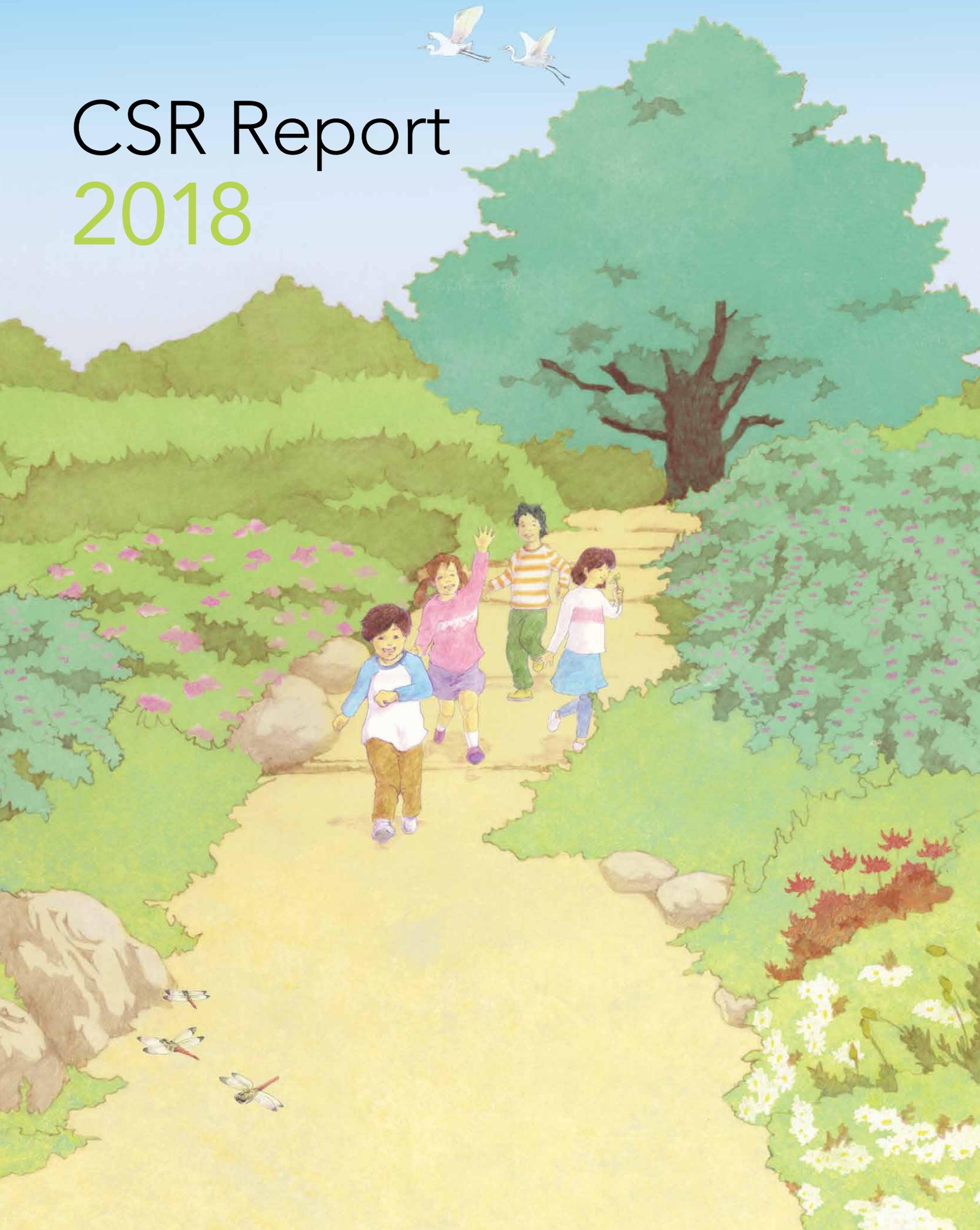


# CSR Report 2018



## Corporate Message

# Expanding the Possibilities of Plastics to Contribute to Establishing a Sustainable Society

Emphasizing environmentally and socially responsible management, Sumitomo Bakelite offers products that are safe and reliable for diverse applications in wide ranging fields extending from telecommunications, automotive and medical to food and construction. The history of plastics in Japan goes back more than one hundred years and today plastics play a role in every aspect of our lives. But how will plastics be used in the future? Expect innovation triggered by technical progress together with the rapid evolution of sophisticated new needs in the market.

**Sumitomo Bakelite is committed to offering  
life-enhancing products through high  
performance manufacturing.**



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## Editorial Policy

This report presents the Sumitomo Bakelite Group's CSR activities in fiscal 2017 clearly and succinctly to facilitate communication with all stakeholders inside and outside of the company. In March 2018, the Responsible Care Committee determined the content and the editorial policies of the report based on consideration of the principle issues concerning our group and stakeholders, in light of the views expressed by stakeholders and the trends influencing society.

The 2018 edition has been created so it may be easily read and understood by all stakeholders with:

- (1) A "Full Online Version" (No. of pages: 83) disclosing information in accordance with guidelines, and containing the details of our approaches to each activity, targets, and results.
- (2) An "Abridged Print Version" (No. of pages: 36), which is easy to read and focuses on the activities and messages of the Sumitomo Bakelite Group that we want stakeholders to know about.

It also features Universal Design Font, and has been written in a simple, concise manner that is easy to understand by all.

### Guidelines referenced

The "Full Online Version" follows the "core" option of the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines / Standards.

### Scope of third-party guarantee

The information in the "Full Online Version" marked with  is assured by a third party (KPMG AZSA Sustainability Co., Ltd.) with regard to its accuracy and completeness.

### Period

In principle, the report covers fiscal 2017 (April 2017 through to March 2018). Cases in which the coverage is different from this period are listed separately.

### Published

December 2018 (The Fiscal 2017 Report was published in November 2017 and the Fiscal 2019 Report will be published in October 2019)

### Boundary

(The names of the companies are generally stated in simplified forms by omitting "Co., Ltd." and "Inc.," etc.)

In principle, this report covers Sumitomo Bakelite Co., Ltd. and its consolidated subsidiaries. Regarding environmental and occupational health and safety, the coverage is limited to the following business sites, which are mostly production sites.

### Japan

Sumitomo Bakelite  
Head Office and marketing offices etc.\*1, Amagasaki Plant, Kanuma Plant, Utsunomiya Plant, Shizuoka Plant, Kobe Facility Office Akita Sumitomo Bakelite, S.B. Techno Plastics, Hokkai Taiyo Plastic, Yamaroku Kasei Industry, Kyushu Sumitomo Bakelite, S.B. Sheet Waterproof Systems, Tsutsunaka Kosan, S.B. Research Osaka Center, Seibu Jushi, Softec\*1

### Overseas

Sumitomo Bakelite Singapore, SumiDurez Singapore, SNC Industrial Laminates, Indopherin Jaya, SBP Indonesia, Sumitomo Bakelite (Suzhou), Sumitomo Bakelite (Dongguan), Sumitomo Bakelite (Shanghai), Sumitomo Bakelite Macau, Sumitomo Bakelite (Nantong), Sumitomo Bakelite (Taiwan), Vaupell China (Dongguan), Durez Corporation, Durez Canada, Sumitomo Bakelite North America, Promerus, Sumitomo Bakelite Europe, Sumitomo Bakelite Europe (Barcelona), Vyncolit, Vaupell Industrial Plastics, Vaupell Molding & Tooling, Russell Plastics Technology Company

\*1 These business sites and companies are included in the compilation of energy consumption and CO<sub>2</sub> emissions data.

Note: In this report, the names of Sumitomo Bakelite Co., Ltd. and its Group companies may be stated in simplified forms by omitting "Co., Ltd." and "Inc.," etc. Quantitative data presented in this report are rounded, in principle. Therefore, in certain cases, the sum of breakdowns may not equal the total.

# Expanding the Potential of Plastics to Become “A Company That Makes Your Dreams for the Future a Reality”

## Introduction

It has been more than 100 years since the beginning of plastics production in Japan. In that time, many different types of plastic products have been invented and developed, and they continue to develop and advance as an essential material for a wide variety of uses, including everyday items, transport equipment, medical equipment, semiconductors, and the aerospace industry.

As a true pioneer of these plastics, our company has pursued the potential of plastics amidst rapid social change, expanding our business on a global scale. We consider it our mission to create plastics with more advanced functionality, and focus on the concept of “Customer Satisfaction (CS) First” to contribute to social development and the standard of living through building customer value.

As part of our advancement into global business, we comply with the laws and regulations of other countries and strive to understand their diverse cultures, enhancing and strengthening our corporate governance. Moreover, as a chemical company, we also intend to fulfill our social responsibility by incorporating environmental safety in our operations and working toward realizing a sustainable society.

Until now, our business activities have prioritized CS, in line with customers’ perspectives, but in October 2017, this

moved on, and we have begun One Sumibe Activities for the first time. We are carrying out these activities as a whole company, transcending our organizational framework and aiming for further growth.

## Emphasizing Environmentally and Socially Responsible Management

We emphasize environmentally and socially responsible management as a top-priority management issue, based on our Business Philosophy, “Our company places prime importance on trust and sureness, and shall commit itself to contributing to the progress of society and enhancement of people’s welfare and livelihood through its business activities.” This is the business spirit ever-flowing throughout Sumitomo, and we firmly believe that business management along these lines offers a guarantee of safety, security, and trust to the world and society.

We have also established materiality (priority items) in order to recognize social issues that need to be solved, and to respond to stakeholders’ expectations and requests. Materiality is reviewed when appropriate, and matches the SDGs\*<sup>1</sup> of each area.

In order to realize even better manufacturing, we are developing original SBPS (Sumitomo Bakelite Production

### The One Sumibe Activities logo



**We consider One Sumibe Activities as a window for our customers; they are company-wide activities that promote the sales of existing products, keeping solutions and products from all business areas in mind, and creating new development projects.**

### The Origin of the Logo

An infinity symbol represented by a handshake, with an expanse of clear sky inside realizes stronger relationships both inside and outside of the company, including those with our customers, demonstrates infinite development and mutual prosperity through coordination and cooperation, and was created with the wish to “Give happiness in people’s futures.”

System) activities based on those of the Toyota Production System, and focusing on reforms, including quality improvement, production innovation, and reduced lead-time. Strengthening our manufacturing capability through the SBPS is an important activity to reliably link demand creation from our customers' perspective to our revenue. It is also connected to the eradication of quality-related complaints, and energy and resource conservation. In addition, we thoroughly control chemical substances, and are carrying out initiatives that consider the environment, safety, and health on each level from development to disposal.

Occupational health and safety is at the heart of our business activities, and we promote activities that create a working environment where we can ensure the safety and health of employees throughout the company. We will continue to strive to create even safer working environments in the future.

### Thoroughness of Compliance

Compliance with laws, regulations, and corporate ethics is our duty as a member of society. All of our employees strive to carry out their duties following "Our Code of Conduct," the standard of conduct set down by our company, and we have established a Compliance Committee aiming to be even more thorough in our compliance.

### Finally

As a pioneer in plastics, our company contributes to the creation of customer value through the development and provision of new functions of plastics, aiming to grow and become "a company that makes your dreams for the future a reality" through our One Sumibe Activities. Today, we have operations in 15 countries and regions around the world. I feel it is important to fulfill our social responsibilities by making efforts to comply with local laws and understand the culture, enhancing and reinforcing corporate governance, and giving consideration to environmental safety as a chemical company. We will continue to focus on fulfilling our social responsibility as a member of the chemical industry, supporting and implementing the Responsible Care Global Charter.

\*1 See p.23



October 2018  
President and Representative Director

*H. Fujiwara*

# Recognizing Social Change and Issues as Business Opportunities, and Connecting Them with Continuous Growth and Contributions to Society



Freelance Newscaster  
**Keiko Yashio**

President and Representative Director  
**Kazuhiko Fujiwara**

## Aiming for a Niche and Top Share in Functional Chemical Products

**Yashio** Nowadays, plastics have become as indispensable as air or water. What is the history of a company such as yours, a pioneer in plastics?

**Fujiwara** It hasn't been all that long since plastics were created – 111 years. The oldest plastics were phenol resin, discovered by Dr. Baekeland, a Belgian American in 1907. These were given the trade name “Bakelite,” which is the origin of our company's name. We are proud to say that we originated from the first company to produce and sell phenol resin, and contributed to the development of global society and people's everyday lives by creating plastics with even higher functionality, and so it can be said that we are pioneers.

**Yashio** And you're at the top of a company with such history. You took up this position this year. Congratulations! What are your ambitions?

**Fujiwara** It is an extremely heavy responsibility to steer our management, and from now on, I want to push towards continuous growth. Under our previous president, who originally came from sales, we prioritized customer satisfaction, expanded business in existing areas, and promoted reforms of various business structures. In so doing, we strengthened our revenue base, and were able to become a profitable company. From now on, I must first follow our current Business Philosophy and basic strategies in order to achieve continuous growth. Within these, the creation and commercialization of new products is an issue that is both important and indispensable. I come from a technical background. As a technician, I believe that my mission is to create a system that can quickly establish an ultimate goal, that is to say research and development with an eye to commercialization, as the cornerstone of our growth trajectory. If we are able to promote this, I am sure that we will realize both a niche and top share in functional chemical products, and become a company with a robust global presence.

**Yashio** So you're not talking about development for development's sake, and technology for technology's sake. I imagine that by carrying out research and development with an eye to an ultimate goal, the motivation of your staff will also change.

**Fujiwara** Yes, that's right. I hope that if we develop along these lines, they will gain the motivation to be able to contribute to society in this way.

## Discovering Customers' Underlying Needs with a Company-wide System, and Building a Stronger Relationship of Trust.

**Yashio** To continue, I'd like to ask about your mid-term business plan from 2016 to 2018. What progress have you made?

**Fujiwara** The mid-term business plan involves making use of the proprietary plastics technology that is our foundation, actively cultivating key customers and working with coordination and cooperation inside and outside of the company with a Business Philosophy that aims to build an even greater added-value business, based on prioritizing customer satisfaction. We have three basic strategies. The first is quickly launching and creating new products. The second is improving profitability in growth areas. The third is regenerating existing business. Fiscal 2018 is the final year of the plan, in which we are aiming to increase operating profits by 20 billion yen; although up until fiscal 2017, we had fallen short of some of our targets in sales, we were able to achieve good results, exceeding our targets in terms of operating profits. We expect to achieve our goals in fiscal 2018.

**Yashio** So there has been a lot of favorable change. Are there any initiatives for further growth?

**Fujiwara** Since October 2017, our business activities prioritizing customer satisfaction have evolved, and we have begun One Sumibe Activities for the first time. These activities move away from the boundaries of “each product” or “each business,” providing value across the whole company. Conventionally, we carried out most business vertically, but we have constructed a system that allows us to introduce products to customers from the company as a whole, creating a group that functions laterally. One Sumibe Activities are whole-company activities that promote stronger, trust-based relationships with customers, with everyone from the top management down to entry-level employees working together, aiming to expand business through discovering our customers' underlying needs.

**Yashio** You handle a wide range of products, and you also have a large number of business locations both in Japan and overseas; I would guess that functioning laterally will be extremely difficult for you. Is that why you have these One Sumibe Activities?

**Fujiwara** For example, when a representative from our semiconductor materials business visits a customer as a point of contact representing our company, they are not only responsible for semiconductor materials, but also they keep in mind our company's various products and solutions, and identify the needs of the company overall rather than just those of the customer's individual business or department. We then respond to these needs as a whole organization. I expect One Sumibe Activities to expand globally in the future. As you say, our group has a lot of bases overseas. Expanding our business overseas is our strength, but in order to make this into an even stronger weapon, it is important for our employees around the world to be of one mind approaching one goal so that we all move straight ahead. The One Sumibe Activities are the key to this.

