [JSR's policy, philosophy, governance system, and management system pertaining to corporate governance](#) 

> [JSR's Corporate Governance Report \(PDF 890KB\)](#) 



Governance Compliance

▼	1. Philosophy
▼	2. JSR Group Principles of Corporate Ethics
▼	3. Advancement Structure
▼	4. Corporate Ethics Activities (1) Publication and Education of JSR Group Principles of Corporate Ethics (2) Corporate Ethics Awareness Survey (3) Hotline (Internal Reporting Channels)
▼	5. Legal Compliance Measures 1) Approach to Preventing Bribery and Unfair Competition 2) Approach to Taxes (Philosophy) (1) Reviewing and Improving Legal Compliance (2) Training and Increasing Awareness 1) Compliance Handbook 2) Seminars and E-Learning
▼	6. Protection of Personal Information

1. Philosophy

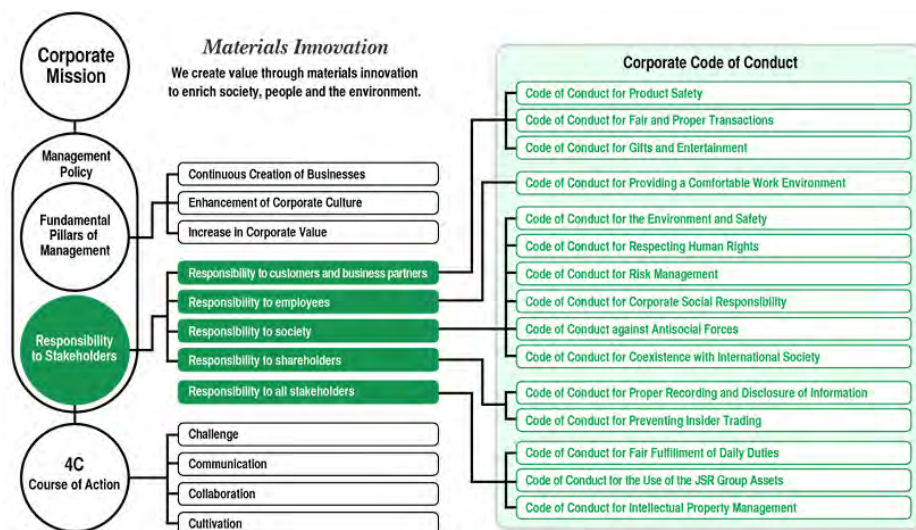
JSR Group has been endeavoring, by building up and maintaining good relationship with all our stakeholders, to become a trustworthy and indispensable corporate citizen.

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. Advancement Structure

Corporate Ethics Committee of JSR is responsible for advancing the Group wide activities such as promotion of corporate ethics activities, monitoring and enhancing legal compliance, and promotion of respecting and safeguarding human rights.



4. Corporate Ethics Activities

JSR Group has been pursuing the following 3 major corporate ethics activities;

(1) Publication and Education of JSR Group Principles of Corporate Ethics

JSR Group formulated the JSR Group Principles of Corporate Ethics to serve as a globally-shared Code of Ethics. By preparing English, Simplified and Traditional Chinese, Korean and Thai versions in addition to the Japanese version, we are ensuring that directors and employees at all Group companies can become acquainted with the JSR Group Principles of Corporate Ethics in their native language or in a language in which they are proficient.

Moreover, each year we provide an e-learning program on the Principles of Corporate Ethics for all employees of JSR Group companies in Japan. We are incorporating the themes of confidential information management, prevention of abuse of power, and prevention of data falsification into the program. We also conduct corporate ethics training for each stratum, such as new recruits and newly promoted managers. Especially regarding harassment education, we conduct management training related to bullying and harassment reports and the handling of actual cases for high-ranking and managerial positions.

JSR Group Principles of Corporate Ethics

- > Japanese (PDF 2,527KB) [PDF](#)
- > English (PDF 2,244KB) [PDF](#)
- > Simplified Chinese (PDF 2,708KB) [PDF](#)
- > Traditional Chinese (PDF 4,994KB) [PDF](#)
- > Korean (PDF 2,386KB) [PDF](#)

(2) 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.

(3) Hotline (Internal Reporting Channels)

• 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.

We also hold regular once-yearly meetings between the corporate ethics officers of domestic Group companies and JSR's Corporate Ethics Committee for the purposes of getting all Group companies in Japan on the same page and tackling ethics-related issues. Furthermore, we post and display guides for accessing the hotlines on the company intranet and online internal newsletters to make the hotlines easier to use.

State of Use of JSR Group's Hotline (Number of Reports)



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.

Ten reports were received during FY2019. Of them, five involved abuse of power.

• 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.

5. 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 establishes specific systems and executes other priority approaches to ensure compliance with laws and regulations that are particularly relevant to the execution of business.

1) Approach to Preventing Bribery and Unfair Competition

JSR has formulated "Policy for Bribery Prevention" "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.

➤ [JSR "Policy for Bribery Prevention" \(PDF 32KB\)](#) [PDF](#)

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.

Participation in global incentives

JSR participates in the Corruption Prevention subcommittee of the Global Compact Network Japan (GCNJ), which is a local network for the UN's "Global Compact". In this subcommittee, various activities are carried out, such as lectures with invited experts, exchange of information related to measures for preventing corruption among participating companies, etc. Through these activities, JSR is exploring, examining and implementing effective and ideal corruption prevention measures that are suitable for the JSR Group.

Corruption prevention measures have a strong compliance system advancement aspect of complying with relevant laws of each country. At the same time, the foundation of such measures is closely linked to global social issues related to human rights, labor and the environment. In addition to continuing to implement effective corruption prevention measures, JSR is searching for ideal forms of such measures.

2) Approach to Taxes (Philosophy)

The JSR Group understands that carrying out appropriate tax payments and tax management that follows relevant laws and regulations of each country fulfills an important role in the economic and social development of each country and is linked to supporting and earning the trust of all stakeholders.

The JSR Group is engaged in taxes by supporting the following philosophy as provided by the Chief Financial Officer (CFO).

"JSR Group will comply with the taxation laws of each country in which it does business, including that regarding transfer pricing and tax havens."

(1) Reviewing and Improving Legal Compliance

Based on legal compliance regulations, JSR Group designates laws and regulations that are important in the execution of business as Overall Significant Laws and Legal Regulations. Each year, the Group regularly verifies its compliance by self-checking whether the business operations of all Group companies conform with the Overall Significant Laws and Legal Regulations. The regular sharing of information on cases of non-compliance within JSR Group is useful in preventing legal violations and quickly detecting and improving non-compliant situations. It also helps improve awareness of compliance.

The number of Group companies is growing as JSR Group's global activities expand, particularly in the Life Sciences Business. In light of this, we are focused on supporting the formulation of legal compliance regulations in all Group companies.

(2) Training and Increasing Awareness

1) Compliance Handbook

Group is thoroughly publicizing important points that demand legal compliance among employees in Japan, South Korea, and China by issuing Japanese, Korean, and Chinese versions of JSR's Compliance Handbook. The Chinese Version is issued to not only Group companies in China but also JSR departments and Group companies that sell products, supply samples, or otherwise engage in business dealings with Chinese enterprises. Through it, we are working to ensure thorough understanding and practice of legal compliance in China.

We revised the Compliance Handbook's Japanese version during FY2017 and redistributed to employees in April 2018. The revision covered content pertaining to recent cases of data falsification and fabrication at other companies and revisions of related laws.



Compliance Handbook

2) Seminars and E-Learning

We held periodic seminars and provided e-learning programs for directors and employees of all JSR companies as part of legal education to ensure full organizational knowledge of laws demanding compliance. The main seminars held in FY2019 were as follows.

September: Antitrust Act seminar

November: Subcontract Act seminar

February: Export Control seminar

We also provided e-learning on the Antitrust Act, export control, anticorruption-related laws, and corporate ethics.

We also provide legal education that has been customized to meet the requirements of individual departments and Group members. We provided individualized education for employees being sent to new assignments (training on the Antitrust Act, anticorruption laws, etc.). We also held chemical substances seminars at various locations in Japan and, as part of them, provided education on domestic laws (Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., Industrial Safety and Health Act, Poisonous and Deleterious Substances Control Act, etc.) and overseas laws.

6. 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.



▼ 1. Philosophy
▼ 2. Risk Management System
▼ 3. Risk Management Measures
(1) Identifying Risks and Selecting Important Risks
(2) BCM (Business Continuity Management)
1) Formulation and Operation of BCM Procedures
2) Major Earthquake Preparations
(3) Enhancement of Initial Response to Emergencies
1) Crisis Management Training
2) Disaster Management Training at each plant and laboratory
3) Safety Confirmation System
4) Infection Preparedness
5) Responses to Legal Risks and Compliance Risks
(4) Enhancing Information Security

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.

➤ [Basic Views and Policies Related to JSR's Corporate Governance](#) 

2. Risk Management System

JSR Group manages risk by largely classifying it into two types: risk related to business strategies and risk related to business operations.

For risk related to business strategies, we engage in risk management through deliberations and decisions made in important meetings, such as those of the Board of Directors, Executive Committee, and Business Issues Committee. Please click on the following link for the roles of each committee and other details.

➤ [JSR's Corporate Governance Report \(PDF 1.6MB\)](#) 

For risk related to business operations, we establish Risk Management Policies and engage in risk management centered on the Risk Management Committee.

The risk management system is incorporated into the internal control system. The status of the internal control system's execution is reported to the Board of Directors. JSR has a Corporate Audit Department that continuously verifies and evaluates the preservation and operation of internal control for the entire JSR Group as required by the Companies Act and Financial Instruments and Exchange Act. It also ensures that risk in existing business does not exceed permissible levels.

The department additionally maintains and strengthens internal control levels for the entire Group and conducts internal audits to ensure the appropriate and efficient execution of operations.



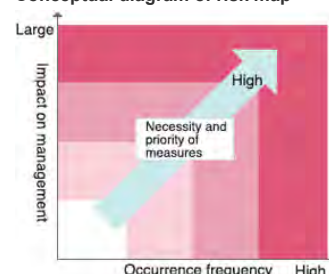
3. Risk Management Measures

(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.

Conceptual diagram of risk map



Click on the following link for information on the risks that could impact on JSR Group's business performance, financial standing, cash flow, etc.

➤ [JSR Group Business and Other Risks \(PDF 47KB\)](#) [PDF](#)

(2) BCM (Business Continuity Management)

1) Formulation and Operation of BCM Procedures

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.

Moreover, we maintain a stable supply of funds on hand to allow us to manage our businesses flexibly if a major risk arises. We also acquire issuer ratings and commercial paper ratings from rating agencies each year. JSR's rating information is available on rating agencies' websites as well as the JSR website.

Amid concerns of a global economic slowdown resulting from the COVID-19 pandemic, we issued three types of unsecured straight bonds with a total value of 35 billion JPY on May 28, 2020.

* BCM: Business Continuity Management/BCP: Business Continuity Plan

A BCP defines activities that need be conducted before the occurrence of an emergency situation that may threaten the survival of a company (large-scale natural disaster, explosion/fire, terrorist attack, etc.), judgment criteria and action guidelines that enable business continuity in the event of such emergencies, and other matters necessary for ensuring the continuity and early restoration of important businesses. BCM is a management system that has been developed to operate and continuously improve the BCP through a PDCA (plan-do-check-act) cycle.

2) Major Earthquake Preparations

JSR Group adopted a mid-term business plan in FY1995 concerning preparations for a major earthquake and has been conducting systematic activities to enhance those preparations. After FY2006, we began a seismic retrofitting project focused on high-pressure gas facilities in our plants, and installed an earthquake early-warning system at all JSR business sites. Based on lessons learned from the experience of the Great East Japan Earthquake, we are further reinforcing the anti-seismic capabilities of our buildings and implementing safety measures by incorporating the perspective of countermeasures against tsunamis. These initiatives are scheduled for completion by FY2020.

➤ [Security and disaster prevention](#)

(3) Enhancement of Initial Response to Emergencies

1) Crisis Management Training

Once a year, JSR holds crisis management training with the participation of “headquarters for accident and crisis control” members. The first such training took place in 2004. In FY2020, training was held for members in charge of accident prevention at JSR’s three plants and the Tsukuba Research Laboratories. The purpose was to strengthen the response capabilities of headquarters for accident and crisis control in each of these business establishments.



Crisis management training

We conducted “blind scenario” simulation training that focused on events that could happen on the day of a disaster. Participants were envisioned to be members of the headquarters for accident and crisis control at JSR’s Chiba Plant after the plant was damaged by an earthquake of “6-upper” in Tokyo (earthquake striking the northern area of Tokyo Bay). Each participant took the initiative to gather information and set response guidelines in an ever-changing situation, and thereby confirmed his or her obligation to consider company-wide safety as well as the importance of decision-making standards for making appropriate responses in an emergency.

*Blind scenario format

A drill format that gives participants a constantly changing disaster or damage situation based on an undisclosed scenario, and then asks them to independently consider, identify, and execute responses.

2) Disaster Management Training at each plant and laboratory

JSR Group conducts disaster management and evacuation training and drills on a regular basis. It is imperative that we minimize the impacts of emergencies and ensure business continuity in such situations.



General disaster drill staged at the JSR Yokkaichi Plant

3) Safety Confirmation System

In FY2009, JSR introduced a safety verification system that uses employees’ mobile phones and smartphones. The system can promptly ascertain the safety of employees in the event of a large-scale earthquake or other disasters. In FY2011, we began expanding the system’s coverage to include domestic Group companies and the families of JSR employees. Training using this system is conducted regularly, and JSR is prepared for large-scale and wide-area disasters.

4) Infection Preparedness

We stockpile masks in preparation for an epidemic of influenza or another infectious disease. We sent masks and other protective equipment to all of our business bases in response to the COVID-19 pandemic that began in January 2020. We endeavored to minimize the pandemic’s effects on manufacturing, R&D, distribution, and other Group business activities that support the world’s key industries.

We also provide necessary information such as the announcement of flu outbreaks.

To prevent flu infections from spreading in our workplaces and to also make sure that the cases of influenza that do occur stay minor, we invited doctors and nurses to JSR’s Head Office and the Yokkaichi, Chiba, and Kashima Plants to administer vaccinations to those who desired one.

5) Responses to Legal Risks and Compliance Risks

Click on the following link for information on our responses to legal risks and compliance risks.

[➤ Compliance](#)

Response to COVID-19

In view of the COVID-19 pandemic’s spread, we established a COVID-19 Response Committee led by the President at the end of January 2020. The committee’s first actions were to gather information in China, determine responses to be taken by local subsidiaries, and provide support. As it became clear that the pandemic was spreading to Japan and the rest of the world, we set up a BCP (Business Continuity Plan) Committee in mid-February. The committee quickly completed various measures taken with recognition that JSR Group is part of a materials industry that supports key industries around the world. They included establishing a code of conduct for maintaining operations at important

manufacturing and R&D centers of the Group in Japan, Asia, Europe, and the United States; enforcing the supply of protective equipment and its use; stopping visits from outside personnel; sharing information with employees throughout the world; and establishing work-from-home environments at all business bases. The details of the BCP Committee's actions are also being shared with outside directors and auditors.

While respecting cultural differences and individuality of JSR business bases around the globe, we are striving to manage the crisis and maintain our business by engaging in speedy and integrated information management within the BCP Committee and linking it to appropriate action. We are also endeavoring to post information concerning stakeholders on the "JSR's Response to COVID-19" on the JSR website and to disclose new information as it becomes available.

> [JSR's Response to COVID-19](#) 

(4) 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.

JSR Group is continually working together with external experts to increase our level of security and protect corporate information assets from cyber-attacks. In FY2014, we issued an Information Security handbook to raise employee sensitivity to information leakage risks and help ensure that employees are aware of and follow rules regarding information security. We also conduct targeted attack drills using fake viruses to raise prevention awareness. In addition, we are engaged in raising awareness of the content in the Information Security handbook through e-learning and workplace meetings.

Additionally, we created a new Cyber Security Management Office in August 2019 to strengthen our information security management (including that of Group companies) and improve employee training and enlightenment as well as employees' ability to respond to incidents.



Information security handbook



- ▼ 1. Philosophy
- ▼ 2. Communication with customers
 - (1) Customer satisfaction questionnaires
 - (2) Responses to CSR questionnaires for our customers
 - (3) Issuance of market reports
 - (4) Receipt of the Collaborative Innovation Award at BOE's SPC
- ▼ 3. Communication with business partners
 - (1) Presentation of Suppliers Awards (Digital Solutions Business)
 - (2) Holding of agency meetings and presentation of agency awards (Specialty Elastomer Department, Elastomers Business)

1. Philosophy

We believe that an important role of JSR Group is to offer innovative materials and excellent products that meet our customers' needs through communication with them and to contribute to the making of a better society. We also link communication with our business partners to improvements in our business activity.

2. Communication with customers

(1) Customer satisfaction questionnaires

We strive to make necessary improvements by having our customers evaluate us in terms of management effectiveness, product development, product quality, technical and sales support, and other areas through customer satisfaction questionnaires. Even though we routinely receive positive scores mainly in product quality, technical and sales support, and other areas, we will remain dedicated to accepting our customers' evaluations with sincerity, improving product quality, and continually improving satisfaction so that we may constantly meet changing quality demands.

(2) Responses to CSR questionnaires for our customers

We aim to be a company that is trusted by its customers. One way we do this is by responding to questionnaires concerning CSR that are submitted to us by the RBA^{*1} and our customers.

^{*1} RBA: Responsible Business Alliance (formerly the EICC) An industrial organization that works to improve sustainability in the electronics industry.

(3) Issuance of market reports

The Specialty Elastomer Department in our Elastomers Business actively supplies information to our customers in Japan by issuing regular market reports that cover raw materials trends and other pertinent matters.

(4) Receipt of the Collaborative Innovation Award at BOE's SPC

JSR was presented with the "Collaborative Innovation Award" at the 2019 BOE Supplier Partner Conference (SPC), held in Beijing, China, on November 26, 2019. The conference was organized by BOE Technology Group Co., Ltd., the world's leading LCD panel manufacturer. The Collaborative Innovation Award is presented to companies that work with BOE to achieve innovation and breakthroughs and that contribute to BOE's product competitiveness and brand power. This year marked the second time JSR has received the award, following last year.



Mr. Keisuke Wakiyama, Division Manager of Display Solution Division, holding the award

3. Communication with business partners

(1) Presentation of Suppliers Awards (Digital Solutions Business)

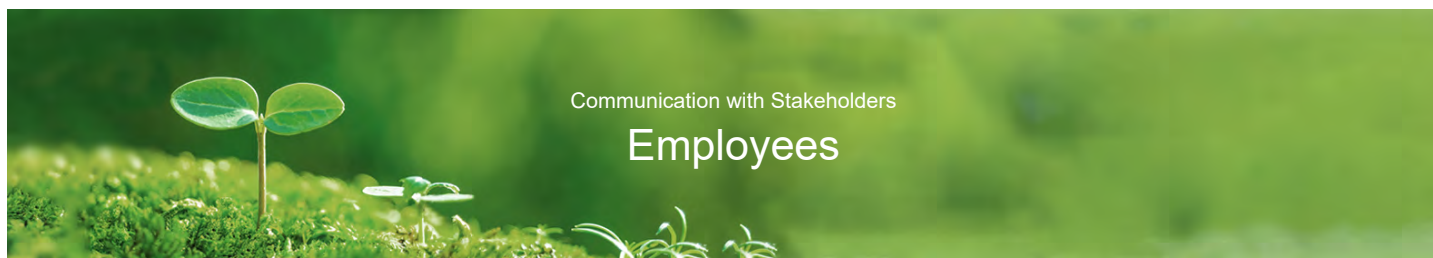
Each year, we present Suppliers Awards to business partners who procure raw materials related to our Digital Solutions Business. We present this award to convey to our partners our desire "to raise value and achieve growth in mutual cooperation with them" and to express our gratitude for their cooperation over the years.

In presenting the award, JSR's research departments, manufacturing technology departments, procurement departments, and business departments evaluate business partners according to their own criteria (e.g., ability to present new proposals, supply performance, quality, cost, ability to meet deadlines, etc.) and provide feedback. We then choose the business partner that scores the highest for the award.