**Yashio** When it comes to plastics, Sumitomo Bakelite really does provide a one-stop solution where people can discuss anything with you. In which business areas do you expect to see particular growth?

**Fujiwara** At the moment, our company has established three fields as areas where we expect growth: automobiles and aircraft, highly integrated devices centered on semiconductors, and healthcare. Each of these three fields are linked to social changes and issues. Highly integrated devices are essential to the development of the IoT (Internet of Things). We are contributing to the improved reliability, and reduced size and weight of materials for components such as automotive ECU bulk encapsulation, as well as materials for simple devices. Furthermore, we are promoting the practical use of honeycomb panels and parts for seating (low smoke PVC) to meet needs such as more effective fuel efficiency and reduced costs even in aircraft components, the market for which we entered fully with our takeover in 2014. When it comes to automobiles, we regulate CO<sub>2</sub> as a way to combat global warming. We perceive this kind of issue as a business opportunity. I believe that anticipating and responding to social and customer needs through business activities will lead to continued growth and contribute to society.

**Yashio** When it comes to automobiles, environmentally-friendly models such as electric and hydrogen-fueled vehicles are being released one after another. Are the components



President and Representative Director

## Kazuhiko Fujiwara

He joined Sumitomo Bakelite in 1980. He became the Team Leader of the Biotechnology-related Product Development Project in 2003, Department Manager of S-Bio Development in 2007, Manager and Executive Officer of S-Bio Business in June 2009, Managing Executive Officer in 2013, Director in 2014, and President in 2018.

produced by your company used in these automobiles, regardless of type, as they are in conventional gasoline cars?

**Fujiwara** There are of course cases where parts that were necessary in conventional vehicles are no longer needed. However, the need for lighter weight is without a doubt common to all types of vehicles, and is greatly emphasized for electric and hydrogen vehicles. In order to make automobiles lighter (and reduce CO<sub>2</sub>), we have promoted research and development of metal alternatives that can replace metals with plastics or combinations of metals and plastics.

**Yashio** If these alternatives and combinations make automobiles lighter, we will be able to have vehicles that are more environmentally-friendly. Is that right?

**Fujiwara** This has already been put into practice with mechanical components such as brake pistons. Lately, the creation of engines with resin has attracted attention, and our company is carrying out joint research with the Fraunhofer ICT, a world-leading German research institution. We have had success with demonstration experiments, coming so far as to say, "This might work."

**Yashio** I also like traveling by automobile, but I believe that while many consumers are aware of exhaust fumes, they do not know about measures to reduce them, or that there is great significance in reducing the size of components. They'd be surprised if they asked specifically about this. What about the field of healthcare? This is also an area that has a very close link to our everyday lives.

**Fujiwara** Our medical-related business has over 40 years of history. We predict that from now on, operations and treatments will be carried out without opening up large holes in patients' bodies with scalpels, and that these minimally invasive treatments that will lead to reduced hospital stays will increase; we are focusing on developing devices that can be used for these treatments. We are strengthening our product lineup and expanding the scope of its application with items such as a steerable microcatheter with a tip that can move freely and an SB knife for endoscopic equipment. In addition, in terms of products that are closely linked to people's everyday lives, we are offering film and sheet products. Our freshness-preserving film P-Plus<sup>®</sup> allows users to keep plant or plant-like products, such as vegetables and fruits, fresh.

**Yashio** I heard that P-Plus<sup>®</sup> is being used by convenience stores and supermarkets to package their cut vegetables. Cut vegetables used to go bad very quickly, and I had the impression that when you opened the bag there would be a pungent odor, but recently that hasn't happened very often. I didn't know that was thanks to the plastic packaging. Since you can also store normal vegetables in a bag in the fridge and they will last longer, it is incredibly reassuring to families that like to cook.

**Fujiwara** If shelf-lives improve, then we can also export overseas. On top of that, we can contribute to society in the sense that we will be reducing food waste, and so-called food loss.

## Promoting Activities Around the World that Contribute to Solving Global Issues

**Yashio** Food loss is an issue attracting a lot of attention all over the world. Another worldwide issue that's been attracting attention is the Sustainable Development Goals (SDGs) proposed by the UN. What initiatives are you putting in place in relation to these?

**Fujiwara** Our CSR activities and business are completely focused on the SDGs, and we're promoting activities that will contribute to solutions. Our Responsible Care Committee is at the heart of these activities, and we're also scheduled to link our next mid-term business plan, which will begin in 2019, to the SDGs. It's important that these activities range across the whole company, rather than just one part. Internally, we've started spreading information through our intranet and holding study sessions, and in the future, we hope that our activities will expand worldwide across our whole group.

**Yashio** This is also in the SDGs, but there have also been strong demands for companies to facilitate diversity and women's employment. What about these areas?

**Fujiwara** These are really important points. Humans do the jobs that cannot be done by AI (artificial intelligence) and robots. They say that people, goods, and money are necessary to a company's success. I believe that people are the most important of these. I like the phrase "people power," and I use it a lot. People power is the multiplication of motivation, abilities, personalities and characters. Education is essential for us to increase this power. There are a total of 220,000 employees attending classes in our SB School, established in 2007, and we are carrying out an initiative whereby young employees are sent overseas for around two years after they have worked with us for three years or more, allowing them to cultivate a sense of the world. Moving forwards while fostering talent is promoting diversity. We also understand that we should be especially proactive in promoting women's employment, and we are putting efforts into recruiting female employees.

**Yashio** I see. I was under the impression that there are not many women in science and engineering.

**Fujiwara** Previously, the numbers were certainly low. However, there are actually a lot of women who excel in science and math. Gender does not matter in office work or in research. However, if we want female employees to work with us for a long time and excel in management roles, we need to give support to enable them to have a work-life balance, including for childbirth and childrearing. We already have a system in place and are actively offering support, and are proud to say that we have mostly developed an environment where it is easy for women to work.

**Yashio** I've already asked you about a variety of topics, but I was really surprised by the number of functions of plastic. You've also really impressed me with the size of your contributions and your support in a variety of areas such

as medicine, food, and environmental protection with the different functions of plastics. Finally, could you tell me how you will be steering the company in the future?

**Fujiwara** Firstly, I want this to be a global company. To accomplish that, we're actively working to be the first to catch social trends and issues in different areas of the world. As I said earlier, we have a profitable base. Next is a stage of further growth for our company. However, growth isn't just chasing profits. The importance of our duties, including social contributions and environmental concerns, will increase. This is not anything new to us as a company. By carrying out our Business Philosophy, "Our company places prime importance on trust and sureness, and shall commit itself to contributing to the progress of society and enhancement of people's welfare and livelihood through its business activities," as we always have done, we naturally enhance value for all our stakeholders, including our customers. I believe that this will lead to further social contribution.



Freelance Newscaster

## Keiko Yashio

She joined TV Tokyo after graduating from the Faculty of Law in Sophia University in 1993. After working as a reporter in the economics department, she was transferred to the announce room.

She began working as a freelance newscaster in 2003. She specialized in marketing in Hosei Business School from 2002, completing her course in 2004 (DBA Doctor of Business Administration), and was an Associate Professor of Kwansei Gakuin University's School of Business Administration from 2006 to 2009. She was a special guest professor at Gakushuin University's Faculty of Economics, Department of Management from 2009 to 2016, and currently teaches as an Associate Professor at Toyo Gakuen University's Faculty of Business Administration.

# Sumitomo Bakelite's Sustainability

## SDG (Sustainable Development Goals) Initiatives in the Sumitomo Bakelite Group –

The Sumitomo Bakelite Group is contributing to the fulfillment of SDGs with development and manufacturing based on the principles of our Business Philosophy (company policy)\*<sup>1</sup>, and wish to contribute to the creation of a sustainable society.

“SDGs” is an abbreviation for “Sustainable Development Goals.” These are international goals, consisting of 17 goals in different areas and 169 targets (concrete objectives), adopted by a UN Summit in September 2015, to be fulfilled in the 15 years between 2016 and 2030.

Our group considers initiatives that improve social as well as economic values to be indispensable to solving social issues and realizing sustainable growth and value creation. All of our business activities carry out “development and manufacturing” based on the principles of our Business Philosophy (company policy)\*<sup>1</sup>, and we are focused on contributing to the creation of a sustainable society.

In October 2018, we set out the details of the SDG areas we are concentrating on, and are establishing an “SDGs Promotion and Preparation Project Team” to implement the necessary policies throughout our company. We are currently promoting the coordination of “social issues represented by SDGs,” “our business activities (value provided),” and

“our company vision.” In terms of business that we are concentrating on, we wish to contribute to the SDGs set out by the UN by steadily promoting our activities, and connect this with increased company value.



\*1 Please see page 27 for more details about the Sumitomo Bakelite Group's Business Policy (company policy).

### Manufacturing Contributing to the SDGs

#### The Sumitomo Bakelite Group's Business Philosophy (Company Policy): The Sumitomo Business Philosophy

**Our company places prime importance on trust and sureness, and shall commit itself to contributing to the progress of society and enhancement of people's welfare and livelihood through its business activities.**

Sustainable Development Goals

Worldwide shared goals made up of 17 goals and 169 targets, to be fulfilled by 2030 → **are the ultimate underlying needs, and our company policy is in agreement with making them a reality.**

**We promote research and development linked to the expansion of existing products and the creation of new products in “Three Creation Areas” through carrying out One Sumibe Activities based on the SDGs.**

Actively committing management resources to the "3 creation areas"



Manufacturing that contributes to the SDGs



# Sumitomo Bakelite's Materiality

In fiscal 2015, we identified Sumitomo Bakelite's materiality (priority items) in order to determine the social issues we should address and to carry out CSR activities closely in tune with the needs and expectations of stakeholders in an integrated manner on a company-wide basis. In fiscal 2016 and beyond, we have been reviewing and will continue to review the materiality we have identified, and continue to carry out activities.

## Materiality determination process (Initiatives for Fiscal 2015)

### 1 Identification

We selected issues, referencing international guidelines such as G4 Sustainability Reporting Guidelines of the Global Reporting Initiative and ISO 26000, based on our previous efforts in various fields of CSR including the environment, safety and peace of mind, professional motivation, and society, which form part of our fiscal year plan.



### 2 Prioritization

We assessed the impacts that the identified issues have on the company and on stakeholders. After internal discussions based on the results of this assessment, we selected 14 items with particularly high priority.



### 3 Confirmation of Validity

Further discussions were held with each business division on these 14 priority items. Next, we narrowed the items down to 11 to focus our efforts based on the results of these discussions. On top of this, we asked outside professionals to review and provide comments on these 11 items. Simultaneously, the Responsible Care Committee confirmed the validity of these items.



Responsible Care Committee



### 4 Review

We will now implement CSR activities based on the materiality of these 11 items as well as conduct a review led by outside professionals and employees about the nature of these activities. The results of this review will be utilized for corporate social responsibility reports and subsequent years as well as for activity planning.

## Initiatives for Fiscal 2016 and Beyond

In fiscal 2016, we conducted an annual review of each business division and made changes to next year's targets based on the identified materiality items. In fiscal 2017 and subsequent years, we have been implementing and will continue to implement the PDCA ("plan, do, check, action") cycle based on these materiality items. We are also promoting the organization and internal dissemination of the relationship between materiality, business activities (providing value), and the 17 goals and 169 targets of the SDGs (Sustainable Development Goals). Furthermore, as we move from the G4 to the GRI Standards, due to the requirements of conformance being clearly defined, we are carrying out a gap analysis in light of the requirements of these GRI Standards.

## Materiality Items Identified

Materiality items identified using the process outlined on page 12 are as follows. We compared each category of materiality items with the SDG goals, and reviewed this in fiscal 2017.

Our group will now work on initiatives for materiality items that were identified so as to contribute to the fulfillment of the SDGs.

| Field   | Materiality item                   | Related stakeholders  | Page number                         |
|---|------------------------------------|---|-------------------------------------|
| <b>Issues related to ensuring harmony with environment</b><br>Related SDGs → 3 GOOD HEALTH AND WELL-BEING, 7 AFFORDABLE AND CLEAN ENERGY, 12 RESPONSIBLE CONSUMER AND PRODUCTION, 13 CLIMATE ACTION | Mitigate environmental impacts     | <ul style="list-style-type: none"> <li>Local communities</li> <li>Business partners</li> </ul>  | Full online version pages 36 to 43  |
|   | Resource and energy conservation   | <ul style="list-style-type: none"> <li>Business partners</li> <li>Employees</li> </ul>  | Full online version pages 36 to 43  |
| <b>Issues related to providing safety and peace of mind</b><br>Related SDGs → 8 DECENT WORK AND ECONOMIC GROWTH, 12 RESPONSIBLE CONSUMER AND PRODUCTION   | Safety and security                | <ul style="list-style-type: none"> <li>Local communities</li> <li>Governments</li> <li>Business partners</li> <li>Employees</li> </ul>  | Full online version pages 44 to 46  |
|   | Management of chemical substances  | <ul style="list-style-type: none"> <li>Business partners</li> <li>Governments</li> <li>Employees</li> </ul>   | Full online version page 47         |
|   | Product liability                  | <ul style="list-style-type: none"> <li>Customers</li> </ul>   | Full online version pages 48 to 50  |
| <b>Issues impacting society</b><br>Related SDGs → 5 GENDER EQUALITY, 8 DECENT WORK AND ECONOMIC GROWTH, 12 RESPONSIBLE CONSUMER AND PRODUCTION, 15 LIFE ON LAND                                     | Biodiversity conservation          | <ul style="list-style-type: none"> <li>Local communities</li> </ul>   | Full online version page 61         |
|   | Improving stakeholder satisfaction | <ul style="list-style-type: none"> <li>Customers</li> <li>Shareholders</li> <li>Local communities</li> <li>Governments</li> <li>Business partners</li> <li>Employees</li> </ul> | Full online version pages 51 to 65  |
|   | Human resource development         | <ul style="list-style-type: none"> <li>Employees</li> </ul>   | Full online version pages 55 to 58  |
|   | Diversity, Work-life balance       | <ul style="list-style-type: none"> <li>Employees</li> </ul>   | Full online version page 53 to 55   |
|   | CSR procurement                    | <ul style="list-style-type: none"> <li>Business partners</li> </ul>   | Full online version page 35         |
| <b>Issues representing the foundation of business activities</b><br>Related SDGs → 12 RESPONSIBLE CONSUMER AND PRODUCTION, 16 PEACE, JUSTICE AND STRONG INSTITUTIONS                                | Compliance                         | <ul style="list-style-type: none"> <li>Employees</li> </ul>   | Full online version pages 32 and 33 |

Please see page 25 to 26 for more details about our initiatives under each materiality item.

## Outside opinion of materiality items

In the year before last (2016), we gave our opinions on materiality items. In the meantime, Sumitomo Bakelite has compared their materiality items with the SDGs (The UN's Sustainable Development Goals), and carried out further reviews. The SDGs require various organizations, such as governments, international organizations, NGOs, and corporations from around the world, to unite and address them in order to solve 17 issues on a global level by 2030, including poverty, sanitation, the environment, gender, and education. Their in-house stance towards materiality, whereby they compare it to SDGs and focus their efforts, has been evaluated as giving Sumitomo Bakelite a high level of awareness of participation in the SDGs.