We also share the results of this process within the company and use them as a point of reference when studying raw materials needed for new product development.

(2) Holding of agency meetings and presentation of agency awards (Specialty Elastomer Department, Elastomers Business)

Since 2013, we have been holding annual meetings with our agencies. The purposes of these meetings are to nurture a sense of unity with our agencies with an eye to strengthening sales and to improve their knowledge of our products by sharing problems, grasping raw materials trends, and introducing products. We also recognize domestic and overseas agencies that have made particularly noteworthy contributions to global sales.



▼	1. Philosophy
▼	2. Progressing Corporate Culture
▼	3. Employee Awareness Survey
▼	4. Employee Awards Program
▼	5. CSR & RC Explanatory Briefings

1. Philosophy

> [Labor Environment](#)

2. Progressing Corporate Culture

JSR is actively working on reshaping its corporate culture based on the principles of freedom and discipline. Our corporate culture-related activities are comprised of cultivation, on-the-job training (OJT) advancement, and communication improvement. "Cultivation" works to help managers and subordinates develop together as individuals by promoting inter-personal communication and encouraging managers to provide their subordinates with more opportunities for independence. "OJT promotion" aims to spread preparedness to implement OJT and its philosophy among employees through training. And "communication improvement" creates opportunities for regular informal workplace gatherings and Group get-togethers.

3. Employee Awareness Survey

Every three years since FY2004, we have conducted an employee awareness survey that targets the entire JSR Group. We make fixed-point measurements and provide feedback to all employees, and also reflect the survey's results on the implementation of measures and system design. We conducted our sixth survey in FY2019. The FY2019 survey achieved a high response rate of 91.9%. Through it, we learned that a corporate culture is developing that fully reflects progress in globalization and the penetration of behavioral guidelines. We will tie the results to an even more attractive company and workplaces based on rising interest in internal communication and human resources development. In FY2019, we summarized aggregated results that were broken down into specific workplaces and explained good points and challenges in those workplaces to their leaders. We also began applying survey results toward creating attractive workplaces. For the next survey, we plan to verify whether planned initiatives have been put to good use by comparing results.

Examples of survey items:

- Satisfaction with the company and workplace
- State of motivation to work
- Degrees of understanding and organizational penetration of the Corporate Mission
- Understanding and organizational penetration of diversity
- Understanding and organizational penetration of work-style innovation

4. Employee Awards Program

We use various awards programs to enhance employees' motivation. Among the awards presented are the President's Award, Production and Technology Award, Research and Development Award, Environment Distinguished Service Award, special commendations, length-of-service commendations, and "zero accidents" commendations.

5. CSR & RC Explanatory Briefings

In accordance with the ESD^{*1} vision, JSR holds CSR and RC explanatory briefings and CSR Report Presentation meetings to ensure that all employees understand what "sustainability" and the SDGs mean and apply this understanding in their work.

^{*1} ESD = Education for Sustainable Development

(1) CSR & RC Explanatory Briefings

Every year, JSR holds RC & CSR explanatory briefings in which officers and managers in charge of specific areas visit each business site. They use the briefings to share the results of activities to advance CSR and responsible care (environment, safety, and quality) and future challenges with employees and to discuss these matters directly with them. They also take advantage of the briefings to provide education on the SDGs.

CSR & RC Explanatory Briefings held in FY2019

Head Office	September 26, 2019
Yokkaichi Plant	October 4, 2019
Chiba Plant	October 3, 2019
Kashima Plant	October 2, 2019
Tsukuba Research Laboratories	September 27, 2019



A CSR & RC Explanatory Briefing (Head Office)

(2) CSR Report Presentation Meetings

JSR holds CSR Report Presentation meetings every year at each site for all domestic divisions, including Group companies, and uses them to assist CSR activities. The theme for 2019 involved a survey of employees' familiarity with the SDGs and the relationship between employees' own departments and the SDGs. We are analyzing the opinions expressed by each department and providing the results to employees. We are also reflecting the results in sustainability-related activities.



- ▼ 1. Dialogues with Local Communities
- ▼ 2. Social Contributions
 - (1) Philosophy
 - (2) Advancement Structure
 - (3) Initiatives Concerning the COVID-19 Pandemic
 - (4) Approaches in FY2019

1. Dialogues with Local Communities

JSR Group is aware of the impact of the activities, products and services of factories and research laboratories on local communities, and promotes symbiosis with local communities. To build favorable relationships with local communities, we are continuing approaches by taking in opinions.

Responsible Care Participation in Regional Dialogue Meetings

The Japan Chemical Industry Association (JCIA) RC committee holds regional dialogue meetings all over Japan as part of its RC initiatives. Participants include local residents, educators, civil servants, and members from various other organizations. They provide an opportunity to introduce participating companies, to explain their everyday safety and environmental measures to local residents to bolster their understanding and peace of mind, and to respond to residents' concerns and questions. Ube plant of Techno-UMG Co., Ltd. participated in a regional dialogue meeting held in the Yamaguchi-Nishi district in FY2019.

2. Social Contributions

(1) Philosophy

JSR Group established its "Philosophy to Social Contribution" in January 2009. We are currently implementing the initiatives outlined in this philosophy.

Philosophy to Social Contribution

- 1) Our Corporate Mission dictates that we contribute to society through our business activities. Further, we are actively engaged in providing solutions to social requirements and issues as a responsible member of society.
- 2) We are continuously engaged in positive social contribution activities, capitalizing on the chemical and technical knowledge and skills that form the core of JSR business.
- 3) Every employee is a point of contact between the Company and society, and we actively support our employees in their voluntary participation in social contribution activities.

Additionally, in 2010 we established "standards for making donations to disasters" in order to stipulate evaluation criteria when making donations to natural disasters. This brought greater clarity to standards and allows contributions to be made promptly and fairly.


(2) Advancement Structure

JSR Social Contribution Committee plans and executes activities that promote JSR Group's standing as a good corporate citizen.

> [Sustainability management and advancement structure](#)

(3) Initiatives Concerning the COVID-19 Pandemic

JSR Group will work as a one to address challenges associated with the COVID-19 threat. Visit the following links for information on specific initiatives.

- [JSR's Responses to COVID-19](#) 
- [JSR donated medical masks to medical institutions to support countermeasures against new coronavirus infection \(Japanese only\).](#) 

(4) Approaches in FY2019

The following section describes some of our main social and community activities for FY2019.

1) Academics, Education, Culture

JSR Group provides support for young-generation development and education opportunities through our continued efforts to provide education and internship opportunities to students both in Japan and abroad. We also provide career experience opportunities.

• Science education for elementary school students

On August 8, 2019, JSR presented an exhibit in the "8th Yokkaichi Children's Science Seminar" organized by the Yokkaichi Board of Education. The objective was to raise children's interest in science through experiments. At JSR's booth, approximately 120 children participated in a synthetic rubber coagulation experiment and heard an explanation of environment-friendly wastewater treatment methods at JSR plants. In October 2019, JSR held a visiting lecture for 93 students at Utsubehigashi Elementary School that taught about global warming through the Yokkaichi Kids' CO₂ Diet Challenge.



• Classes for local junior high school students

In September 2019, employees from JSR Kashima Plant visited Hasaki Second Junior High School and held a class for 50 second-year students. The class consisted of three experiments: "Latex Coagulation Experiment," "Bouncing and Unbouncing Balls," and "Unbreakable Plastic." Using Molecule, the JSR's image character, "Bunshi-kun", he explained the relationship between the characteristics of materials and molecules in an easy-to-understand manner.



A scene from the lecture

• Participation in a program for training skilled workers to lead local industry

The Yokkaichi Plant accepted 12 students from a nearby high school for an in-company training program. The participants learned about work and safety in the plant through a plant tour and practical activities in a miniature plant.



Practical training

• Employee presentations at Nihon University

As part of our efforts to promote collaboration between industry and academia^{*1}, every year, the Chiba Plant holds presentations at the Nihon University College of Industrial Technology. On October 15, 2019, it presented a course titled "The Properties and Manufacturing Processes of Rubber and Quality Assurance" that attracted approximately 120 students.

^{*1} Ichihara City's program to strengthen collaboration between industry and academia



A scene from the lecture

• Acceptance of trainees from China

On November 18, 2019, we held an environmental workshop through ICETT^{*2} for four trainees from Tianjin, China (employees administrators, and engineers of the Tianjin ecology and environment bureau). The trainees attended a lecture on environmental conservation activities and wastewater treatment technologies at the Yokkaichi Plant and toured the plant's facilities. The training turned out to be highly productive, as it was alive with questions from the trainees and featured spirited exchanges of opinions.

JSR has presented its environmental activities and technologies ever since ICETT's establishment, having accepted a total of 594 trainees (from 54 countries) over the years. We will continue to actively participate in ICETT's programs to help resolve global environmental problems.

^{*2} ICETT: International Center for Environmental Technology Transfer. ICETT was established in March 1990 by Mie Prefecture, Yokkaichi City, and contributing companies with support from the Ministry of Economy, Trade and Industry and major companies and academic institutions in Japan. Its purpose is to transfer Japan's know-how in the pollution-prevention technologies and environmental management technologies to developing countries.

- **Support of “Summer School for Junior High and High School Girls: Encounters with Science, Technology and People”**

JSR supports “Summer School for Junior High and High School Girls” run by the non-profit organization GSTEM-CPP.

Summer School for Junior High and High School Girls: A program in which junior high and high school girls are exposed to science and technology, which connects them to women who are active in the world of science and technology, and also encourages them to think about the future with friends and seniors who are also interested in science and technology. The objective is for these girls, through exchanges with scientific researchers and engineers, university and graduate school students, etc., to learn about the merits of choosing a path in science, or to re-realize these merits and strengthen their determination in moving forward along the science path. After the program, participating junior high and high school girls will be given support in selecting their future path and in deepening their ideas on career development.