However, the SDGs were adopted by the UN in 2015, and there have been new issues constantly arising around the world since then. For example, the issue of microplastics. The photograph of the treatment of a sea turtle whose nose had been pierced by a straw that had become marine litter shocked the world, and plastic litter has come to be regarded as an issue. Microplastics that float in the sea do not only originate from litter that consumers have

used and then thrown away; there are research results that suggest that pieces of plastic by riverbanks, from artificial turf and industrial products such as agricultural materials, are washed into rivers and pollute the seas as microplastics. We recommend that Sumitomo Bakelite make further disclosure on the sustainability of plastics in entire value chains and information about Sumitomo Bakelite's initiatives, as the social responsibility of a company that handles plastics. This approach of active engagement towards an issue that is attracting worldwide attention will also contribute to raising the value of the company.



**Makiko Akabane**

Japan representative for CSR Asia. She has covered the CSR efforts of a number of multinational corporations from various sectors for more than a decade. She has given lectures throughout Japan and around the world, including at the Ministry of the Environment, International Christian University (ICU), Keio University, Seisen Jogakuin College, Rikkyo University, Meiji Gakuin University, the World Bank, APABIS, the British Council, and Toyo Keizai Inc.

# Familiar Sumitomo Bakelite Products Around You

Most of Sumitomo Bakelite's products are processed in various ways after being supplied to customers and then delivered around the world as finished goods. Here, we will introduce a number of products made by our group that are used in various situations and play an important role in our lives.

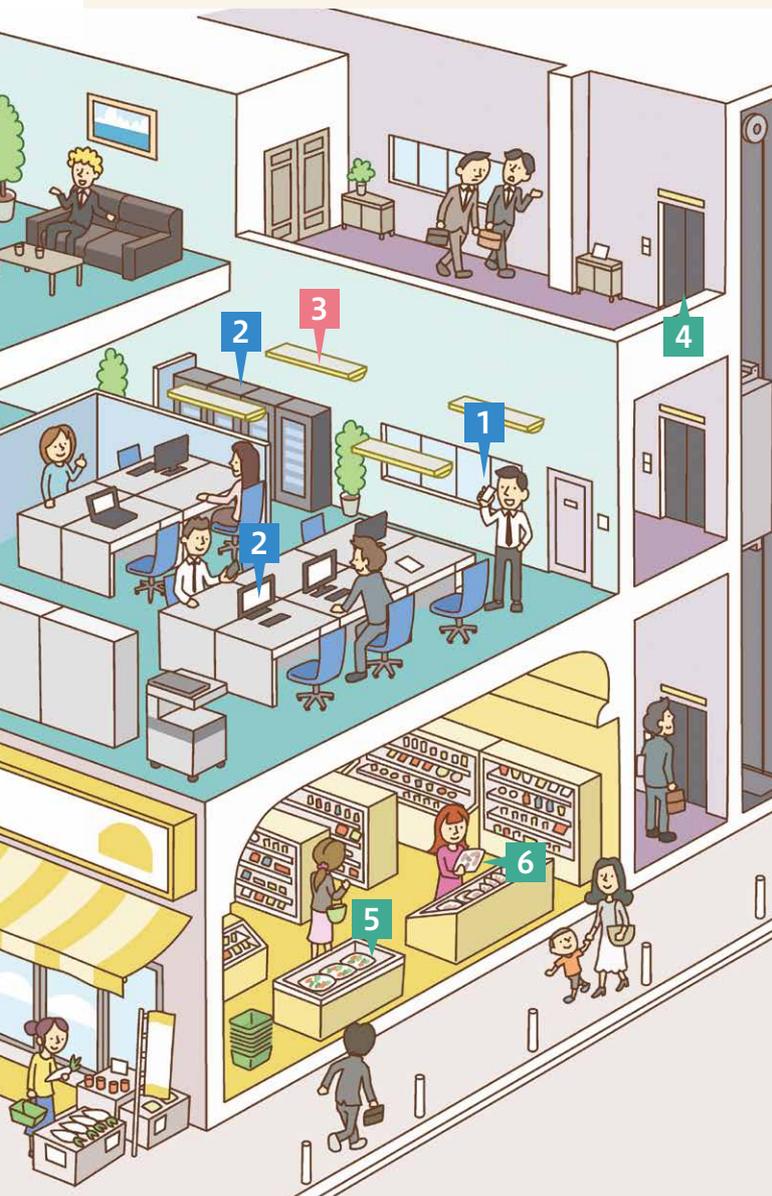
- ...Semiconductor Materials
- ...High-Performance Plastics
- ...Quality of Life Products

Please visit the "Familiar products of our company around you" page on our corporate website to learn more about the products we make.

Link → [http://www.sumibe.co.jp/around\\_you/en.html](http://www.sumibe.co.jp/around_you/en.html)



## Shop/Office



### 1 Electronic components for computers and mobile phones, etc.

**Epoxy Resin Molding Compounds for Encapsulation of Semiconductor Devices (SUMIKON® EME)**

We carry a lineup of epoxy resin molding compounds that protect delicate semiconductor devices from the external environment, including moisture and impacts, contributing to improved reliability.

**Semiconductor Package Substrate Materials (LaZ®)**

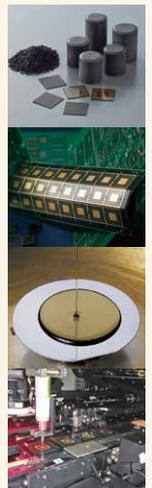
We deliver new value to customers with our substrate material for semiconductor packages called "LaZ," which offers reduced thermal expansion and highly consistent dimensions.

**Coating resins for semiconductor wafers (SUMIRESIN EXCEL®CRC)**

Coating resins protect semiconductor elements from external stress and impurities, greatly improving reliability.

**Paste for Die Bonding (SUMIRESIN EXCEL®CRM)**

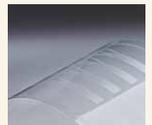
Semiconductor paste is used to attach semiconductor chips or LED chips to various substrates (lead frames, organic substrates, ceramic substrates).



### 2 Optical circuit products for servers, etc.

**Optical waveguide sheets**

Optical waveguide sheets are film-like materials for optical circuits. They are very flexible and easy to form into any shape, making them ideal for not only data communications, but various other purposes as well.



### 3 Lighting substrates

**Copper-clad laminates (SUMILITE®ELC/ALC)**

Composite materials and aluminum substrates with excellent heat dissipation are used in LED lighting applications, helping to reduce energy usage.



### 4 Interior materials of elevators and office walls

**Melamine-Faced Decorative Sheets (DCOLA INNOVAIR®)**

Our decorative melamine laminates, just 0.2mm thick, are used for walls and elevators in buildings, hotels, shops, and hospitals.



### 5 Freshness preserving films (for fruit and vegetables and cut vegetables, etc.)

**Freshness Preserving Films (P-Plus®)**

This cling wrap slows deterioration in quality of fruits and vegetables in transit and storage, maintaining them as fresh as possible at the point of sale.



### 6 Food packaging films for ham, sausage, etc.

**Multilayered Films for Food Packaging (SUMILITE®CEL)**

These flexible multi-layer composite films can be used for vacuum packaging, gas packaging, skin packaging, and various other kinds of packaging.



# Car

## 7 Materials for Encapsulating Automotive Electrical Components

**Epoxy Molding Compounds for Encapsulation (SUMIKON®EME)**  
 We have a line-up of products from the EME-M series, unique molding compounds created to protect electric components in vehicles, such as ECU, inverters, sensors, and motors. We are working on electrifying automobiles and the electrification of automatic driving, contributing to higher reliability, and reductions in size, weight, and cost.



## 8 Substrate for electronic devices such as car navigation and car audio

**Copper-Clad Laminates (SUMILITE®ELC)**  
 Our highly heat-resistant substrate material is used in electronic control circuit boards improving fuel economy and riding comfort.



## 9 Tire reinforcement

**Tire-Reinforcement Material (SUMILITERESIN®PR)**  
 Our phenolic resins are added to the rubber components required for the tire stiffness, contributing to improved rolling resistance in fuel conserving tires.



## 10 Material for powered parts

## 11 Material for disk brakes

**Materials for Pulleys and Disc Brake Pistons (SUMIKON®PM)**  
 Phenolic resin molding material used in auxiliary engine parts and brake components requiring high heat resistance and strength. This material contributes to automobile weight reduction and fuel economy.



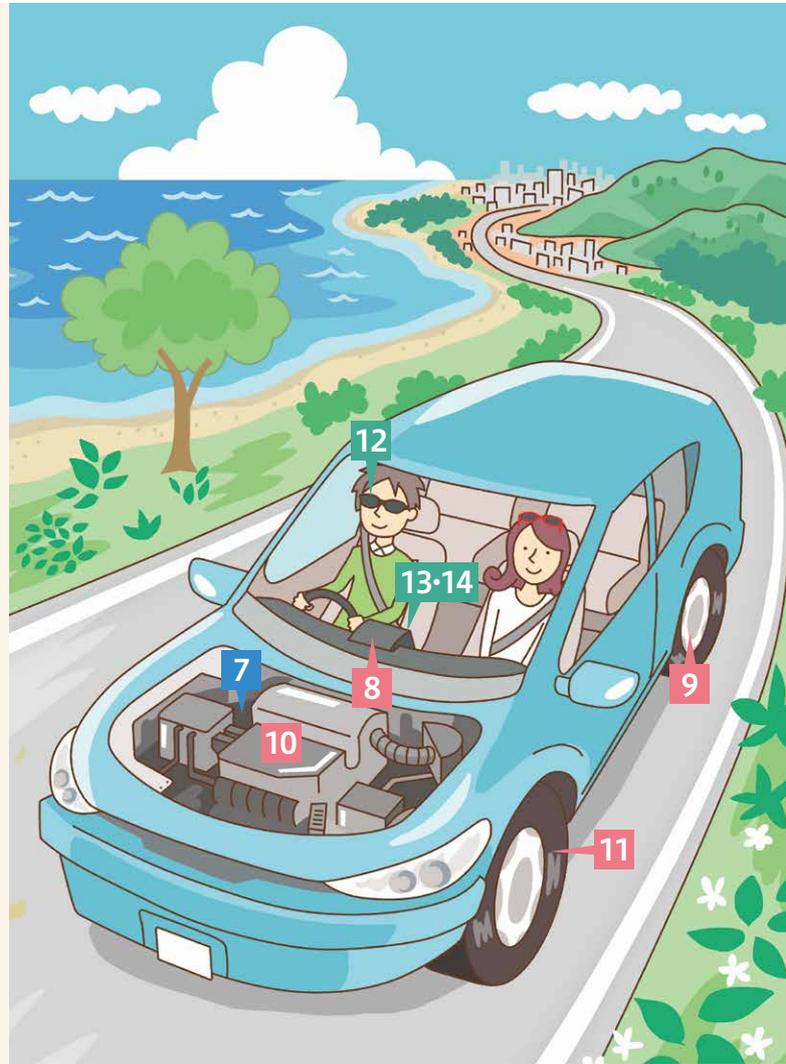
## 12 Polarizing plate for sunglasses, etc.

**Polycarbonate polarizing sheets**  
 Made from polycarbonate with excellent optical qualities and impact resistance for safer and more comfortable vision.



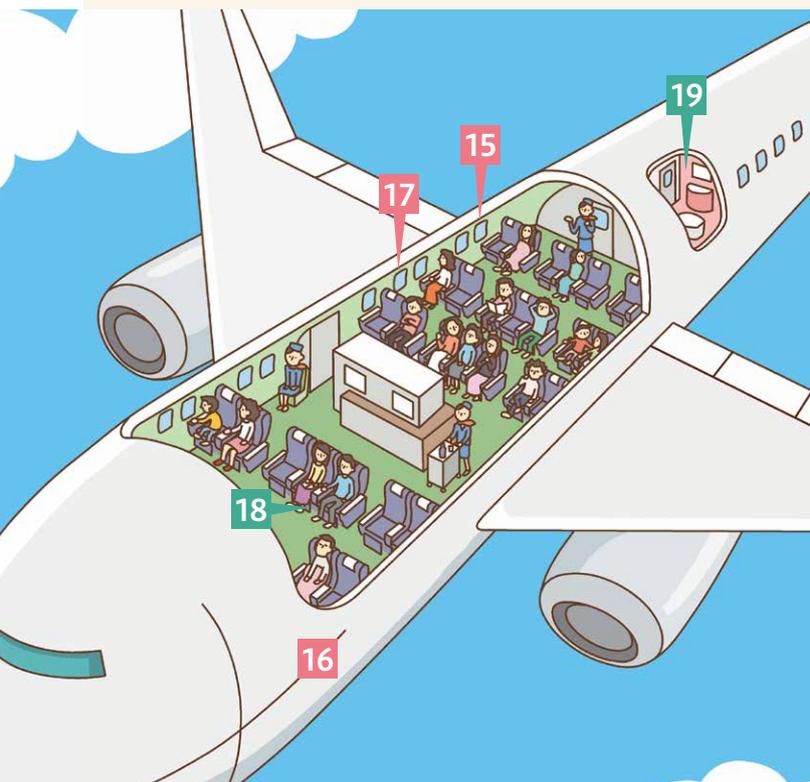
## 13 Covers for head-up displays

**Polycarbonate Sheets (Coated PC sheets)**  
 Excellent optical qualities contribute to high resolution and brightness in projection images.



## 14 Display panel of in-vehicle meters and in-vehicle center panel

**Polycarbonate Sheets (Extruded PC sheets)**  
 Offers improved reliability and visual design of instruments because it is made from polycarbonate sheets with excellent printability and moldability.



# Aircraft

## 15 Window assembly

## 16 Ventilation lid (for cabin pressure adjustment)

- 17 • Air outlet valves
- Service unit for AC, lights, etc. (for passengers)
- Seat markers

High performance plastics for metal replacement achieve weight saving, low-fuel consumption, and a comfortable environment for passengers.



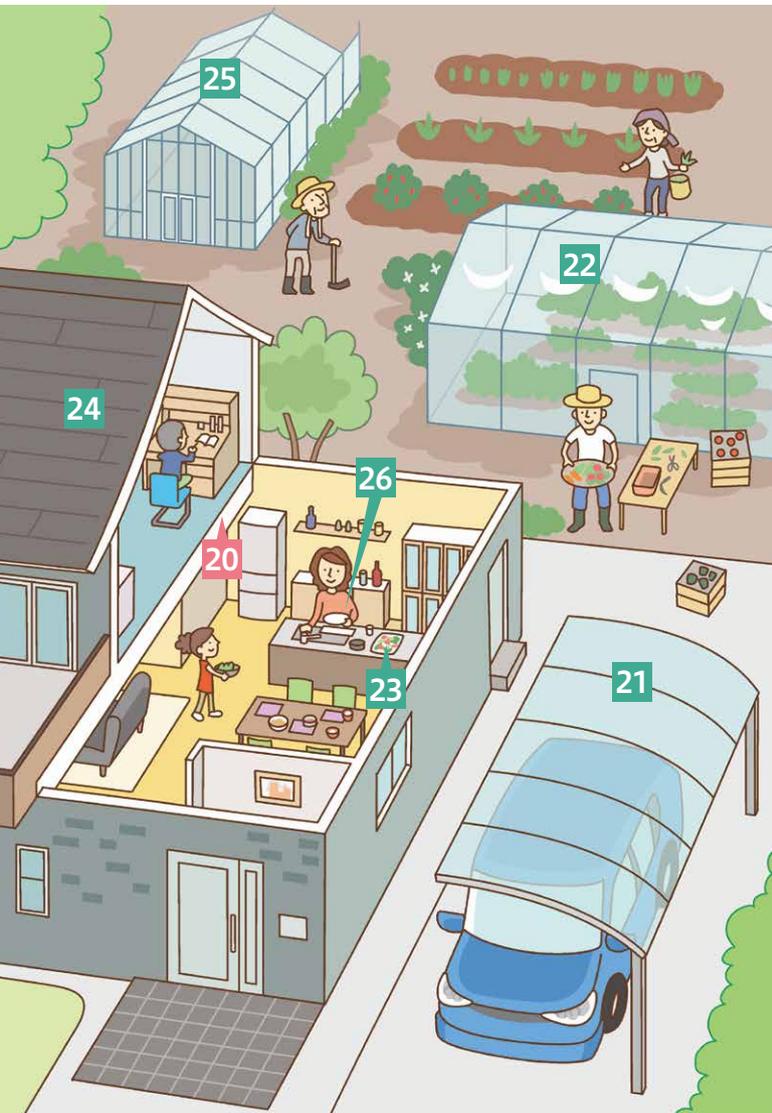
## 18 Seat tables

## 19 Lavatories

**KD, Acrylic-modified PVC Plate**

Having many superior properties such as flame retardancy and impact resistance, these plates are used for various applications such as interior decoration for aerospace transportation and trains.