➤ [Junior high and high school girls Summer School \(Japanese only\)](#) 

- **Creation of educational opportunities Participation in book bag donations in Yokkaichi**

Creation of educational opportunities Participation in book bag donations in Yokkaichi Since 2014, the Yokkaichi Plant, with cooperation from JSR Group and JSR Labor Union, has participated in the "Memory Book Bag (Randoseru) for Children in Afghanistan" event held by JOICFP, an NGO engaged in international cooperation. Through the event, we donate unused school bags to underprivileged children in Afghanistan to assist their education. The event's aim is to help give children the knowledge and information they need to keep themselves and their families healthy by attending school and learning to read and write. In FY2018, we again donated book bags as well as pencils, notebooks, and other stationery. We will remain involved with the event, viewing it as a social contribution activity in which individual employees can participate. In May 2020, we again donated book bags as well as pencils, notebooks, and other stationery.



➤ [JOICFP \(external site\)](#) 

- **Support for the non-profit organization Supporting Organization for Artists of Tohoku (SOAT)**

JSR supports the activities of the non-profit organization SOAT.

SOAT carries out support activities for victims in the Great East Japan Earthquake in 2011 by creating motivation in life through an art workshop. As part of these activities, SOAT and women who suffered damages create wine bags, and sell them at JSR Trading's Wine Sale event. The wine bags are made out of leftover curtain cloth provided by Actus Co., Ltd., an interior goods store, and bottom liners provided by Techno-UMG Co., Ltd., and are sustainable. All profits go back to the victims.



A fabricated wine bags

➤ [NPO Supporting Organization for Artists of Tohoku \(external site\)](#) 

- **Support for the Boso Satoyama Art Festival Ichihara Art X Mix 2020**

Ichihara Art x Mix is an event led by Ichihara City and held jointly with Chiba Prefecture and neighboring municipalities. As a local art festival held in a village forest (satoyama) of southern Ichihara City, it serves to draw attention to local resources through modern art. JSR assists in Ichihara Art x Mix's public relations and contributes to the promotion of local arts. The event was postponed from March 2020 until March 2021 due to the effects of the COVID-19 pandemic.

- **Donations to the Otsukado Performing Arts Preservation Society**

The Otsukado Performing Arts Preservation Society in Joso City, Ibaraki Prefecture is committed to preserving the old tradition of Tsunabi, which dates back to the Edo Period. Tsunabi is a traditional play that combines puppets and fireworks. The play is enacted with wooden dolls wrapped in fireworks that hang from a string. This play is performed for the public every year at the Grand Festival at Hitokotonushi Shrine in Otsukado. Elastimix donates to this preservation society to help keep this tradition alive.

2) Community activities, environment

- **JSR Harmony Festa**

JSR Harmony Festa is held in the Yokkaichi District every year to bring JSR Group and their families together with residents in the local area. Having become a local custom, the FY2019 Harmony Festa (the 20th held thus far) was attended by some 1,700 people. Many fun and interesting activities were featured, including various sports and games, soccer lessons, an etegami (picture letter) workshop, and a drawing. On the stage were presented dance and musical performances by local schools. Again this year, a non-profit organization called COM-FRIENDS, whose objective is to support the independence of disabled persons by providing them with places to work, joined in the JSR Harmony Festa by setting up a booth selling food and drinks. This Festa is a great opportunity for neighbors and JSR groups to build good relationships.



20th Anniversary Reception Gate



Sales booth of COM-FRIENDS' kitchen car

- **Participation in international beach clean-up activities**

- Following last year, JSR BST Elastomer (Thailand) again participated in the International Coastal Cleanup event organized by the Ocean Conservancy NPO based in the US. In 2019, 60 employees and their families helped clean Mae Ram Phueng Beach in cooperation with other companies located in the same industrial park, local businesses, educational institutions, and community volunteers.

This event is held on the third Saturday in September all around the world to clean beaches, lakes, seas, and rivers in various countries. The participation of nearly 500,000 people in 91 different countries makes this one of the largest marine conservation projects in the world.

- Participation in a beach cleanup on a remote island

JSR's Yokkaichi Plant participates in coastal cleanup activities on Toshijima, an island in Toba City, Mie Prefecture.

Companies and organizations that are members of the Mie Prefecture Industrial Waste Solutions Promotion Committee and environmental administration of Mie Prefecture participate. JSR's Yokkaichi Plant serves as an executive member company of the committee.

- **Participation in hands-on forestation development activities to protect water resources**

Techno-UMG Co., Ltd. participates in hands-on forest development that protects water resources.

Techno-UMG participates in these activities each year as a member company of the Kotogawa Industrial Water Users' Association. Their aim is to cultivate and maintain the water sources of the Kotogawa Dam watershed while also encouraging a better understanding of the roles that forests have and the necessity of forest development through hands-on thinning of trees and bamboo. Each year, Techno-UMG also participates in efforts to protect and nurture grasslands on the Akiyoshidai Plateau, located in Mine City, Yamaguchi Prefecture.

These efforts are undertaken with the participation of concerned organizations and local residents as well as companies that do business in the prefecture and their employees' families.

Techno-UMG's Ube Plant makes a local contribution by assisting with water conservation activities and traditional events.



Forestation development activities to protect water resources

3) Social welfare and health

- **Cooperation with blood donation activities**

Blood cannot be stored for a long time, nor can artificial blood be created.

To supply blood to medical institutions in a stable manner and save the lives of as many people as possible, the JSR Group has been actively cooperating with blood donation activities for a long time with both Japanese and overseas bases.

- **Mutual aid fundraising**

JSR Micro Korea handed out donations collected at an internal bazaar auction to underprivileged families in the region through the Cheongwon District Office. The donations were distributed to families selected by the district office, including single-parent families with no income and low-income elderly people with disabilities who live alone.

- **Donation of foreign coins**

The JSR Group has been conducting a foreign coin collection campaign since 2009 to assist a program that supports children around the world through the Japan Committee for UNICEF. Collection boxes for this purpose have been set up on the Tokyo, Yokkaichi, and Tsukuba Districts.

These coins are effectively utilized to protect the life, health, and rights of children in developing countries.



A collection box (Tokyo)

- **Donations to food banks**

Whenever JSR Group updates the emergency supplies and food stocks stored at its business bases, it donates those items that are still within their "best-by" period to nearby food banks.

The donated food items are delivered from the food banks to facilities and people in need, and thereby help people in difficult circumstances get by.

- **Participation in aluminum can collection activities**

Since October 2010, the JSR Yokkaichi Plant has been participating in aluminum can collection activities for "i-project", an independence support organization for children with disabilities in Yokkaichi City. Aluminum cans are useful in "can crushing," which is a form of multi-functional work activity. We therefore plan to continue participating in this activity.

- **Plastic bottle cap collection**

In the Tokyo and Yokkaichi Districts and at JM Energy, JSR Group collects plastic bottle caps that would ordinarily be incinerated as waste and sells them to recycling companies. The funds earned through this activity are then used to provide vaccinations to children around the world.



Plastic bottle cap and aluminum can collection boxes (JSR Yokkaichi Plant)

- **The Table for Two Program**

The Table for Two ProgramThe JSR Group's Tokyo and Yokkaichi Districts have participated in the TFT program run by the non-profit organization TABLE FOR TWO since February 2010. We have donated approximately 160,000 meals as of the end of March 2020.

TFT is an approach to share meals with children in developing countries. When an employee purchases a healthy meal designated by TFT, 20 yen per meal is donated to buy a school meal for a child in a developing country. School meals not only satisfy children's hunger; they also improve school attendance rates and academic records, improve children's physical fitness and strengthen disease prevention. Results such as formation of a community of schools and parents are expected, and school meals play an important role in solving poverty.

In Yokkaichi City, activities (CUP FOR TWO) that utilize beverage vending machines are ongoing.



- **JSR donations to help resolve global health issues**

We make donations to medical care support programs such as the Japan branch of the Médecins Sans Frontières NGO to provide treatment for HIV/AIDS and infectious diseases such as cholera and malaria.

- **Participation in the Human Resources Fostering Program in Chemistry**

The Human Resources Fostering Program in Chemistry was created by the Japan Chemical Industry Association (JCIA) in October 2010. It is based on a proposal made in a report prepared in April of the same year by the "Kagaku Bijon Kenkyukai" (chemistry vision study group) of the Ministry of Economy, Trade and Industry. The program informs universities of the chemical industry's human resources needs. Then industry supports the university courses that can meet these needs and their students. Its purpose is to develop the young people who will serve as the foundation for stronger international competitiveness and industrial promotion in Japan's chemical industry. We use the program to support courses engaged in outstanding initiatives and their students.

4) Assistance to disaster-stricken areas

- **Support for those affected by Typhoon Faxai and Typhoon Hagibis**

JSR provided donations to help provide victims' relief and restore damaged areas following Typhoon Faxai and Typhoon Hagibis in 2019. We offer our sincerest wishes for a quick return to normalcy for everyone who was affected.

- **Holding of a "Tohoku reconstruction support market"**

On February 6, 2020, we held the fourth "Tohoku reconstruction support market" at JSR's Head Office. The market is a sustainability program selling specialty products from three Tohoku prefectures that were stricken by the Great East Japan Earthquake of 2011 (Iwate, Miyagi, and Fukushima). Eight businesses from the three Tohoku prefectures set up sales stands. Many people from both inside and outside the company visited and enjoyed purchasing products while conversing with the stands' operators. Approximately nine years after the Great East Japan Earthquake, the affected areas continue to transition from reconstruction to business promotion. Nonetheless, around 47,000 people continue to live as evacuees.

In addition to making a contribution to society through our business activities, we will continue to actively meet society's requirements and resolve social issues as a responsible member of society.



* Number of evacuees: Announced by the Reconstruction Agency on March 11, 2020).

Cooperation: Office for disaster victim support coordination, Reconstruction Agency, FY2019, and Mitsubishi Research Institute, Inc.

5) Employee volunteer activity support

JSR actively supports employees voluntarily participating in social contribution activities. Employees can take up to five days of paid leave per year as a part of our paid volunteer leave system. This allows employees to participate in social contribution activities that occur during working hours.

> [ESG Data \(PDF 1.5MB\)](#) [PDF](#)



▼	1. Philosophy
▼	2. Codes of Conduct
▼	3. Investor Relations (IR)
▼	4. Shareholder Composition

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

1. Philosophy

JSR Group's most important challenges are to strengthen our R&D activities from a long-term perspective, increase our competitiveness by developing new businesses, and maintain continuous growth in our business performance. We are also working hard to enhance corporate governance with the aim of developing a trusted and attractive corporate culture. Management transparency and soundness are being boosted, and management monitoring and oversight functions are being strengthened through the appointment of independent outside directors and auditors.