# House/Farms

## 20 Plywood adhesive used for floors, walls and residential fixtures

### Adhesives for Plywood Production and Boards (Sumitac)

This adhesive uses low formaldehyde phenol that cures quickly at low temperatures, improving the productivity of plywood manufacturing and contributing to protecting the environment.

## 21 Carport roofs

### Polycarbonate Plates (Extruded PC Plates)

Having outstanding impact resistance and transparency, these plates are applicable for construction and architectural needs such as canopies and windows.

## 22 Hemmed film for vinyl greenhouses

### Polycarbonate Films for Agricultural Use

This product is a film that retains the functions of polycarbonate plate, such as transparency and impact resistance. It is used for covering lower parts of agricultural greenhouses.

## 23 Freshness preserving films (fruit and vegetables including sliced vegetables, etc.)

### Freshness Preserving Films (P-Plus®)

This cling wrap slows deterioration of fruits and vegetables, maintaining them in a fresh state for a longer time. Our lineup includes not only films for commercial applications, but also zipper bags for home use.

## 24 Waterproofing sheets/systems for roofs

### Waterproofing Sheets and System (SUNLOID DN®)

Employing PVC sheets, this system is used on the roofs of buildings, for the waterproofing of tanks and veranda flooring, and on the roofs of high quality prefab housing.

## 25 Covering materials for agricultural greenhouses

### Polycarbonate Plates (Extruded PC Corrugated Sheet)

Transparent corrugated plate made of polycarbonate, with excellent impact strength as well as weather resistance. It also has excellent heat insulation and thermal resistance. A plentiful assortment of colors is available for a wide range of uses.

## 26 Plastic chopping boards

### Plastic Chopping Boards (MYKITCHEN®)

Since developing the first plastic chopping board in Japan (MYKITCHEN®), we have developed a number of kitchen utensils under the theme cleanliness and hygiene that meet various needs from commercial to common kitchens, including the Super Heat Resistant Chopping Board, which offers excellent heat resistance and disinfecting qualities.



# Medical

## 27 Packaging materials for medical and pharmaceutical products

### Push-through pack (PTP) packaging materials for pharmaceutical products (SUMILITE®)

These materials help maintain the quality of a wide range of medical equipment and drugs with an emphasis on sanitation and safety.

## 28 Plastic labware for cell culture

### Laboratory ware (SUMILON®)

A wide variety of plastic lab ware for cell culture including dishes, plates, flasks, and cryogenic vials.

## 29 Testing kits

### Bio-related Products (S-BIO®)

S-BIO chips and beads help to reduce waste and lower costs by downsizing and speeding up analysis and testing of biological specimens.

## 30 Medical devices for general surgery

## 31 Medical devices for patient drainage and nutrition management

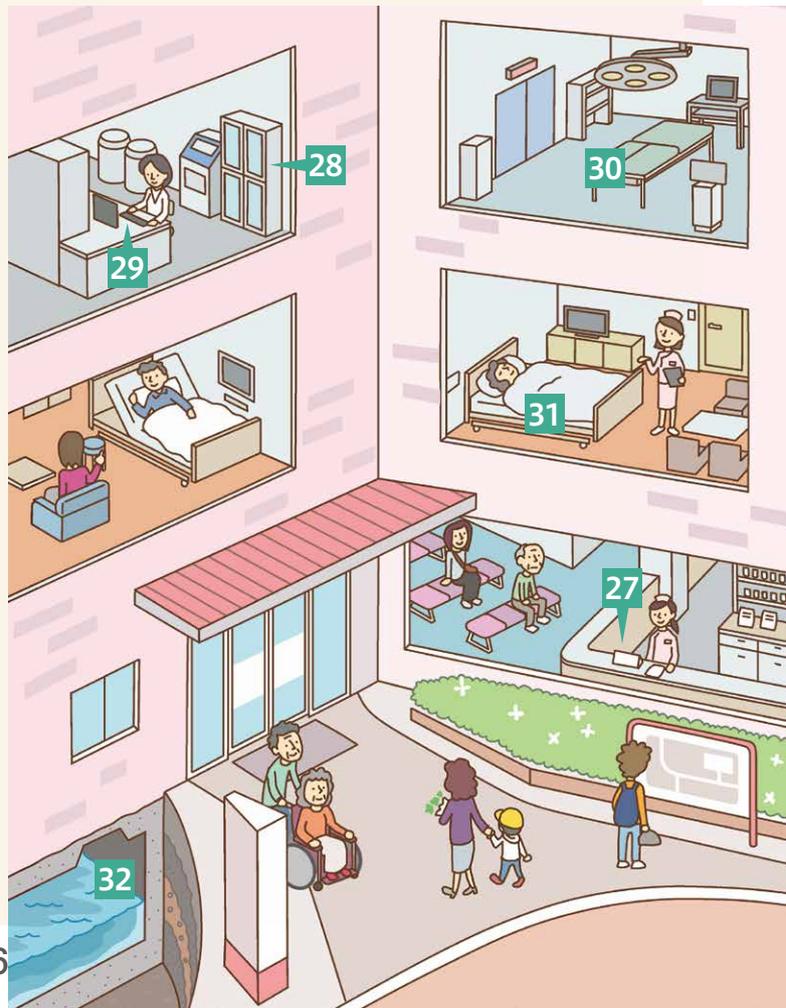
### Medical and Therapeutic Devices (sumius®)

Our medical equipment contributes to safety and reliability in healthcare, supporting everyone's health.

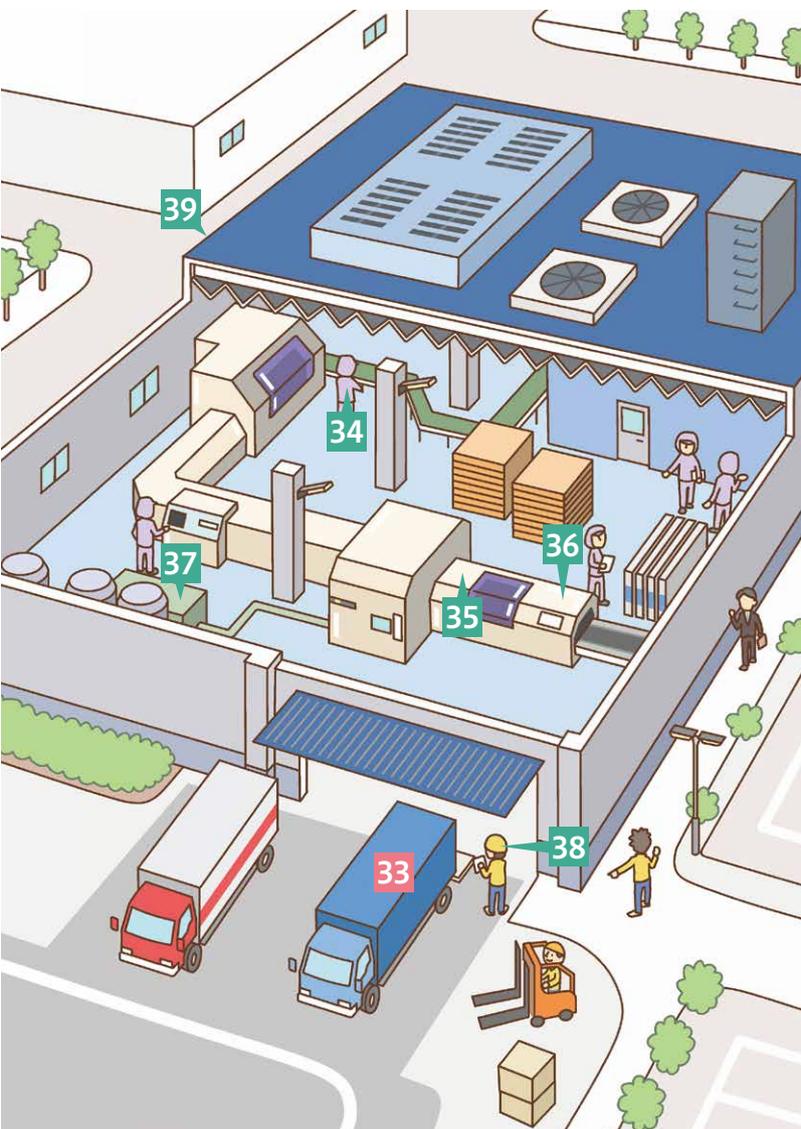
## 32 Energy-saving heat storage tank waterproofing system

### Thermal insulation and waterproofing Sheets & System (for thermal storage tanks of energy conservation systems)

Regenerative heat pumps contribute to energy savings. Our waterproofing and insulation system for heat storage tanks supports the energy saving activities in urban cities.



## Factory



### 33 Purifying water for nitrogen compounds from diesel engine gas exhaust

#### *Diesel Exhausts Fluid (AdBlue)\**

This high purity urea water is used in systems for lowering nitrogen oxide from diesel exhaust, contributing to protecting the environment.

\*AdBlue<sup>®</sup> is a registered trademark of the Association of German Chambers of Commerce and Industry (VDA).



### 34 Manufacturing facility covers, security windows, partitions, etc.

#### *Multilayered Films and Sheets for Industrial Use (SUMILITE<sup>®</sup> CEL)*

Our PVC Heat Resistant Plate offers heat resistance for industrial use, corrosion resistance, and chemical resistance.



### 35 Packaging, transport, and mounting tape for semiconductor parts, etc.

#### *Cover Tapes for mounting semiconductors (SUMILITE<sup>®</sup> CSL)*

Our tape is used for transferring and mounting semiconductors, playing a role in protecting semiconductors from static electricity.



### 36 Wafer adhesive tape used for the dicing process of semiconductor parts

#### *Tape for the dicing process in semiconductor and related field (SUMILITE<sup>®</sup> FSL)*

Tape for the dicing process in semiconductor and related fields. Dicing tape is designed to meet a variety of customers' requirements.



### 37 Manufacturing facility covers, security windows, partitions, etc.

#### *PVC Plate (PVC Heat Resistant Plate)*

These products have excellent corrosion resistance and chemical resistance, are used under high-heated conditions.



### 38 Helmets

#### *Safety Helmets (SUMI HAT<sup>®</sup>)*

Our helmets are used at both factories and plants as well as for disaster relief operations because they offer advanced safety features, comfort and vents.



### 39 Roof waterproofing structures/systems

#### *30-minute Roof Fire Retardant & Waterproofing Method (SUNBRID)*

A light weight and insulating rooftop waterproofing structure made from waterproof sheets with excellent durability and heat shielding performance, which helps conserve energy and lower life cycle costs (LCC).



## Train/Station

### 40 Ceilings, doors, walls, etc.

#### *Aluminum based decorative laminates (ALUMI DECOLA<sup>®</sup>)*

Having flame retardancy, light weight, and design variations, ALUMI DECOLA<sup>®</sup> products are used for interior materials of railway vehicles and busses, and contribute to comfortable spaces of vehicles.



### 41 Armrests and tables for seats

#### *KD, Acrylic-modified PVC Plate*

Having many superior properties such as flame retardancy and impact resistance, these plates are used for various applications such as interior decoration of aerospace transportation and trains.



Special Feature 1

# Thermoset Products to Support Eco-friendly Vehicles of the Future



Our initiatives to develop and produce eco-friendly automobile technology are linked with economic development and global environmental protection, contributing to development goals 7, 8, 9, 11, and 13 of the SDGs.

Combustion test of an engine with phenolic cylinder housing made by our company (Photograph: Fraunhofer ICT)

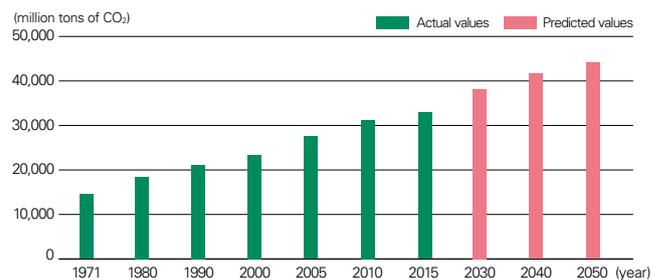
## Towards environmental friendliness for automobiles desired all over the world

Climate change caused by global warming is impacting our lives in various ways, including abnormal weather in different parts of the world and rising sea levels. Reducing CO<sub>2</sub> emissions (Graph 1), which are one of the causes of global warming, is included in the Paris Agreement and SDGs (Sustainable Development Goals) as a shared issue that must be urgently addressed by each country's government and companies. Notably, there is intense attention on making automobiles, which are a major source of CO<sub>2</sub> emissions, environmentally friendly (Graph 2).

The IEA's EPT 2012 2°C Scenario (2DS) (Graph 3) includes estimations of the future around the world based on different powertrains\*<sup>1</sup>. It is predicted that if by 2040 we do not ensure that 80% of vehicles are electric, which includes simple electric vehicles (EV), fuel cell electric vehicles (FCEV), hybrid vehicles with internal combustion engines (HV), and plug-in hybrid vehicles (PHV), the worldwide temperature will rise more than 2°C. Further, by 2050 CO<sub>2</sub> emissions from personal vehicles (Graph 2) are predicted to exceed 9.5 billion tons, and it is expected that this will greatly exceed the 1.7 billion tons that is the COP21 goal. It is calculated that, because countries around the world cannot meet their targets in terms of strengthening emission regulations by 5% each year from 2020, stronger regulations of 8% per year will be necessary. Meanwhile, according to the statistical data (Graph 3), there are many issues with respect to EV,

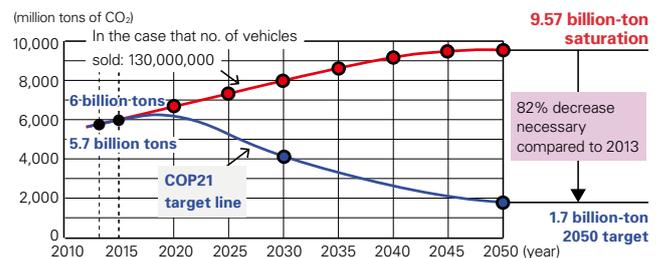
including infrastructure and battery improvement, and it is predicted that, in 2035, the status of vehicles with internal combustion engines, such as those which use gasoline or

### Worldwide CO<sub>2</sub> emissions trends (Graph 1)



Source: "EDMC Handbook of Japan's & World Energy & Economic Statistics 2018," The Energy Conservation Center, Japan

### CO<sub>2</sub> emissions from personal vehicles by 2050 and necessary reductions (Graph 2)

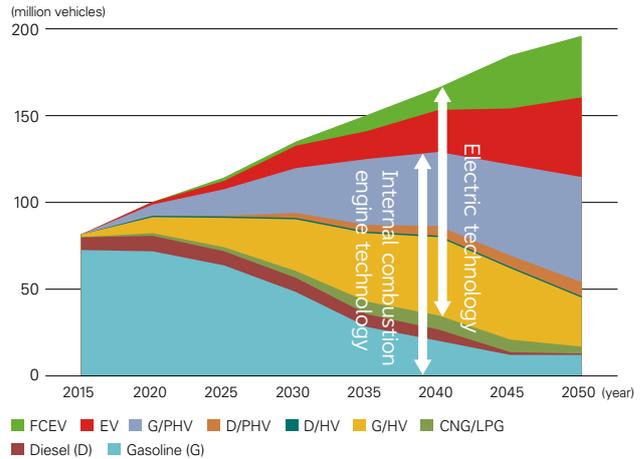


Source: Toshio Fujimura, Guest Professor at the Aichi Institute of Technology

diesel, will not differ much from that of today. We must once again recognize that we are in a situation where CO<sub>2</sub> reduction policies concerning automobiles are now or never. In these circumstances, the move towards electric vehicles has accelerated in China, which is urgently passing measures against serious air pollution, and in Europe due to the impact of the diesel fuel consumption fraud. The environment surrounding automobiles has begun to turn to eco-friendly cars in a big way, with the UK and France announcing that sales of vehicles with internal combustion engines will end in 2040, China introducing the NEV rules\*<sup>2</sup> in 2019, and the ZEV regulation\*<sup>3</sup> of California in the US. Looking 30 or 40 years into the future, eco-friendly automobiles such as electric vehicles, fuel-cell electric vehicles, and vehicles with highly efficient internal combustion engines will surely be mainstream all over the world.

Sumitomo Bakelite is responsible for the research, development, production, and sales of a great variety of materials for automotive components, and is responding to these trends with a global system.

**■ Predicted no. of sales by vehicle (global) / case of 2DS (Graph 3)**



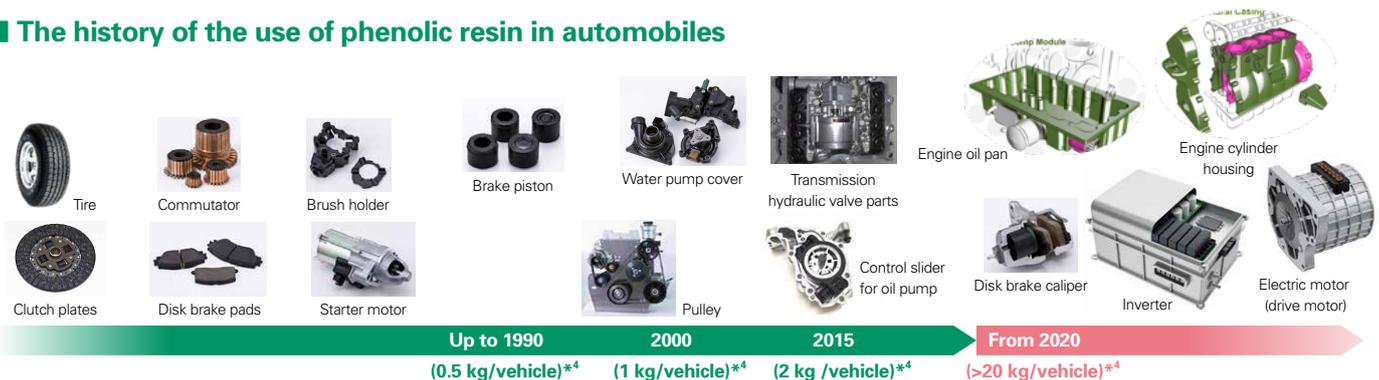
\*1 Powertrain: General term for a device that efficiently sends the rotational energy produced by the engine to the driving wheels  
 \*2 NEV rules: Stands for New Energy Vehicle; these rules promote new energy vehicles in China  
 \*3 ZEV regulation: Stands for Zero Emission Vehicle; exhaust gas regulation in the state of California

## Reducing body weight and improving fuel economy through thermoset resins

Initiatives by automobile and component manufacturers regarding eco-friendly vehicles have at their foundation CO<sub>2</sub> emission reductions, both direct and indirect. Automobile manufacturers have previously engaged in reducing the weight of vehicle bodies and improving the fuel efficiency of the engine, and the need for this has further increased in recent years with the development of electric cars and exhaust gas regulations. For example, the weight of electric vehicles has increased compared to that of vehicles with conventional internal combustion engines due to the inclusion of a large battery. Moreover, a higher-power, long-life battery is needed to increase mileage, and the reality is that with our current technology we must use a large battery. For this reason, discussions about improving battery performance, such as that of solid-state batteries, are moving forward, but on the other hand we also need to reduce the weight of the vehicle body. Using plastic components as alternatives for metal

components in automobiles began in the 1980s, and by around 2010 all possible components that could be made of resin, including those around the engine under the hood and in the vicinity of the brakes, had been replaced. Our company has a track record in making appropriate use of phenolic resin, notably with thermal-load components and components requiring dimensional accuracy. We are currently promoting metal alternatives for parts relating to the bodies of powertrains in eco-friendly vehicles, and for parts that are conventionally required to be metal due to its strength and heat resistance. In order to accomplish this, we have set up "sbDRIVE™", a metal alternative concept for the vehicles of the future, through the development of our original new materials and processing techniques that make use of the advantages of thermoset resins such as phenolic resin and epoxy resin, and are providing various solutions from materials to proposals for resin components.

**■ The history of the use of phenolic resin in automobiles**



\*<sup>4</sup> The weight of phenol within the total weight of an automobile

# The “sbDRIVE™” Concept Developed in Europe Promotes a Reduction in CO<sub>2</sub> from the Automobile Society



Vyncolit NV (Group company of Sumitomo Bakelite)

Vyncolit NV  
Managing Director  
**Peter Vanderstraeteu**



Vyncolit NV  
Chief Innovation Officer  
**Hendrik de Keyser**



The phenolic materials that we produce help to substantially reduce the weight of automobiles, contributing to a cleaner society. Taking the example of internal combustion engine technology, we can make automobiles lighter by combining large, functional components associated with the engine.

Sumitomo Bakelite has created the concept of “sbDRIVE™”. This is a marketing concept that proposes a resin solution for large, heavy automobile components such as engines, electric powertrains, and brake systems, aiming to develop strategic technology in the automobile industry. In addition to our core business of materials development, our sbDRIVE Demo Center has been established at Vyncolit NV (Belgium), where we are focusing our efforts on developing production solutions for commercialization, prototypes, and components. In the sbDRIVE Demo Center, you can create components of up to 3 kg in one go as well as seeing the manufacturing process, completely automated with a robotic function. Customers are able to understand with one glance how we are able to construct a safe production line and provide metal alternatives for larger automobile parts at the sbDRIVE Demo Center.

We also carry out jointly developed product prototyping (creating prototypes for testing), useful for smooth cooperation and communication with customers.

In recent years the electrification of powertrains has been promoted, and “sbDRIVE™” offers further market opportunities and provides new solutions for electric

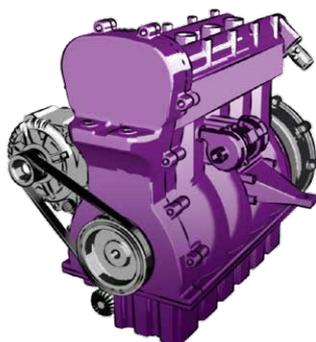
motor housing using sealing technologies for electronic components. We are also in the process of developing a composite solution for brake systems. Composite brake pads could reduce the weight of a single vehicle by over 1 kg. The commonalities of all of our “sbDRIVE™” activities are that they combine knowledge of materials, prototyping, and developing a completely automated production system, and these are developed in cooperation with the automotive industry. We believe that having a development activity “brand” is important for building the Sumitomo Bakelite Group’s identity as a solution provider.



Weighing 500 tons, one of the world’s largest machines for thermoset injection molding (sbDRIVE Demo Center)

The “sbDRIVE™” concept was established a few years ago to create long-term sustainable growth for Sumitomo Bakelite through technology development, along with major automobile manufacturers and component manufacturers in the automotive industry. It is important that we make value creation for our end customers and society the goal of our technology development.

By starting this initiative, we are making our development abilities in the automotive industry well known, and differentiating ourselves from conventional application development.

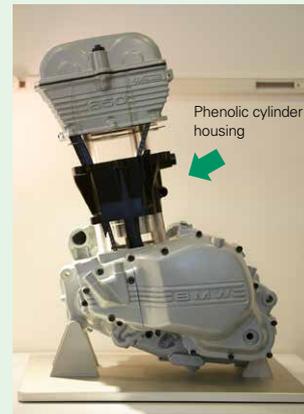


The TM2 Concept, an engine concept made from thermoset resin conceived by Vyncolit NV

## Example of joint development Development of a plastic motorcycle engine

Sumitomo Bakelite has developed a plastic motorcycle engine with Fraunhofer ICT. It uses a cylinder housing made of glass-fiber reinforced phenolic molding compounds, resistant against loads, wear, fuel, and coolant, which will be implemented as part of a single-cylinder motorcycle engine from BMW. The results of performance experiments offer proof that this engine is not inferior to conventional aluminum engines in terms of performance. In addition, it is around 20% lighter, noise and heat are suppressed, and the manufacturing costs are lower.

Sumitomo Bakelite and the Fraunhofer ICT exchanged a comprehensive tie-up agreement relating to the creation of resin automobile components in 2017. Based on the agreement, a variety of research and development teams are being started, including those at Vyncolit NV. In the future, we will promote research in order to develop and make use of materials that can demonstrate excellent functionality in terms of the environmental friendliness, with a focus on electric vehicles.



BMW single-cylinder engine for a motorcycle

### Comment from our collaborator



Fraunhofer Institute for Chemical Technology (ICT)  
New Drivetrain Project Group  
Hybrid Drive and Electric Mobility Area Manager  
Doctor of Engineering

**Lars Fredrik Berg**

#### Q What do you think about phenolic materials as materials for engines?

We believe that introducing thermoset materials such as phenolic resins for components that are exposed to high heat underneath the hood of a car is the key to expanding the use of resin composite materials.

This is because phenolic composite materials can meet the levels of mechanical strength, heat resistance, and chemical resistance needed for the components of an automotive engine. It is also suited for producing large-capacity components, and is cost competitive when compared to light-weight alloys.

#### Q Why are you cooperating with Vyncolit NV ?

Fraunhofer is always seeking partners with whom to carry out innovative research and development activities.

In 2012, we had a plan where we officially announced resin engine blocks. At that time, people in the automotive industry thought that it was impossible to realize this, but Vyncolit NV alone clearly demonstrated the possibility, and so we decided to work with them.

#### Q What do you think about Vyncolit NV as a partner?

Our cooperation with Vyncolit NV has been ideal when it comes to furthering our core competence (competitive advantage).

Having made Vyncolit NV our partner, we have been able to jointly cover the whole development chain, from developing materials to evaluating components while approaching potential customers, and we know that this partnership is beneficial to us.

### Fraunhofer ICT

This organization has 72 institutes and independent research units in Germany, and is the largest organization for applied research in Europe. Research of practical utility is at the heart of the practical research carried out by the Fraunhofer ICT in a variety of scientific and technology fields.



# Contributing to the Promotion of Eco-friendly Cars with a Global Research and Development Network

## High Performance Plastic Technology Development Laboratory



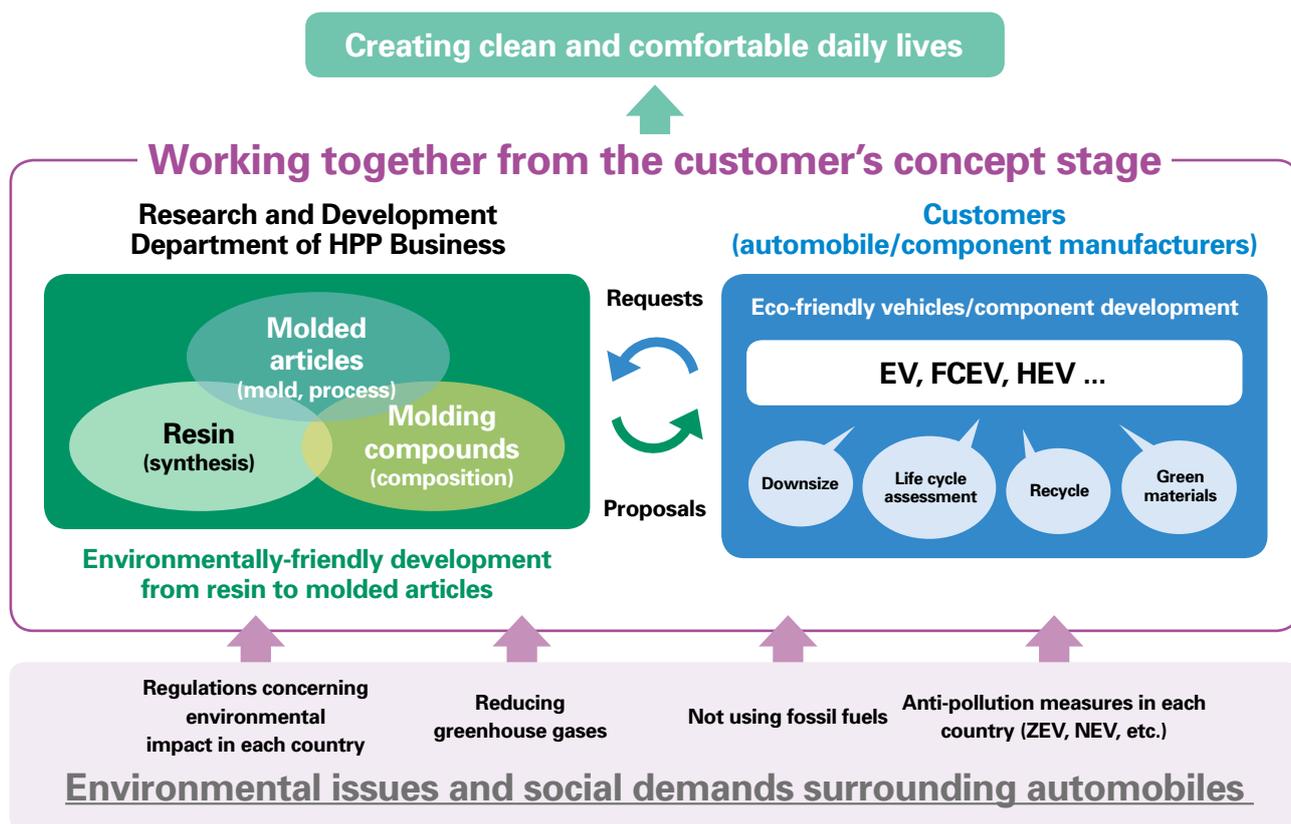
High Performance Plastic Technology Development Laboratory  
Deputy Director  
**Hidemi Yazawa**



With initiatives and rising demands for global environmental friendliness in the background, various countries and automobile manufacturers have rapidly advanced the development of eco-friendly vehicles in recent years. In these circumstances, Sumitomo Bakelite is carrying out technology development, mainly centered on Japanese research, that will contribute to environmental friendliness in the near future by sharing information and coordinating technologies with bases around the world. Notably, in Europe, which is leading the development of electric cars, we are verifying the practical use of the potential of a next-generation resin engine made by Vyncolit NV, part of the Sumitomo Bakelite

Group, with cooperation from the Fraunhofer ICT. In addition to demonstrating the high potential of realizing a substantial weight reduction and improving fuel efficiency, we have also proven that this engine is wonderfully quiet. The results of this verification have had repercussions all over the world. We are also exploring this at the High Performance Plastic (HPP) Technology Development Laboratory in Japan, and Japanese automobile manufacturers have expressed very keen interest in the proposed technologies that will reduce weight and improve fuel efficiency. The technology of the next-generation resin engine is not only being applied to engines; there is also the potential to use it for new powertrains such as the electric

### Initiatives for environmental friendliness in the Research and Development Department of HPP Business

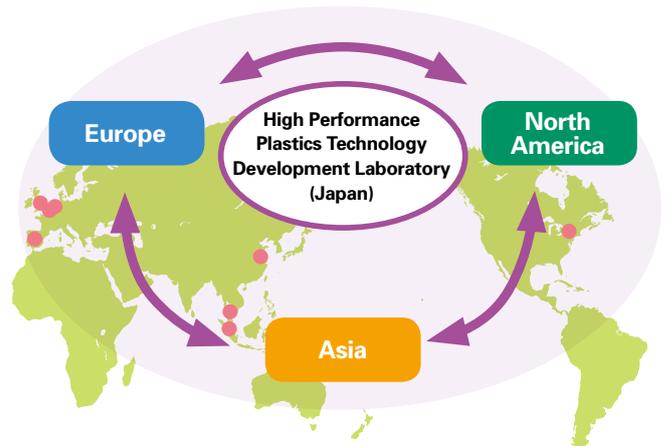


motors indispensable to electric cars, inverters, and the steps to modularize these. Our thermoset materials are useful as a reduced weight technology that makes use of the electrical insulation properties unique to resin. We are spreading information from Japan to the world about the alternative uses of these accumulated technologies in electric vehicles, and are promoting its use in next-generation eco-friendly vehicles. We believe that, many years in the future, eco-friendly vehicles that use reduced weight technologies will be in active use the world over.