> [Corporate Governance](#)

2. Codes of Conduct

Code of Conduct to fulfill Responsibility to Shareholders

(1) Code of Conduct for Proper Recording of Information and Disclosure

- 1) When evaluating business activities, we shall focus not only on final results but also on business processes that deliver those results. We will strive to accurately and explicitly record our business activities.
- 2) We shall disclose information on management and business activities in a timely and appropriate manner.

(2) Code of Conduct for Preventing Insider Transactions

- 1) In the case that we have and hold any undisclosed material information, we shall not release such information until it is disclosed officially. Additionally, we shall not sell and/or purchase JSR's and/or other relevant companies' shares or relevant financial products until official disclosures are made.
- 2) We shall not use, for our private interests, undisclosed material information which we have come to know through conducting our business and which concerns JSR Group and/or other companies in which we engage.

3. Investor Relations (IR)

JSR Group strives to promote investor relations (IR) with due consideration for our shareholders and investors, and to disseminate information regarding business situation and corporate policies promptly and accurately.

(1) Shareholders' Meetings

JSR Group has implemented a variety of measures to facilitate the exercise of shareholder voting rights. The following provides a few examples.



Panel exhibition at a shareholders' meeting

■ Examples of measures to facilitate the exercise of shareholder voting rights

- Early holding of general meetings of shareholders to avoid the typical peak period of shareholders' meetings
- Earlier notification for general meetings of shareholders and web disclosure prior to notification day
- Adoption of a system for voting via the Internet
- Listing of invitations to shareholders' meetings on JSR's website in both Japanese and English
- Better convenience in the exercise of voting rights by using smartphones

We aim to make documents attached to invitations to our shareholders' meetings easy to understand. To this end, we provide not only legally required content, but also other useful information, such as information regarding our products and an overview of our mid-term business plan. Additionally, we make effective use of graphs, photographs, and color printing.

We also employ various methods to enhance understanding of JSR at ordinary general meetings of shareholders. They include displaying panels that present JSR, explaining our business conditions with visual and audio media, and presenting a briefing on the mid-term business plan by the President.

(2) Communication with Shareholders and Investors

In addition to conducting briefings on our business results after each quarter, we also organize seminars for investment institutions and analysts as well as various other events to achieve extensive bi-directional communication with shareholders and investors.

During FY2019, we held a total of about 230 meetings with investors in Japan and overseas. We also participated in several seminars (briefings) for corporate investment analysts and for individual investors. Feedback on opinions and questions received through these meetings is shared with management on a regular basis.



IR meetings

With regard to the global development of JSR Group companies, we voluntarily introduced IFRS* from FY2017 in an effort to improve the comparability of financial information regarding international capital markets.

* International Financial Reporting Standards

1) Information Disclosure on Our Website

In order to provide the latest information regarding our financial and business performances, JSR Group's website contains the section, "Investor Relations (IR)." This section includes the latest IR information, news releases, and the latest stock price information, which are indicated in a way that is easy to see. The section also presents various types of IR information, including documents regarding our business results, integrated reports, IR news, information related to our stocks, documents regarding our shareholders' meetings, and our company information for individual investors. We strive to provide necessary information in a timely and easy-to-understand manner.



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

➤ http://www.jsr.co.jp/jsr_e/ir/

2) Information Disclosure in an Integrated Report (JSR Report)

JSR previously issued financial reports for each fiscal year as well as annual reports that summarized the Group's management and business conditions. However, beginning in 2019, we began preparing an integrated report called "JSR Report" to encourage a better understanding of our business model and corporate value among shareholders, investors, and diverse stakeholders.

The report presents our management strategies and other financial information together with non-financial information, such as our environmental and social relevance. We prepare it by referring to disclosures frameworks issued by the International Integrated Reporting Council (IIRC) and the Ministry of Economy, Trade and Industry's Guidance for Collaborative Value Creation.

➤ [Integrated report \(JSR Report\)](#)

(3) Environmental Reporting Platform Development Pilot Project

JSR is a participant in the Ministry of the Environment's "Environmental Reporting Platform Development Pilot Project" and discloses environmental information accordingly.

➤ [Environmental Reporting Platform Development Pilot Project, Ministry of the Environment: ESG Discussion Platform](#)

4. Shareholder Composition

The number of JSR shareholders was 15,999 as of March 31, 2020; shareholder composition is as follows:

The shareholding ratio is calculated by using 214,713,837 shares (calculated by deducting the number of treasury shares (11,412,308 shares) from the total number of issued shares) and then rounding off at the third decimal place.



Positive and Negative Impacts of JSR Business Activities

1. JSR Group's "JSR Sustainability Challenge"

2. Business Segment Interviews

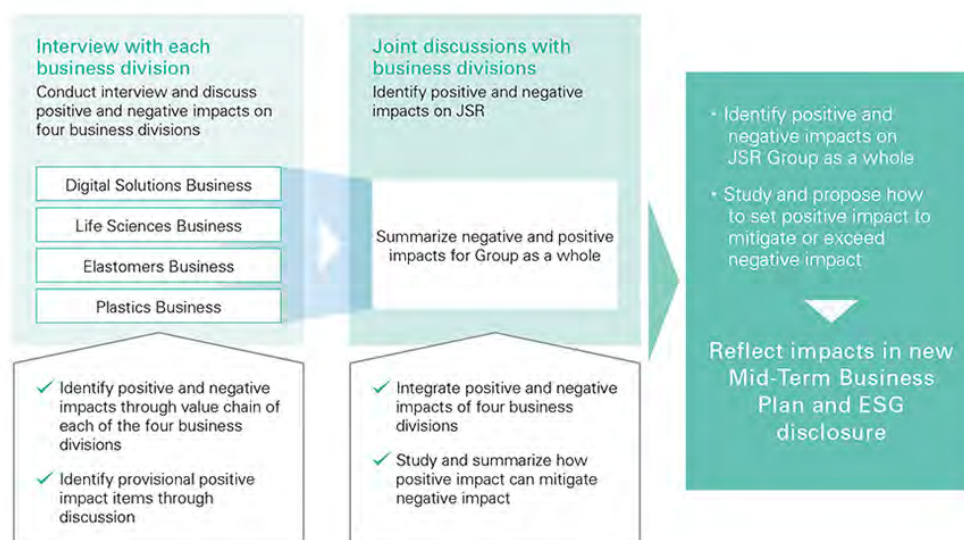
- ▽ Digital Solutions Business
- ▽ Life Sciences Business
- ▽ Elastomers Business
- ▽ Plastics Business

"Materials Innovation" is JSR Group's corporate mission. Based on this corporate mission, we aspire to be a company that contributes to society, and lives up to society's trust in us, through materials that are indispensable for society. Unfortunately, it is rare for us to appreciate the actual impact of the final product which is handled by general consumers, since the JSR Group is a manufacturer and provider of chemical materials. Recognizing the social impact of our business activities, which encompass even end products, has both negative aspects and positive aspects, we, therefore, endeavored to re-engage with the question of where we stand as a sustainable company amid an ever-changing social environment.

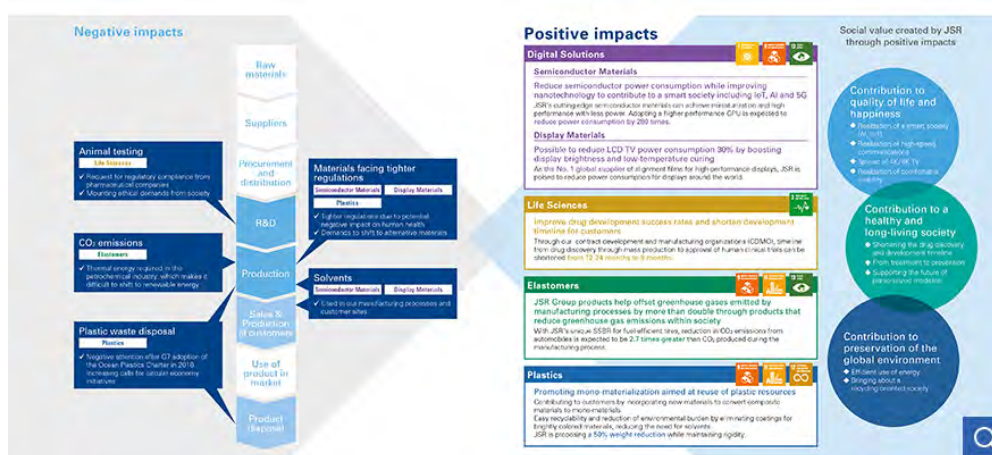
1. JSR Group's "JSR Sustainability Challenge"

We conducted a program called the "JSR Sustainability Challenge" for the JSR Group's four primary business segments. The program involved interview surveys of each segment's leaders and employees with practical knowledge, followed by joint discussions with business segments starting with third-party assessments of the initial surveys. The JSR Sustainability Challenge compiled both positive and negative impacts in a correlated fashion, such as instances where negative impacts of the production process can be transformed into positive impacts for the Group as a whole and examples that connect to positive impacts by offsetting negative impacts. Details of the program are included in the JSR Report. Results from the JSR Sustainability Challenge will be used in the new mid-term business plan, in materiality reviews, and for other purposes.

Overview of "JSR Sustainability Challenge"



Implementation Process for "JSR Sustainability Challenge"



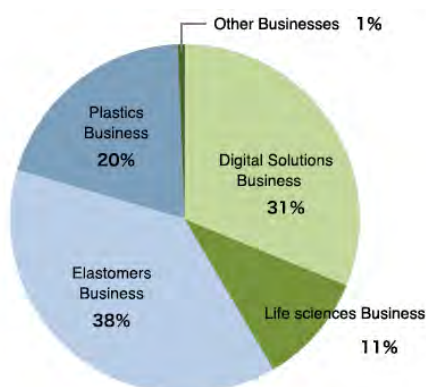
> “JSR Sustainability Challenge”, JSR Report 2020

* JSR Report 2020 is scheduled for release on November 30.

2. Business Segment Interviews

A key part of the JSR Sustainability Challenge was the interview surveys at each of the four business segments, in which leaders and employees with practical knowledge exchanged frank opinions. This process unearthed many discoveries not readily noticed by the involved parties alone, such as examples that connect to positive impacts by offsetting negative impacts. Selected comments from the conversations are published below.