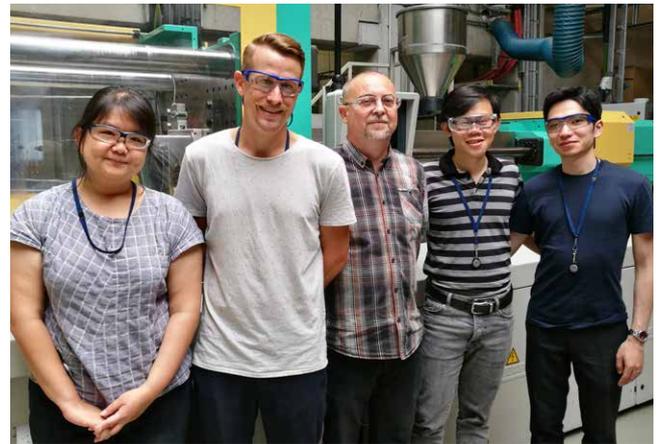
In terms of the development of conventional automotive components, as resin manufacturers, we are developing efficient materials that are requested by our customers, with most of these limited to supply. However, the most recent need for reduced weight means that there are many components that are difficult to simply exchange for other materials.

Sumitomo Bakelite has advanced technology development and expertise with an established track record in phenolic resin, molding compounds, and molded parts. This expertise is applied and used to its full extent, making it possible to come up with new solutions. By taking part from the concept stage of the development of the customer's product, we are able to develop the most appropriate resin and compounds; we are also able to propose new solutions, from suggestions for shapes that fully make use of the resin materials to processing methods, from the unique perspective of a resin manufacturer with expertise in metal alternatives gathered over a long period of time, and are creating metal alternatives in cooperation with customers. We will continue to make use of our global support system while meeting the expectations of customers and markets in each of our research laboratories around the world, striving to create products that will contribute to the wider environment and society, including the automotive industry.

## ■ HPP Business Research and Development Department's Global Network



**Our global network is formed with technology developed and disseminated by Japanese R&D at its core**



Electric automobile motor development engineers and marketing members

## Sumitomo Bakelite's Future Mission for the Environment

As we stated above, there is a tendency for electric vehicles to have increased weight when compared to vehicles with conventional internal combustion engines, due to the increased number of electronic components and battery. In order to offset this, we are implementing a proposal to increase the number of components made of metal alternatives. Up until now, many of the components that are made of resin and have reduced weight are palm-sized, and phenolic resin components inside an automobile weigh around 0.5 kg to 2 kg. Sumitomo Bakelite is aiming to increase this to 20 kg to 50 kg, contributing to the reduction of CO<sub>2</sub> and increased fuel efficiency by reducing the weight of automobiles.

In Europe, we have been able to develop technologies that we would not have been able to achieve alone by joining consortiums in different fields. We have also been able to discover the potential of applying resin materials to

components that were lumps of metal, for example engines, electric motors, transmissions, brake systems, power control units, and inverters. The Sumitomo Bakelite Group is playing a part in environmentally-friendly automobile manufacturing, along with automotive and component manufacturers in not only Japan but also in Europe, America, and China.



# Helping to Maintain the Freshness of Produce and Reduce Environmental Impacts with P-Plus®



We contribute to the SDGs through the reduction of food-waste, increasing the added value of agricultural products, preserving necessary nutrients, making impossible imports and exports possible, increasing agricultural productivity, and ensuring safety by preventing corruption.

Our company's freshness-preserving film P-Plus® helps to improve distribution and product appeal by retaining the freshness of fruits and vegetables for an extended period of time, and delaying degradation. This is achieved by keeping the product in a state of "hibernation" (a state of equilibrium with reduced breathing).

This means that products can be switched from styrene foam packaging to cardboard boxes, contributing to the resolution of problems with waste due to lighter and more compact packaging. This can also reduce food loss with the extended period of quality maintenance thanks to functional improvements in packaging and containers, contributing to the reduction of environmental burdens in terms of the lifecycle of fruits and vegetables.

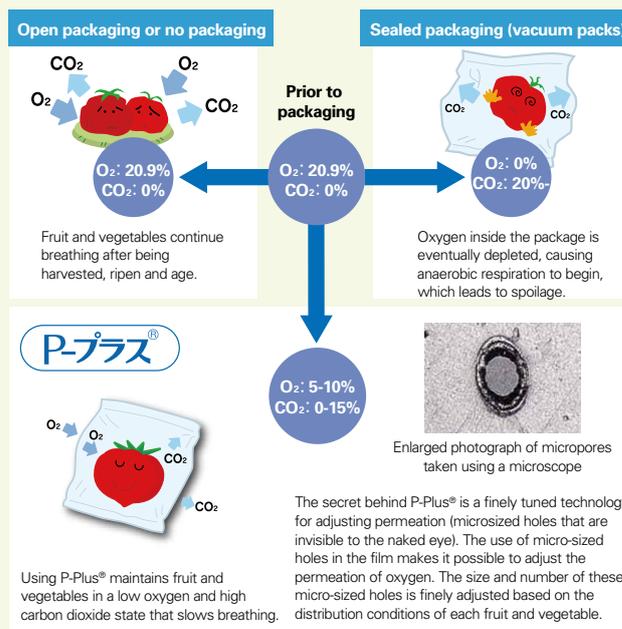
P-Plus® is not only used in areas across Japan to transport their

Cut vegetables

Zipper bags for home use



typical fruits and vegetables, in recent years it has been adopted for overseas exports and distribution between foreign countries. It is also used for packaging cut vegetables, and you can buy zipper bags for use at home.



## P-Plus® is being used to ship fruits and vegetables grown in every corner of Japan

### Wakayama Prefecture Tanabe Chuo Seika

#### Nanko Plums



Tanabe Chuo Seika has continued to use P-Plus® for more than 20 years, since it was first sold. Plums begin to lose their freshness from the moment they are harvested, meaning that if you ship them in regular OPP anti-fog bags they turn yellow before you know it. With P-Plus®, in addition to keeping their green color, the quality of the fruit can also be maintained.

### Saga Prefecture Earth Mind Ima-ri

#### Paprika



Earth Mind Ima-ri uses P-Plus® because these are fully ripe Japan-grown paprika, and they want to deliver them to consumers having preserved their rich nutrients and characteristic sweetness and juiciness. To maintain the quality of these paprika, grown using exacting farming methods, P-Plus® is indispensable.

### Akita Prefecture JA Akita-Obako Edamame Group

#### Edamame



Edamame is an important crop that everyone involved in farming in Akita Prefecture is focused on together. However, they don't keep well, and they must be transported over long distances to reach the metropolitan areas, their main market, creating a problem with deterioration. When P-Plus® was introduced, the period for which they maintain their freshness increased a great deal, and JA Akita-Obako is now able to deliver delicious edamame.



New product mascot called P-Plus Man was created. He makes vegetables fresh.



Look for the following logo



Every month, we cover topics related to fruits and vegetables on our corporate website as part of "This month's P-Plus produce" page.

Link → <http://www.sumibe.co.jp/product/p-plus/topics/>

# Highlights of Fiscal 2017 Activities

Our group aims to deliver safety and reliability as well as achieve harmony with the environment and co-existence with society.

We are working to contribute to the realization of a sustainable society by resolving various issues facing society through our businesses, including energy issues and environmental issues, linking all our activities to the SDGs. Toward that end, we carry out activities focused on social issues and businesses in need of attention in a steady manner while establishing plans and targets.

○: Target attained △: Target not attained (but improvement over the previous fiscal year)  
▼: Target not attained (deterioration from the previous fiscal year)

| Area of activities   | Major items   | Fiscal 2017 targets  | Fiscal 2017 results   | Fiscal 2018 plan   | Achievement evaluation | Relevant SDGS   | Related page  |
|--|---|--|---|--|------------------------|---|---------------|
| <b>Themes related to the promotion of harmony with the environment</b> |   |  |   |  |                        |   |               |
| 1. Environmental initiatives   | Reduction in CO <sub>2</sub> emissions (compared with fiscal 2005)  | In Japan: 38% reduction  | In Japan: 39% reduction   | In Japan: 39% reduction  | ○                      | <br><br> | 39            |
|  |   | Overseas: 22% reduction  | Overseas: 13% reduction   | Overseas: 18% reduction  | ▼                      |   | 39            |
|  | Reduction in material loss (compared with fiscal 2005)  | In Japan: 38% reduction  | In Japan: 33% reduction   | In Japan: 37% reduction  | ▼                      |   | 39            |
|  |   | Overseas: 50% reduction  | Overseas: 42% reduction   | Overseas: 46% reduction  | ▼                      |   | 39            |
|  | Reduction in chemical substance emissions(In Japan: compared with fiscal 2005)(Overseas: compared with fiscal 2010) | In Japan: 74% reduction  | In Japan: 67% reduction   | In Japan: 68% reduction  | ▼                      |   | 39            |
| Overseas: 64% reduction  |   | Overseas: 49% reduction  | Overseas: 49% reduction   | ▼  | 39                     |   |               |
| 2. Resource conservation, energy saving                                | Energy saving activities  | <ul style="list-style-type: none"> <li>As in fiscal 2016, establish an energy conservation plan in Japan and overseas, and continue to roll out good practices.</li> </ul> | <ul style="list-style-type: none"> <li>In Japan, reduced energy usage by 2,758 kL of crude oil equivalent after implementing specific proposals.</li> <li>Overseas, continued to roll out good practices</li> </ul> | <ul style="list-style-type: none"> <li>As in fiscal 2017, establish an energy conservation plan in Japan and overseas, and continue to roll out good practices with cooperation from Japanese mother plants and secretariats.</li> </ul> | ○                      |    | 36            |
| <b>Themes for providing safety and reliability</b>                     |   |  |   |  |                        |   |               |
| 3. Safety and security   | Prevention of industrial accidents  | Number of lost-time accidents In Japan: 0  | In Japan: 3   | In Japan: 2  | △                      |    | 45            |
|  |   | Number of lost-time accidents Overseas: under 14   | Overseas: 25  | Overseas: 13   | △                      |   | 46            |
|  | Security and disaster prevention  | <ul style="list-style-type: none"> <li>Conduct systematic safety training and disaster prevention training</li> </ul>  | <ul style="list-style-type: none"> <li>Conducted rank-based safety training and disaster training at each business site</li> </ul>  | <ul style="list-style-type: none"> <li>Conduct systematic safety training and disaster prevention training</li> </ul>  | ○                      |   | 44<br>•<br>46 |
| 4. Chemical Substance Management                                       | Chemical Substance Management   | <ul style="list-style-type: none"> <li>Prepare SDS*<sup>1</sup> for legislation</li> </ul>   | <ul style="list-style-type: none"> <li>Complied with Mexican GHS*<sup>2</sup></li> <li>Created new SDS formats for Myanmar, Slovakia, Denmark, and Sweden</li> </ul>  | <ul style="list-style-type: none"> <li>Prepare SDS*<sup>1</sup> for legislation</li> </ul>   | ○                      |    | 47            |
| 5. Product liability   | 'Monozukuri' Audit  | <ul style="list-style-type: none"> <li>Carry out 'Monozukuri' Audit, combining SBPS*<sup>3</sup>, EHS and QA at major production bases inside and outside Japan</li> </ul> | In Japan: Carried out in six main business sites<br>Overseas: Carried out in four business sites in North America   | In Japan: Carry out in nine business sites under our direct control and belonging to affiliated companies<br>Overseas: Specify priority business sites in China and South-east Asia  | ○                      |    | 50            |

| Area of activities                         | Major items  | Fiscal 2017 targets   | Fiscal 2017 results  | Fiscal 2018 plan   | Achievement evaluation | Relevant SDGS   | Related page  |
|--|--|---|--|--|------------------------|---|---------------|
| <b>Themes that affect society</b>          |  |   |  |  |                        |   |               |
| 6. Biodiversity                            | Conservation Biotope                                       | <ul style="list-style-type: none"> <li>Continue with self-led conservation activities</li> <li>Open to public and begin communicating externally</li> </ul>   | <ul style="list-style-type: none"> <li>Added business-site beautification to conventional maintenance as self-led conservation, implemented as whole-site activities</li> <li>Visited by 428 people when made open to public. Continued offering killifish externally and carried out experience-based learning</li> </ul> | <ul style="list-style-type: none"> <li>Continue with self-led conservation activities</li> <li>Open to public and begin communicating externally</li> </ul>  | ○                      |    | 61            |
|  | Initiatives to preserve forest ecosystems                  | <ul style="list-style-type: none"> <li>Continue to support forest thinning projects in Iwate Prefecture by mainly using "Paper Products that Contribute to Forest Thinning Efforts" (Morino Chonai-Kai (Forest Neighborhood Association))</li> </ul>  | <ul style="list-style-type: none"> <li>Used 6,064 kg of Morino Chonai-Kai paper and contributed to promoting the thinning of 0.42 ha</li> </ul>  | <ul style="list-style-type: none"> <li>Continue to support forest thinning projects in Iwate Prefecture by mainly using "Paper Products that Contribute to Forest Thinning Efforts" (Morino Chonai-Kai (Forest Neighborhood Association))</li> </ul>   | ○                      |   | 62            |
| 7. Improvement of stakeholder satisfaction | Improvement of customer satisfaction                       | <ul style="list-style-type: none"> <li>Carry out activities to strengthen ties with customers under the leadership of the companywide CS Promotion Committee</li> <li>Carry out activities to improve hospitality for customers at business sites</li> </ul>  | <ul style="list-style-type: none"> <li>Began One Sumibe Activities. Formed teams that carry out business laterally, deepened relationship with customers through marketing activities for company-wide products</li> </ul>   | <ul style="list-style-type: none"> <li>Implement education to spread the One Sumibe Activities internally, and disseminate them through the company</li> </ul>   | ○                      |    | 51            |
|  | Communicating corporate information, advertising           | <ul style="list-style-type: none"> <li>Promote preparation of content that helps customers understand our products</li> </ul>   | <ul style="list-style-type: none"> <li>Installed a new advert at Jingu Stadium</li> <li>Approved for invitation to the Expo 2025</li> <li>Made partnership agreement with the Japan Inclusive Football Federation</li> </ul>   | <ul style="list-style-type: none"> <li>Promote preparation of content that helps customers understand our products easier</li> </ul>   | ○                      |   | 51            |
|  | Development of products that contribute to the environment | <ul style="list-style-type: none"> <li>Continue to increase sales of environmentally friendly products</li> <li>Expand evaluations on the environmental contributions of existing products</li> <li>Promote development of R&amp;D products with a large contribution to the environment</li> </ul> | <ul style="list-style-type: none"> <li>Increased sales ratio: 41.3% to 43.7%</li> </ul>  | <ul style="list-style-type: none"> <li>Continue to increase sales of environmentally friendly products</li> <li>Expand evaluations on the environmental contributions of existing products</li> <li>Promote development of R&amp;D products with a large contribution to the environment</li> </ul>  | ○                      |   | 29<br>•<br>36 |
| 8. Human resource training                 | Internal human resource training                           | <ul style="list-style-type: none"> <li>Continue to carry out employee training at SB School*4</li> </ul>  | <ul style="list-style-type: none"> <li>About 17,000 employees took part, representing about 26,000 hours of training</li> </ul>  | <ul style="list-style-type: none"> <li>Continue to carry out employee training at SB School*4</li> </ul>   | ○                      |  | 55<br>•<br>56 |
|  | Women's empowerment  | <ul style="list-style-type: none"> <li>Expand and conduct training programs for female managers</li> </ul>  | <ul style="list-style-type: none"> <li>Sent three female managers to external seminars</li> </ul>  | <ul style="list-style-type: none"> <li>Continue training programs for female managers</li> <li>Conduct team-building programs that take diversity into account</li> <li>Conduct human rights education to prevent harassment</li> </ul>  | ○                      |  | 53            |
| 9. Diversity, Work-life balance            | Employment of people with disabilities                     | <ul style="list-style-type: none"> <li>Employment rate of people with disabilities: 2.0% level</li> </ul>   | <ul style="list-style-type: none"> <li>Employment rate of people with disabilities: 2.17%</li> </ul>   | <ul style="list-style-type: none"> <li>Employment rate of people with disabilities: maintain at 2.2% level</li> </ul>  | ○                      |   | 53            |
|  | Work style reform  | <ul style="list-style-type: none"> <li>Support so that staff can work and raise children/provide nursing care</li> </ul>  | <ul style="list-style-type: none"> <li>A 100% rate of returning to work after taking childcare leave or nursing care leave (In fiscal 2017, people who took childcare leave: 6; people who took nursing care leave: 0)</li> </ul>  | <ul style="list-style-type: none"> <li>Discussing effective measures to reduce overtime work and disseminating them throughout the company</li> <li>Support so that staff can work and raise children/provide nursing care</li> </ul>  | ○                      |  | 54            |
|  | Promoting employee health                                  | <ul style="list-style-type: none"> <li>Implement initiatives to prevent worsening of illnesses as part of the Data Health Plan</li> </ul>   | <ul style="list-style-type: none"> <li>Implemented Data Health Plan (preventing the worsening of illnesses) in our company and certain Japanese affiliated companies</li> </ul>  | <ul style="list-style-type: none"> <li>Continue implementing the Data Health Plan (preventing the worsening of illnesses) (in our company and certain Japanese affiliated companies)</li> </ul>  | ○                      |  | 59            |
| <b>Fundamental Themes</b>                  |  |   |  |  |                        |   |               |
| 10. CSR procurement                        | Practice of CSR procurement                                | <ul style="list-style-type: none"> <li>Request improvements to suppliers based on the results of the CSR survey</li> </ul>  | <ul style="list-style-type: none"> <li>Following results of the CSR survey, sent requests for improvements to two companies who are below standard, who complied with improvements</li> </ul>  | <ul style="list-style-type: none"> <li>Carry out the CSR survey on business partners who were not covered in the fiscal 2016 survey, carried each raw material used in products that make up more than 80% of sales, and special materials.</li> <li>Request improvements to business partners based on the results of the CSR survey</li> </ul> | ○                      |  | 35            |
| 11. Compliance                             | Practice of compliance                                     | <ul style="list-style-type: none"> <li>Publish revised version of the booklet "Our Group's Code of Business Ethics and Conduct"</li> <li>Promote activities that raise awareness about compliance</li> </ul>  | <ul style="list-style-type: none"> <li>Published revised version of "Our Group's Code of Business Ethics and Conduct" (in seven languages)</li> <li>Implemented activities that raised awareness of compliance during the month of emphasis</li> </ul>   | <ul style="list-style-type: none"> <li>Promote activities that raise awareness of compliance (including prevention of bribery and cartels, security export control, and protection of personal information)</li> </ul>   | ○                      |  | 32<br>•<br>33 |

\*1,2 See the glossary on page 78.

\*3 SBPS is an acronym for "Sumitomo Bakelite Production System." These activities ensure the necessary revenue and safety (people, facilities, environment, quality) for our company's continued development. They are the same as our daily business: deciding upon a concrete aim (value, quantity, delivery time), planning who will complete each of these and by when, and carrying it out without delay.

\*4 SB School is the name of an in-house training institute for all employees, from new hires to executive officers.

# Business Policy and CSR

## The Sumitomo Business Philosophy and Sumitomo Bakelite Group Business Philosophy

We have inherited Sumitomo's Business Philosophy, passed down by the Sumitomo family, which has supported the Sumitomo Group for four centuries. The origins of this philosophy are found in the Monjuin Shiigaki (the Founder's Precepts), a document written by Sumitomo family founder Masatomo Sumitomo. Approximately 400 years ago, Sumitomo (Monjuin) wrote to his family about business wisdom, urging at the beginning, "Strive with all your heart, not only in business, but in all situations."

The rigorous efforts and honesty demanded by the Monjuin Shiigaki as well as other personal character-building precepts continue to form the foundation of the Sumitomo Group's Business Philosophy and make up the basis of our fundamental policy.



Monjuin Shiigaki

[Link](#) → [Sumitomo Group Public Affairs Committee](#)

### Business Philosophy of Sumitomo Bakelite Group (Company Policy)

The Business Philosophy of the Sumitomo Bakelite Group, demonstrating our management principles, is as follows:

#### Business Philosophy

**Our company places prime importance on trust and sureness, and shall commit itself to contributing to the progress of society and enhancement of people's welfare and livelihood through its business activities.**

This Business Philosophy is in line with the abovementioned Sumitomo Group's Business Philosophy, and this Business Philosophy connotes the followings:

1. We value trust and confidence of all concerned and endeavor to meet all the expectations given to us as an entity under the name of Sumitomo.
2. We take steadfast steps in managing our Group without pursuing speculative profit.
3. We make contributions to prosperity of the nation and improvement of people's life through our business activities of research, development, production and sales of creative and innovative plastics.

[Link](#) → [Guiding Principles](#)

### Our Code of Conduct (Code of Ethics)

#### Our Code of Conduct

1. We provide products and services designed from the viewpoints of social benefit as well as customer satisfaction on which we place highest priority.
2. We endeavor to improve business performance of the Group of Sumitomo Bakelite Co., Ltd. from a global perspective.
3. We observe corporate ethics, abide by all applicable laws and regulations as well as our internal rules, and, above all, value fairness and transparency in our business activities.
4. We place importance on safety, and voluntarily take actions for environmental protection.
5. We honor and respect each individual's personality and rights, and make efforts to create amicable and lively workplaces.

### Management Policy of Sumitomo Bakelite Group

To become an excellent global enterprise that helps enhance customer value through creating plastics with more sophisticated functions, and achieving sustainable growth in the advanced chemical products sector.

## Policy on Responsible Care Activities\*<sup>1</sup> of Sumitomo Bakelite Group

### Philosophy

In all its operations, Sumitomo Bakelite Co., Ltd. will contribute to the sustainable development of society while promoting business activities by meeting the highest standards of the Responsible Care concept and giving due consideration to environmental preservation, human health and safety as well as product quality.

### Policy

1. Evaluate the safety, health, and environmental aspects throughout the entire life cycle of a product, from product design to the procurement of raw materials through disposal, strive to minimize the environmental impact of our corporate activities, and undertake to develop safer products and technologies;
2. Make sustained, group-wide efforts to promote resource and energy conservation, waste reduction and biodiversity conservation;
3. Perform Environmental, Safety & Health Audit and Quality Assurance Audit as well as work to maintain and improve systems for managing environmental protection, safety promotion and disaster prevention, worker safety and health, and quality management;
4. Comply with all relevant laws, regulations and agreements associated with safety, health, the environment, and chemicals

while autonomously establishing administrative rules with the aim of strengthening management capacity, so as to improve environmental, health and safety conditions for society, customers, and employees;

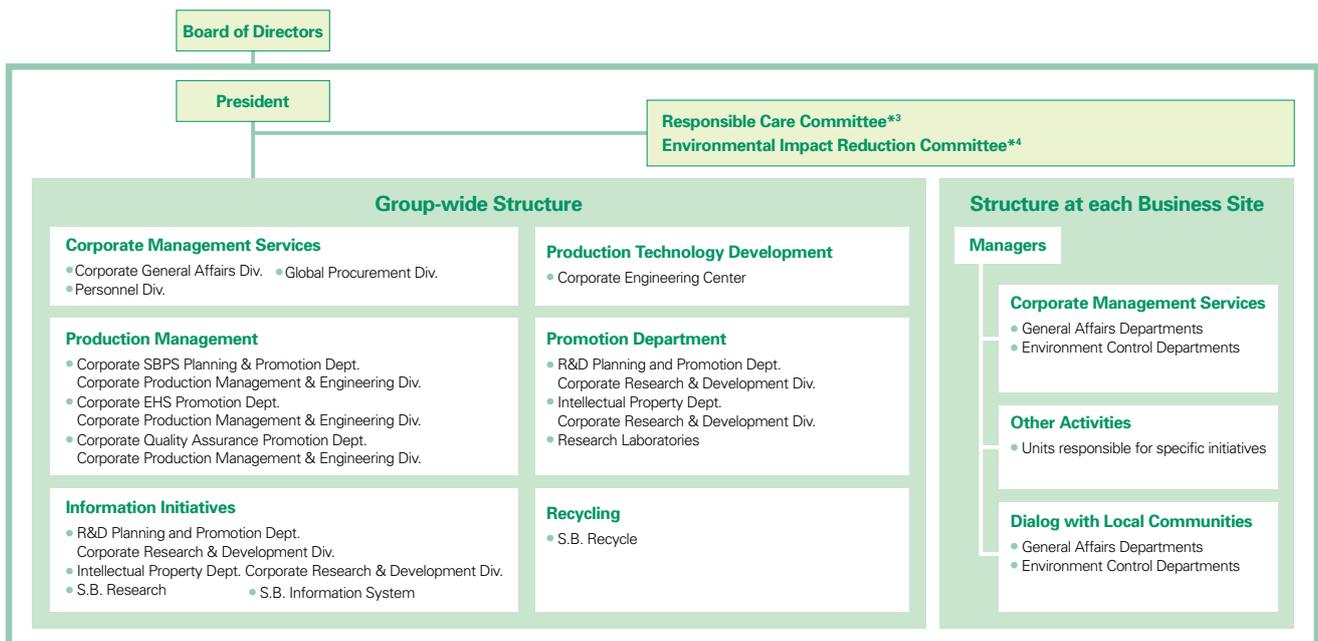
5. Work to ensure and improve the safety of raw materials, products, transportation operations and process safety, and provide product safety information to employees, customers, and others;
6. Promote continuous improvement in security over facilities, processes and technologies, and implement operational safety management programs to ensure the safety and health of employees and residents of local communities;
7. Publicly disclose information on the environment, safety and products to and promote dialog with interested parties such as customers, employees and residents of local communities, so as to identify their needs and deepen mutual understanding and trusting relationship;
8. In order to ensure environmental preservation, human health and safety as well as product quality, provide employees with training to develop necessary human resources for that end.

\*1 Established in August 2015. These policies were newly established by revising the Corporate Policies for Safety and the Environment in line with the amendment of the Responsible Care Global Charter.

## CSR Promotion Structure

Our company's structure for promoting CSR activities centers on the Responsible Care\*<sup>2</sup> concept. Centered on activities of the Responsible Care Committee and Environmental Impact Reduction Committee, it engages in various activities through Group-wide

cooperation that involves all functions including the head office, administrative divisions, research and development teams, and all business sites.



\*2 Responsible care means that companies should work to secure the environment, safety, and health in all of their corporate activities from the development of chemical substances through production, distribution, usage, final consumption, disposal, and recycling. They should also make information publicly available on the results of their activities and implement measures to promote dialog and communication with the community. (Japan Chemical Industry Association)

\*3 Chaired by the officer overseeing the Corporate Production Management & Engineering Div., this committee meets twice each year. It has the objective of promoting Responsible Care activities related to the Company's business operations.

\*4 Chaired by the officer overseeing the Corporate Production Management & Engineering Div., this committee has two subcommittees—the Life Cycle Committee and Energy Conservation Committee. It meets once or twice each year. Its subcommittees meet twice each year. Our goals are to promote the reduction of environmental impact caused by our product life cycles and the conservation of energy and resources at our production plants.

# Corporate Data

|  |  |
|--|--|
| Name                                       | Sumitomo Bakelite Co., Ltd.  |
| Head Office                                | 5-8 Higashi-Shinagawa 2-chome, Shinagawa-ku, Tokyo 140-0002, Japan |
| President                                  | Kazuhiko Fujiwara  |
| Established                                | January 25, 1932   |
| Capital                                    | ¥37.1 billion (as of March 31, 2018)                               |
| Number of Shareholders                     | 11,674 (as of March 31, 2018)                                      |
| Stock Listing (as of March 31, 2018)       | Tokyo Stock Exchange, First Section                                |
| Number of Employees (as of March 31, 2018) | 1,676 (non-consolidated)<br>5,708 (consolidated)                   |
| Net Sales (as of March 31, 2018)           | ¥90.2 billion (non-consolidated)<br>¥211.8 billion (consolidated)  |

## Major Products by Division

### Semiconductor Materials

- Epoxy molding compounds for encapsulation of semiconductor devices
- Photosensitive coating resin for semiconductor wafers
- Liquid resins for semiconductor devices
- Substrate materials for semiconductor packages

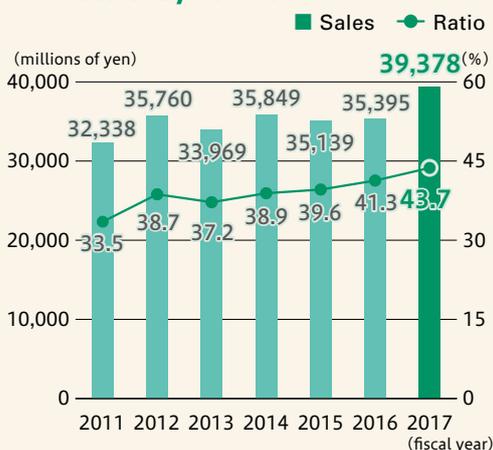
### High-Performance Plastics

- Phenolic molding compounds
- Phenolic resins
- Precision molded products
- Synthetic resin adhesives
- Phenolic resin copper-clad laminates
- Epoxy resin copper-clad laminates
- Aircraft interior components

### Quality of Life Products

- Medical products
- Vinyl resin sheets and multilayer sheets
- Freshness preserving films
- Melamine decorative laminates and fireproof decorative laminates
- Polycarbonate resin plates
- PVC resin plates
- Design and contracting of waterproofing work
- Biotechnology related products

## Sales of Environmentally Friendly Products



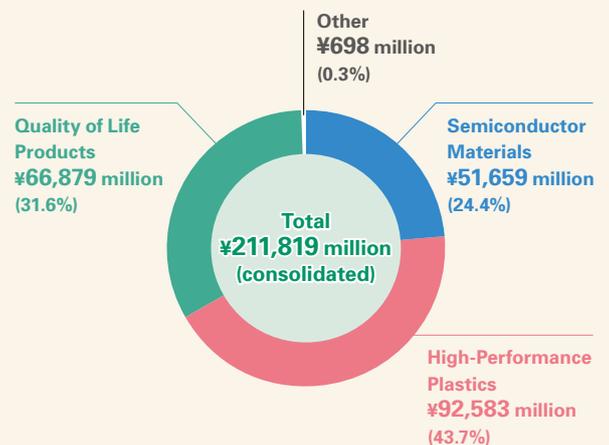
### Definition

Environmentally friendly products means products contributing directly or indirectly to reduction of environmental impacts, including resource saving, waste reduction, prevention of environmental pollution, energy saving, and reduction of greenhouse gas emissions, at the Company, for users, or in society.