Sales ratios by business segment (FY2019)



Digital Solutions Business

1. Electronic Materials

- The negative impacts of electronic materials include the solvents used in manufacturing processes for photoresists and other products as well as the trace amounts of chemical substances subject to environmental emission controls. We take measures to mitigate these negative impacts based on regulatory controls.
- Solvents are contained in products as well as being used for other purposes, such as cleaning production tanks. However, production plants for electronic materials are small, and the amounts of solvents used are not large. Furthermore, solvents after cleaning processes are recycled into fuel systems.
- We have taken the lead on controlling chemical substances emissions. JSR has business offices globally and production sites in the United States and Belgium. We also have a prevailing culture of responding quickly to environmental problems. For example, we took prompt action on finding substitutes for perfluorooctanesulfonic acid (PFOS) when concerns about PFOS as an environmental pollutant first surfaced. Today, we have finished replacing PFOS in all electronic materials. Our early response allowed us to meet in advance the deadline stipulated by the Japanese government, which was moved up a year from the COP9^{*1} usage ban deadline. We executed PFOS replacement so smoothly that we even received inquiries from other material manufacturers about why we could act so quickly.



^{*1} COP9. The ninth meeting of the Conference of the Parties (COP9) to the Stockholm Convention on Persistent Organic Pollutants was held in Geneva (Switzerland) in 2019. It hosted discussions on a review of the acceptable purposes and specific exemptions for perfluorooctane sulfonic acid (PFOS), etc.

- A negative environmental impact is the power consumed by the cleanrooms in which high-quality materials for semiconductors are manufactured and evaluated. This impact on the environment is thought to be modest; however, because cleanrooms are operated at temperatures similar to the ambient temperature and occupy only limited floor space.
- On the other hand, semiconductor devices manufactured using JSR products are expected to have positive impacts on the environment. Semiconductor development has made remarkable progress in achieving greater integration through miniaturization with each successive generation and in lowering power consumption from the design stage onward. High-performance semiconductor chips used in servers, data centers, and other applications can substantially reduce the energy consumed by the devices and facilities.
- Development is progressing of semiconductor chips that can dramatically improve energy efficiencies. A good example is AI chips, which have been gaining attention lately. GPUs^{*2} and AI chips specialized for neural networks^{*3} are much more efficient than CPUs, requiring just 1/10 and 1/100, respectively, of the power needed for image recognition. The science journal Nature reported that cutting-edge neural chips can achieve energy efficiencies as great as 280 times that of CPUs. JSR is a member of the IBM Research Frontiers Institute and is involved in the development of application-specific semiconductor chips. JSR contributes to higher energy efficiencies in semiconductor chips through materials development.

^{*2} Graphics processing units (GPUs) are semiconductor chips that process the calculations needed to render 3D graphics.

^{*3} Neural networks are mathematical models that emulate the network structures of neurons in the human brain.

- The semiconductor chips discussed above appear in all kinds of end products such as smartphones and IoT devices, and they are directly connected to improving our quality of life. JSR, and the customers to whom we supply materials to, use materials to generate a diversity of value for society. As such, our relationships are a perfect fit for the partnerships called for in Goal 17 of the SDGs.

2. Display Materials

- A negative impact is the significant amounts of solvents nearly all JSR display material products contain, since the materials are dissolved in solvents when supplied to our customers. This poses only slight risks in our production and sales processes, but disposal of the solvents is a substantial risk on the customer side. The widely used, highly soluble organic solvents are subject to regulations. Although the use of these solvents has not been banned completely at this point, customers feel there are risks of a ban. JSR, therefore, routinely studies alternative solvents and is ready to propose alternative plans to customers. Although these alternatives are not yet sold, when the time comes, they can be deployed as a future strength of our business.
- Helping lower energy consumption is an obvious positive impact of the Display Materials Business. Two contributions of note are those to our customers' production processes and those to end consumers through products with higher energy efficiencies.
- Our customers frequently tell us they want to reduce the number of photo masks and the number of processes in which photo masks are used. We, therefore, employ new materials based on customer needs to reduce production complexity. The new materials lower the amount of energy needed in manufacturing processes. For example, with the aim of further reducing energy consumption, JSR developed products curable at low temperatures, reducing curing temperatures from the conventional 230°C to 150°C. We decided to make all JSR product lines curable at 150°C. This goal is nearly complete, and we are starting to market this to customers. These products are expected to reduce the power consumed in curing processes at customer plants by 25 to 30 percent. Reactions from customers have been positive.
- The televisions our customers produce also reduce energy consumption. Our newly developed alignment films boost display brightness, allowing for proportionally lower light emissions and less power consumption when driven. The alignment films and insulating films constituting the liquid-crystal alignment method that enables the realization of high-luminance LCD displays can cut the power consumption of LCD televisions by around 30 percent.
- As monitors get larger, naturally their power consumption goes up. This creates further demands for reduced energy consumption by monitors. It is an eternal problem. We must strive to develop display materials with drive methods that use less power.
- We believe the market recognizes the positive impacts of our display materials. JSR has a share of over 80 percent of the display materials in high-end 4K and 8K TVs marketed worldwide, and over 80 percent in high-end TVs globally.
- Augmented Reality (AR) and Virtual Reality (VR) started to pervade society and be increasingly used in business. AR is a technology that superimposes virtual visual information on an existing landscape to augment the world in front of us. VR is a technology that represents the real world on a screen to project a visual image. Displays are also used for AR and VR. These displays contribute to telemedicine and remote control of robots in hazardous locations.



Life Sciences Business

- Drug development cannot avoid animal testing with today's technology, since it is essential to confirm drug safety and other characteristics thoroughly on animals before administering a drug to human subjects. The use of animals, consequently, is the biggest negative impact of JSR's drug development assistance business. The 3Rs and other international guidelines have been established to ensure the humane use of laboratory animals. They include such principles as not allowing animals to suffer and minimizing the use of laboratory animals. Customers also demand observance of similar principles. The JSR Group strictly abides by these guidelines at the present time. In the future, however, technological advances are hoped to enable



toxicological and other tests to be performed on artificial organs instead of animals. This will not only eliminate the use of laboratory animals; it will also increase the probability of a drug's success at the clinical trial stage because tests are performed on subjects more similar to humans. JSR is working on the development of organoids and other technologies that will permit such testing.

- A big issue for drug development after animal testing is the inability to obtain the anticipated effects when a drug is administered to human subjects. Animals and humans are biologically different, so disparities are to be expected. Nevertheless, this is a huge issue for drug development. Higher success probabilities are wanted when transferring from animal to human trials. This is why we have devised special animal tests that mimic human subjects as close as possible in an effort to improve success probabilities when moving to human trials. For example, we have cultivated cancer cells from various patients in special laboratory mice and tested the efficacy of cancer drugs. From the tests, we can infer which type of cancer patients will benefit from a drug under development. With tests on special laboratory mice, we can clarify at the animal testing stage that a particular drug is effective for cancer patients with gene A, for example, and not particularly effective for cancer patients without gene A. Following this, we can improve the efficiency of clinical trials on actual human subjects because we know to select only patients with gene A, where the drug's efficacy has been demonstrated, for clinical trials. And by screening patients for gene A before administering the drug, it is possible to cut down on unnecessary drug doses and contribute to patients' quality of life. Initiatives like these by JSR benefit drug makers in terms of more efficient drug development, shorter development times, and lower development costs. Shortening drug development times means patients around the world can obtain and benefit from valuable drugs sooner.
- Efforts around the world are underway aiming for personalized healthcare, which provides healthcare tailored to specific individuals. Two key technologies are necessary to realize personalized healthcare: biopharmaceutical technologies able to provide pinpoint efficacy for the desired target, and diagnostic technologies able to predict in advance whether a drug will be effective for a particular individual. JSR is working on developing both kinds of technologies. For example, we established manufacturing technology to ensure stable mass production of biopharmaceuticals by our biopharmaceutical contract development and manufacturing organization (CDMO). And we are searching for biomarkers that determine a drug's efficacy and developing technology to turn those biomarkers into diagnostic reagents. The capacity to assist both biopharmaceutical development and diagnostics will likely become a strength of the Life Sciences Business.

Elastomers Business

- The petrochemical industry is an energy-consuming industry, and JSR elastomers emit significant amounts of CO₂. To counter these negative impacts, we are enhancing energy recovery and recycling efforts and working to cut CO₂ emissions. We also plan to further optimize our energy mix, by expanding the renewable energy and relatively eco-friendly liquefied natural gas we use on a percentage basis. We have set a target of reducing CO₂ emissions by 15 percent from 2013 levels by 2030.
- On the positive impact side, the Elastomers Business is pushing ahead with the 3Rs (rolling resistance, reduce, and recycle). The first R refers to lowering the rolling resistance of tires, which in turn cuts CO₂ emissions. We contribute to society in this respect through the development and provision of SSBR, which gives lower rolling resistance. As for reducing the use of resources, we are developing high durability polymers for new high durability SBR and similar products. We are also engaging with the third R, recycling, where possible, although the technical barriers to recycling rubber are high because of its chemical structure.
- With regard to rolling resistance, we believe our polymers, which control the performance of tires for improved fuel efficiency, have significant and tangible positive impacts on society. Estimates of the CO₂ actually generated in each stage of a tire's lifecycle suggest 86 to 88 percent of total lifecycle emissions occur during tire use. Our preliminary calculations indicate that against the greenhouse gases the JSR Group emits during polymer production, our polymers contribute to society with more than double that amount in greenhouse gas reductions.

➤ [LCA-based study of the GHG emissions reduction effects of synthetic rubber used in fuel-efficient tires](#) [PDF](#)

➤ [Opinions on "the GHG emissions reduction effects of synthetic rubber used in fuel-efficient tires"](#) [PDF](#)



- In the area of reducing resource use, markets have given top marks to our polymers used to manufacture highly durable tires. Assuming polymers to date have had a durability score of 100, the polymers we developed raise this durability score to 150. For this reason, they are very highly regarded. Using our polymers increases the distance a single tire can travel by 1.5 times that of a conventional tire. Conversely, designing a tire to travel the same distance as conventional tires has the advantage of reducing the amount of rubber used, allowing for thinner and lighter tires. Lighter tires contribute to better fuel economy. High durability also means more consistent performance; thus, it is superior safety. Benefits include consistent driving conditions over longer periods of time and the ability to maintain constant braking timing for autonomous driving.
- Recycling requires cooperation with customers, since we manufacture materials. As a first step, however, we can implement recycling measures for waste rubber generated during production (i.e., usable rubber that does not end up in products, such as leftover product scraps and out-of-spec products). Waste rubber generated at our production sites is sold to selected businesses that reuse the rubber. So although the rubber does not end up in tires, it is made into rubber mats and other products. Among our products, the characteristics of thermoplastic elastomers make them excellent candidates for recycling. We hope industry as a whole will gradually enlarge the reuse of elastomers.

Plastics Business

- Curbing the Plastics Business's negative impacts is limited by the extent wastewater and atmospheric emissions can be controlled in the manufacturing stage. Nevertheless, further reduction efforts are felt necessary. For example, attention is focusing on atmospheric emissions of acrylonitrile (AN). Although we meet AN emissions standards, we want to further enhance controls. Therefore, we plan to invest in AN control equipment in 2020 that will commence operations in 2021. Investments like these in atmospheric emission processing can also further cut CO₂.
- One positive impact, in the sense of atmospheric emissions, are measures taken by customers for volatile organic compounds (VOCs). The Plastics Business supplies material products that prevent VOCs in response to frequent customer requests to reduce VOCs.
- Demands for lighter vehicles are part of a movement to reduce energy losses. A promising solution, although prices are still high, is using ABS in place of steel sheet (substituting hardened ABS for iron). ABS resins make vehicles lighter, and weight reductions of about 50 percent have been achieved using ABS resins that have the equivalent rigidity of steel.
- Regarding circular economy initiatives, the Plastics Business sells the ECO PELLET as a product recycled in the manufacturing process. On a larger scale, however, ABS is not collected from the market and there are no frameworks for ABS collections. Even if it were possible to collect ABS, its diverse physical properties would make recycling very complex, resulting in recycled products that cost more than new products. Further complicating ABS recycling is that ABS materials are often coated or plated, rather than being monomaterials (materials made of a single substance). Circular economy initiatives are a hot topic within industry, although they haven't reached the public yet. There have been no calls to carry out specific initiatives, but the circular economy is already a trend.
- The main thrust of our proposals is adopting monomaterials: for example, suggesting that customers choose single, uncoated resins (in effect using monomaterials). They are high-added value products that have texture and high coloration (in effect using monomaterials). And another advantage of omitting coatings is lower costs on process. Materials themselves are also likely to change, as more stringent environmental measures are imposed on paints, coatings, and plating chemicals in the future. If coating solvents and other chemicals are banned, we can propose the use of monomaterials as a solution. Anti-squeak materials are a good example of adopting monomaterials, since they do away with grease and textiles used to alleviate squeaks. We have set a target of raising the percentage of new materials (uncoated materials and noise-reduction materials) to 15 to 20 percent of the total 250,000 to 260,000 tonnes of resins we sell.
- In addition to monomaterials, another product that contributes to the circular economy is compatibilizing AS. Polystyrene and ABS are collected and separated, but since both have almost the same specific gravity, they are hard to divide. The use of a special type of S, however, enables PS and ABS to mix thoroughly and become resins easy to recycle. This streamlines handling by recyclers.



Editorial Policy

▼	1. Editing Concept
▼	2. Positioning of this Report
▼	3. Referenced Guidelines
▼	4. Target Period and Fiscal Year
▼	5. Operations Covered
▼	6. Notes concerning Notations
▼	7. Independent Review
▼	8. Publication Information

1. Editing Concept

• Where JSR aims to go

Under the corporate mission of “Materials Innovation - We create value through materials to enrich society, people and the environment,” JSR Group aims to build and maintain good relations with all of our stakeholders and become a trusted and indispensable corporate citizen. To this end, the Group will contribute to the realization of a sustainable global environment and society by creating value through its corporate activity and based on this corporate mission.

• From CSR to sustainability

At the General Meeting of Shareholders held in June 2020, JSR decided to evolve to its traditional “corporate social responsibility” (CSR) activities into activities that contribute to all stakeholders with value created through corporate activity. Such activities are now referred to as “sustainability” activities. Accordingly, the department responsible for these activities, the CSR Department, was also renamed the Sustainability Promotion Department. JSR’s first female director was assigned to head the newly named department as its assigned officer.

The CSR Report was likewise renamed the “Sustainability Report.”

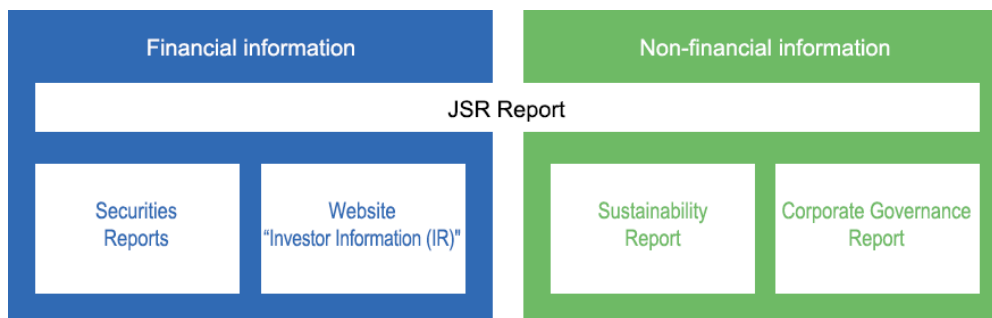
• About the report

Although the report was edited amid a delay in the announcement of the mid-term business plan due to the effects of the COVID-19 pandemic, we have nonetheless endeavored to communicate our initiatives in FY2019 to stakeholders in an easily understandable manner.

The report contains a message from the officer in charge of sustainability promotion as well as an account of materiality (priority issues) arranged in terms of ESG (environment, social, governance) to assist the reader in comprehending JSR’s sustainability as a whole. We also present related numerical data in the ESG Data section. Please note that we will not publish a Highlight Version.

2. Positioning of this Report

The “JSR Group Sustainability 2020” provides comprehensive coverage of non-financial information.



Please access Report Downloads for past websites and publications.

➤ [Report Downloads](#)

Please visit the JSR website for details on products and services, financial information, etc.

➤ [JSR Website: Home Page](#) 

3. Referenced Guidelines

- United Nations Guiding Principles on Business and Human Rights
- Environmental Accounting Guidelines 2005 / Environmental Reporting Guidelines 2012, Ministry of the Environment
- Environmental Accounting Guidelines for Chemical Companies, Japan Chemical Industry Association (JCIA)
- Global Reporting Initiative (GRI) Standards

4. Target Period and Fiscal Year

- FY2019: April 1, 2019 to March 31, 2020

Please note that some sections include activities conducted during periods that are other than that provided above.

FY: Fiscal Year means the year starting April 1st.

5. Operations Covered

- The entire report

JSR Group: 66 companies

JSR: Head Office, Yokkaichi Plant, Chiba Plant, Kashima Plant, Yokkaichi Research Center, Tsukuba Research Laboratories, JSR-Keio University Medical and Chemical Innovation Center, Nagoya Branch, Taiwan Branch

Group Companies: 24 domestic Group companies, 41 overseas Group companies
(Current as of March 31, 2020)

- RC data (environment, safety, health)

JSR Group: 19 companies

JSR: Head Office, Yokkaichi Plant, Chiba Plant, Kashima Plant, Yokkaichi Research Laboratories, Tsukuba Research Laboratories, Nagoya Branch

Group Companies: 8 domestic Group companies, 10 overseas Group companies*
(Current as of March 31, 2020)

* For information about Group companies that collected RC data, see "ESG Data: JSR Group Companies." [PDF](#)

"JSR" and "JSR Group" are classified as follows:

JSR Group: JSR and Group companies

JSR: JSR Corporation

6. Notes concerning Notations

- Definitions of business activity, management foundation, and corporate activity

Corporate activity : Activity that combines business activity and the management foundation

Business activity : Activity that provides products and services

Management foundation : Activities of departments associated with company operation and of manufacturing departments

- **About numerical data**

For both absolute values and percentages, numerical values that fall below the shown number of digits are rounded off.

For this reason, the sums of individual numbers may differ from the sum values provided.

7. Independent Review

JSR Group undergoes independent reviews from the Responsible Care Verification Center of the Japan Chemical Industry Association. Additionally, the entire report is approved by the Sustainability Promotion Committee before publication.

Scope of review: All notations in the "JSR Group Sustainability Report 2020" pertaining to the environment and industrial safety/accident prevention (including ESG Data)

➤ [Evaluation by Outside Organization and Independent Review](#)

8. Publication Information

Date of publication: October 2020

Next scheduled issue: October 2021

(Previous issue: September 2019)

Evaluation by Outside Organization and Independent Review

1. Evaluation by Outside Organization

2. Independent Review

1. Evaluation by Outside Organization

(1) Inclusion in ESG indexes, socially responsible investment (SRI) indexes and investment universes (Current as of July 1, 2020)

The JSR Group is highly regarded for its sustainability 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).



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)



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.*



We were selected for inclusion in the S&P/JPX Carbon Efficient Index by the S&P Dow Jones Index.



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



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



On May 8, 2020, we were reconfirmed for inclusion in the Ethibel Pioneer & Excellence Investment Registers, which is an international SRI universe.



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

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

* The inclusion of JSR Corporation in MSCI indexes, as well as the use of the MSCI logo, trademark, service mark and index name, does not constitute support, endorsement or promotion of MSCI or any MSCI-affiliated company by JSR Corporation. MSCI indexes are the sole property of MSCI.

MSCI and all MSCI index names and logos are the trademark or service mark of MSCI and its affiliated companies.

(2) Evaluation by non-ESG evaluation organizations



2020 Certified Health and Productivity Management Organization Recognition Program (Large Enterprise Category)

We were selected by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi as a company practicing outstanding health and productivity management.



2020 Certified Health and Productivity Management Organization Recognition Program (SME Category)

JSR Micro Kyushu Co., Ltd.; Japan Coloring Co., Ltd.; Elastomix Co., Ltd.; Emulsion Technology Co., Ltd.; and JSR Kenko Hoken Kumiai, all of which are JSR Group companies, were certified in the program's SME Category.

(3) Major awards and commendations received in FY2019

Winner	Sponsor	Award Name
JSR Chiba Plant	Japan Chemical Industry Association	13th Responsible Care Award
JSR Chiba Plant	Chiba-ken Keiryo Kyokai	2019 Outstanding Measurement Management Office
Emulsion Technology, Co., Ltd.	Mie-ken Kikenbutsu Anzen Kyokai	2019 Outstanding Establishment Award
JSR Micro Kyushu Co., Ltd.	Saga prefectural government	The first Saga saikou commendation (healthy management section)
JSR Micro Taiwan Co., Ltd.	Central Taiwan Science Park Bureau	Special Workplace Diversity Promotion Award (Excellence Award)

2. Independent Review

JSR Group undergoes independent reviews from the Responsible Care Verification Center of the Japan Chemical Industry Association.

Scope of review: All notations in the "JSR Group Sustainability Report 2020" pertaining to the environment and industrial safety/accident prevention (including ESG Data)

➤ [Click here for the Independent Review Report \(PDF 698KB\)](#) [PDF](#)



Report Downloads

Sustainability Report / CSR Report (Group Companies) / RC Site Report

▼	1. JSR Group Sustainability Reports
▼	2. JSR Micro, Inc. CSR Report
▼	3. JSR Micro N.V. CSR Report
▼	4. JSR Plant Responsible Care Reports

1. JSR Group Sustainability Reports

The name was changed to Sustainability Report in 2020. A Highlight Version will not be published.

JSR Group Sustainability Reports 2020 (April 1, 2019 - March 31, 2020)

> [Website](#)



CSR Report 2019 (April 1, 2018 - March 31, 2019)

> [Detailed Version Website](#)

> [Highlight Version \[Two-Page Spread Type\] \(PDF 4.6MB\)](#) [PDF](#)

> [Highlight Version \[A4-Size Page Type\] \(PDF 4.6MB\)](#) [PDF](#)

CSR Report 2018 (April 1, 2017 - March 31, 2018)

> [Detailed Version Website](#)

> [Highlight Version \(PDF 5.7MB\)](#) [PDF](#)

CSR Report 2017 (April 1, 2016 - March 31, 2017)

> [Online Version](#)

> [Highlight Version \(PDF 4.8MB\)](#) [PDF](#)

CSR Report 2016 (April 1, 2015 - March 31, 2016)

> [Online Version](#)

> [Print Version \(PDF 4.6MB\)](#) [PDF](#)

CSR Report 2015 (April 1, 2014 - March 31, 2015)

> [Online Version](#)

> [Highlight Version \(PDF 6.7MB\)](#) [PDF](#)

CSR Report 2014 (April 1, 2013 - March 31, 2014)

- [Online Version](#)
- [Print Version \(PDF 11.5MB\)](#) [PDF](#)

CSR Report 2013 (April 1, 2012 - March 31, 2013)

- [Online Version](#)
- [Print Version \(PDF 5.1MB\)](#) [PDF](#)

CSR Report 2012 (April 1, 2011 - March 31, 2012)

- [Online Version](#)
- [Print Version \(PDF 5.7MB\)](#) [PDF](#)

CSR Report 2011 (April 1, 2010 - March 31, 2011)

- [Online Version](#)
- [Print Version \(PDF 3.6MB\)](#) [PDF](#)

CSR Report 2010 (April 1, 2009 - March 31, 2010)

- [Online Version](#)
- [Print Version \(PDF 2.5MB\)](#) [PDF](#)

CSR Report 2009 (April 1, 2008 - March 31, 2009)

- [Online Version](#)
- [Print Version \(PDF 1.3MB\)](#) [PDF](#)

2. JSR Micro, Inc. CSR Report



- [JSR Micro, Inc. CSR Report 2018 \(PDF 2.7MB\)](#) [PDF](#)

- [JSR Micro, Inc. CSR Report 2016 \(PDF 5.1MB\)](#) [PDF](#)
- [JSR Micro, Inc. CSR Report 2014 \(PDF 4.5MB\)](#) [PDF](#)
- [JSR Micro, Inc. CSR Report 2012 \(PDF 8.0MB\)](#) [PDF](#)

3. JSR Micro N.V. CSR Report



- [JSR Micro N.V. CSR Report 2019 \(PDF 1.9MB\)](#) [PDF](#)

- [JSR Micro N.V. CSR Report 2017 \(PDF 0.8MB\)](#) [PDF](#)
- [JSR Micro N.V. CSR Report 2015 \(PDF 4.3MB\)](#) [PDF](#)

4. JSR Plant Responsible Care Reports

Responsible care report of each Plant (Japanese only)

- [Yokkaichi Plant Responsible Care Report](#)
- [Chiba Plant Responsible Care Report](#)
- [Kashima Plant Responsible Care Report](#)



Corporate Information JSR Group Profile

- ▼ 1. JSR Profile (as of March 31, 2020)
- ▼ 2. JSR Group's Major Business (as of March 31, 2020)
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1. JSR Profile (as of March 31, 2020)

Company name	JSR Corporation
Established	December 10, 1957
Head office	Shiodome Sumitomo Building, 1-9-2 Higashi-Shimbashi, Minato-ku, Tokyo, Japan
Representative Director and CEO	Eric Johnson
Representative Director, President and COO	Nobuo Kawahashi
Capital	23,370 million yen
Number of employees (consolidated)	9,050

2. JSR Group's Major Business (as of March 31, 2020)

The manufacture and sale of the following products

Type of business		Main products
Elastomers Business	Synthetic rubbers	Styrene-butadiene rubber, butadiene rubber, ethylene-propylene rubber and other synthetic rubbers and refined processed products
	Thermoplastic elastomers	Thermoplastic elastomers and related processed products
	Emulsions	Latex for paper processing, general industrial-use latex, acrylic emulsion, and refined processed products made from raw latex
	Functional chemicals	High-performance coating materials, high-function dispersant, industrial particles, latent heat storage materials, heat reflection paint material, and battery material
	Other	Chemical products such as butadiene monomers
Plastics Business		Synthetic resins such as ABS resin, AES resin, AS resin, and ASA resin
Digital Solutions Business	Semiconductor Materials	Lithography materials (photoresists and multi-layered materials), packaging materials, cleaning solutions, and CMP materials
	Display Materials	Color liquid crystal display (LCD) materials and Organic electroluminescence display materials
	Edge Computing	Heat-resistant transparent resin, functional films, stereolithography, and photo molding
Life Sciences Business		Life Sciences (in vitro reagents for diagnostics and / or research, raw materials for such reagents, bioprocess materials, services to support drug development)

3. JSR Corporation's Business Establishments (as of March 31, 2020)

Head office		1-9-2 Higashi-Shimbashi, Minato-ku, Tokyo, Japan	
Branches	Nagoya Branch		Nagoya City, Aichi Prefecture
Plants	Yokkaichi Plant		Yokkaichi City, Mie Prefecture
	Chiba Plant		Ichihara City, Chiba Prefecture
	Kashima Plant		Kamisu City, Ibaraki Prefecture
Research centers and laboratories	Yokkaichi Research Center	Performance Polymer Research Laboratories	Yokkaichi City, Mie Prefecture
		Display Solution Research Laboratories	Yokkaichi City, Mie Prefecture
		Fine Electronic Materials Research Laboratories	Yokkaichi City, Mie Prefecture
		Advanced Materials Research Laboratories	Yokkaichi City, Mie Prefecture
		Edge Computing Research Laboratories	Yokkaichi City, Mie Prefecture
	Tsukuba Research Laboratories		Tsukuba City, Ibaraki Prefecture
	JSR-Keio University Medical and Chemical Innovation Center		Shinjuku Ward, Tokyo
Overseas branch	Taiwan Branch		Taiwan

4. JSR Group Companies (as of March 31, 2020)

Consolidated companies: 50

Non-consolidated subsidiaries: 7

Equity-method affiliates: 8

Scope of RC reporting: 18

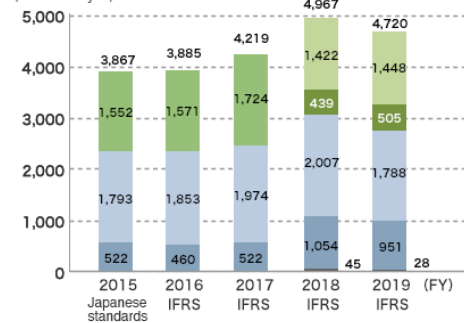
Details are provided in ESG Data.

> [ESG Data: JSR Group Companies](#) [PDF](#)

5. Financial Information

Revenue (consolidated)

(100 million yen)

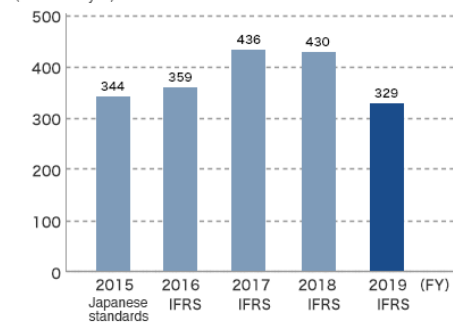


■ Diversified Businesses (Fine Chemicals Business, Life Sciences Business, and Other Materials)
■ Digital Solutions Business ■ Life Sciences Business
■ Elastomers Business ■ Plastics Business ■ Other Businesses

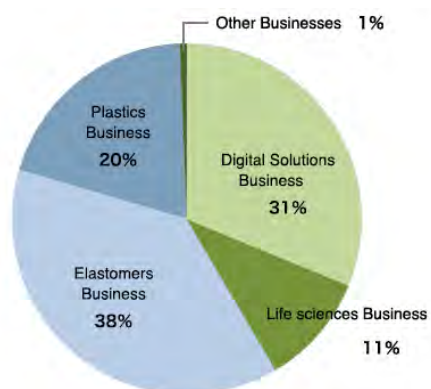
Note: Reporting segment classifications were changed in FY2018.

Operating Income (consolidated)

(100 million yen)



FY2019 Revenue (Consolidated) Composition Ratios



* Other: Purchasing and sales of other chemical products, wine, etc.; insurance agency, etc.