### Method of certification

- Regarding existing products or developed or improved products contributing to reduction of environmental impacts, through discussion with divisions, an internal screening committee will review such products, and if it is considered to be appropriate, such products will be certified as environmentally friendly products.
- Regarding products whose environmental performance is to be publicized, those satisfying the following conditions will be certified as environmentally friendly products.
  - a) Reduction of CO<sub>2</sub>-equivalent emissions by 10% or more
  - b) Reduction impact is objectively assessed by internal LCA review.

## Fiscal 2017 Sales Composition by Division (Consolidated)



## Relationships with Stakeholders

The stakeholders of our group are the same as those defined in the Corporate Governance Code, complying with the Corporate Governance Code of the Tokyo Stock Exchange, as resolved by the Board of Directors. There have not been any major concerns up to this point; our group values our relationship with all our stakeholders, and we promote our business while engaging with them. Those stakeholders with whom we engage are those linked to the materiality items of our Group (p.13).

### Customers

#### Main Responsibilities

The Group works in good faith to live up to its responsibilities related to such issues as product quality, delivery dates, and prices as well as to quickly respond to customer needs. To achieve this, we have established the CS Committee, which continuously endeavors to enhance customer satisfaction.

#### Main Methods of Communication

- Communication through the conduct of daily business
- Quality assurance support
- Exchange of information through trade shows, etc.
- Provision of information through our website and customer support.

### Shareholders

#### Main Responsibilities

The Group is committed to distributing appropriate dividends and is taking steps to disclose all relevant information. To attain these goals, we are increasing the rigor of corporate governance, and ensuring the timely disclosure of relevant information.

#### Main Methods of Communication

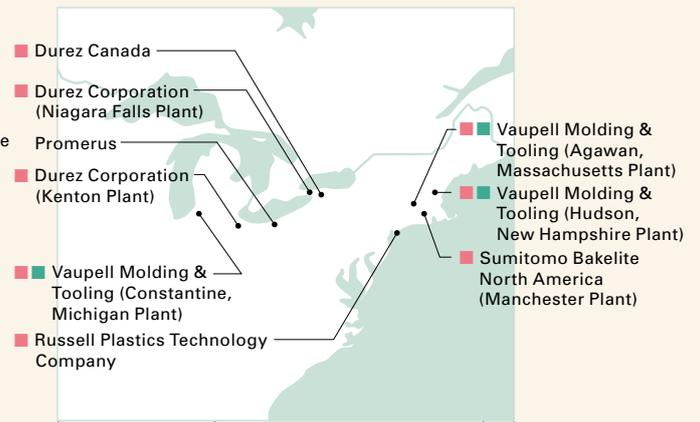
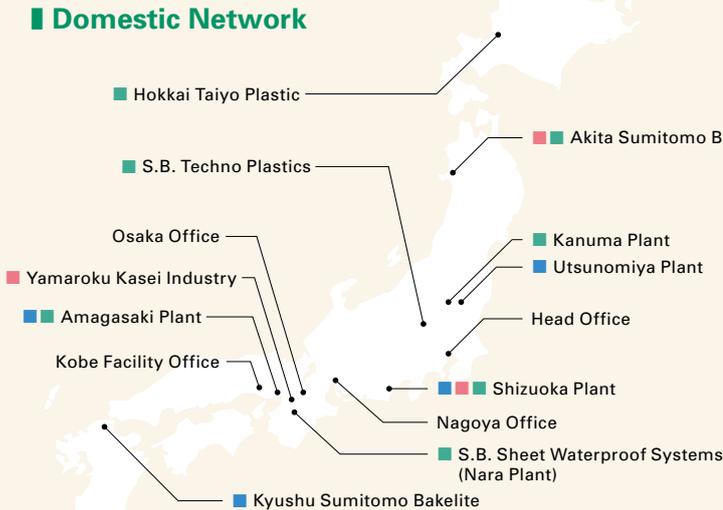
- Shareholders' meeting
- Presentation of financial results and business outlook
- Media response
- Publishing of Annual Report and shareholder reports
- Information disclosure via the website

## Group Companies

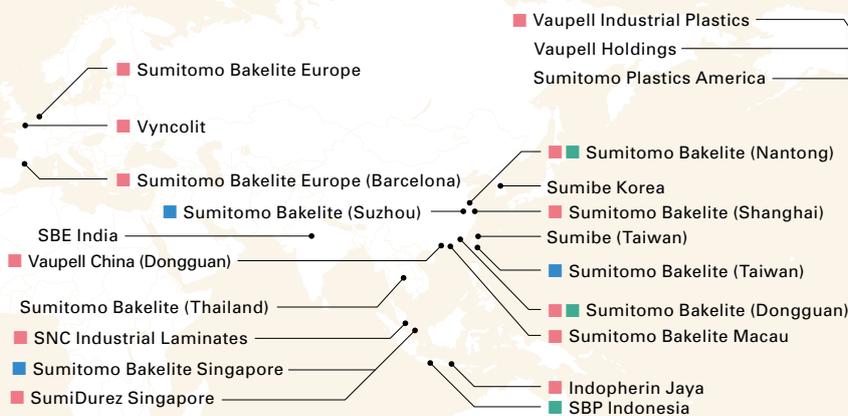
The Group operates in 15 countries and regions, including Japan.  
Production sites are color-coded according to the category of products manufactured.

■ Semiconductor Materials ■ High-Performance Plastics ■ Quality of Life Products

### Domestic Network



### Global Network



#### Local Communities

##### Main Responsibilities

Operating as a member of local communities, the Group seeks to contribute to the regions in which it operates while giving careful consideration to environmental protection issues.

We disclose information to local residents by organizing factory tours and proactively participating in local events.

##### Main Methods of Communication

- Relations with local residents and mutual engagement
- Participation in local events
- Acceptance of next generation internships and site visits
- Participation in the conservation of the local environment and beautification events
- Activities via economic and industry organizations

#### Government Entities

##### Main Responsibilities

Besides maintaining rigorous compliance with relevant laws and regulations, the Group endeavors to make information publicly available and engage in two-way communication with local government entities. For this purpose, we are establishing internal mechanisms for monitoring the revision and enactment of laws.

##### Main Methods of Communication

- Engagement with local and regional governments
- Activities and engagement through economic and industry organizations
- Reply to surveys and questionnaires
- Submission of notifications

#### Business Partners

##### Main Responsibilities

The Group engages in impartial and fair business transactions and cooperates with its business partners to realize CSR procurement objectives. Accordingly, we maintain day-to-day dialog with business partners to confirm the propriety of transactions and clarify the terms of contracts.

##### Main Methods of Communication

- Engagement through purchasing and procurement activities
- Engagement through surveys and questionnaires
- Disclosure of information on our website

#### Employees

##### Main Responsibilities

The Group strives to create safe and pleasant working environments and provide employees with meaningful and satisfying careers. We are endeavoring to reduce workplace risks by implementing diverse risk assessments, and we are providing all employees with educational opportunities through the SB School.

##### Main Methods of Communication

- Training of all employees through the SB School
- Perform a variety of human resources development and training
- Corporate-level meetings, labor-management meetings, occupational safety meetings
- Sharing of information through publication of a monthly newsletter
- President's homepage and intranet
- Whistleblower system, consultation contact point

# Corporate Governance



We are strengthening corporate governance as one part of the foundation underpinning our business activities. These efforts will contribute to Sustainable Development Goal 16: Peace, Justice and Strong Institutions.

## Strengthening Corporate Governance

As a pioneer in plastics, our company brings “delight” to customers through the creation of new advanced functions from plastics and through the use of its products, with the goal of contributing to value creation for customers and various other stakeholders. For this reason it is important to earn the

trust of society and be needed by society, and therefore, we are establishing efficient and effective structures for achieving management that is highly compatible with society and the environment and for addressing risks facing management, including rigorous compliance.

## Management System

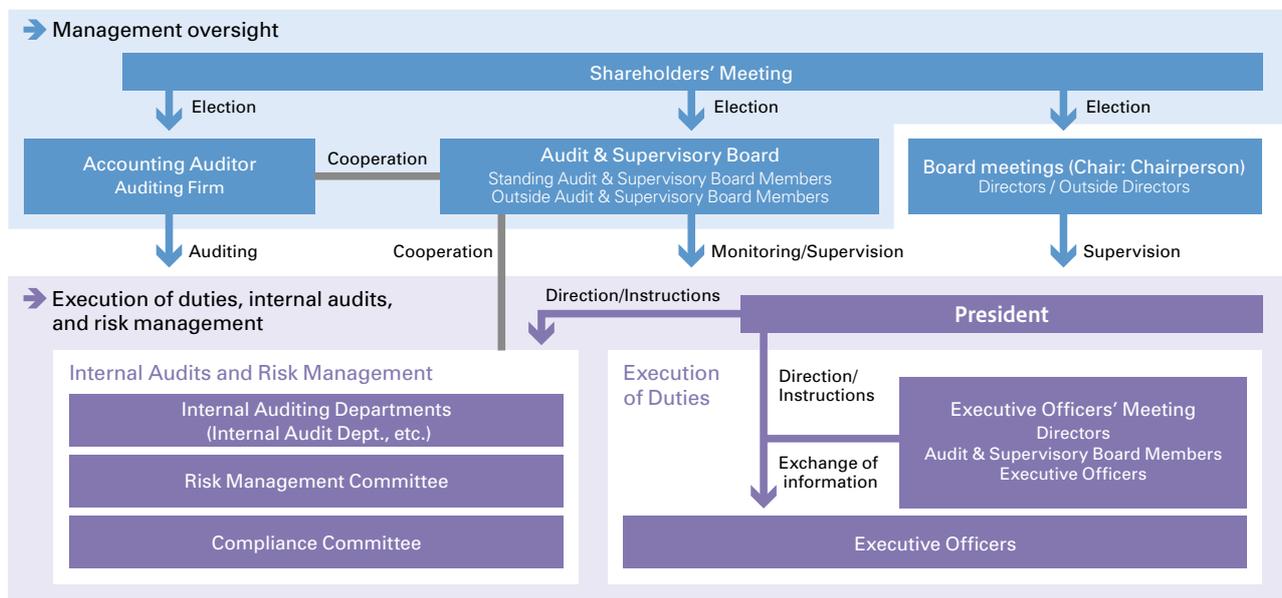
The Board of Directors, in accordance with laws and regulations, including the Regulations of the Board of Directors, makes decisions on the execution of important operational matters and monitors the progress of each director’s execution of operations based on reports on important issues concerning the performance of duties by each director. In the case of conflicts of interest involving any director, potential conflicts of interest are required to be reported in advance to the Board of Directors so that the director in question will be excluded from participation in the decision-making process concerning the matter in question.

The Board of Directors deliberates on and selects candidates for the position of director from among appropriate persons in terms of business performance, knowledge and experience, personality, views, and motivation, among other factors, so that the right person is selected for the job. Based on this, directors are appointed by resolution of the Shareholders’ Meeting.

The remuneration of directors (excluding outside directors) comprises monthly base pay and a bonus. Monthly base pay is fixed based on the job title, while the amount of the bonus is determined according to the Company’s consolidated business performance during the fiscal year, in order to raise directors’ motivation to achieve the fiscal year business plan. The annual amount of the

monthly base pay and bonus is determined within the total amount of remuneration approved by the Shareholders’ Meeting, while the amount paid to each individual director is approved by resolution of the Board of Directors and authorized by the representative director. Matters concerning the appointment and remuneration of directors are discussed by the Appointment and Remuneration Advisory Committee comprised of the representative director and independent outside directors to solicit the views of independent outside directors, with the findings of discussions reported to the Board of Directors. In addition, the Board appoints executive officers, and the executive officers are responsible for executing their assigned tasks under the direction of the president. As of June 22, 2018, the management structure includes 10 directors and 17 executive officers (including six who serve concurrently as directors). Of the directors, three are outside directors. Our company is a company with a Board of Corporate Auditors. There are four Corporate Auditors, of which two are Outside Corporate Auditors. Among our company board officers (director, auditor, executive officer), there are 24 male members and 1 female member, with a female board member ratio of 4%. In addition, all of the Company’s officers are over the age of 50.

### Structure of Corporate Governance (as of June 22, 2018)



## Internal Control

The Company has systems in place for ensuring appropriate operations in accordance with its business philosophy. In accordance with the Basic Policy on Internal Control Systems drawn up by the Board of Directors in May 2006, we periodically review the systems and promote various activities to enhance internal control.

With respect to internal control over financial reporting, based on the Company's Basic Rules and Regulations for Internal Control over Financial Reporting, we endeavor to enhance systems for ensuring the reliability of the Group's financial reporting, appropriately operate internal control systems in terms of implementation, assessment, reporting, and correction, and

ensure appropriate and timely disclosure of corporate information. The Comprehensive Guidelines for Internal Control in Consolidated Subsidiaries covers the items that subsidiaries are required to address in establishing their internal control systems and in their subsequent ongoing implementation of control activities. The internal control over the Group's financial reporting as of March 31, 2018 was assessed and deemed to be effective by Internal Auditing Departments. In addition, as a result of the accounting auditor's audit, it was confirmed that the internal control report presents fairly the result of assessments of internal control over financial reporting.

[Link](#) → Basic Policy on Internal Control Systems

## Compliance



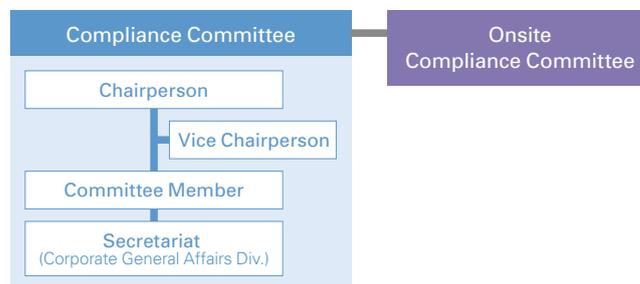
We are strengthening compliance as one part of the foundation underpinning our business activities. These efforts will contribute to Sustainable Development Goal 16: Peace, Justice and Strong Institutions.

## Compliance System

At our company, we emphasize compliance because we recognize that adherence to laws and corporate ethics is integral to the conduct of business.

As part of the framework to ensure the appropriate conduct of business by directors and employees, the Company has established the Compliance Committee. This committee is responsible for promoting compliance through assessments of compliance levels and, as necessary, undertaking related improvements as well as education and training.

### Compliance System



## Code of Conduct for Employees

Our Group's Code of Business Ethics and Conduct is a booklet that explains the fundamental policy in the Group's Business Philosophy along with Our Code of Conduct, established as a set of standards guiding employees during their day-to-day work to ensure the Group engages in mistake-free business activities. This booklet is regularly used in e-learning sessions and read aloud at workplaces to make the information therein known to all.

The current version of Our Group's Code of Business Ethics and Conduct was revamped in October to 2017, taking into account the latest worldwide trends in customer satisfaction, SBPS, quality control, health and safety initiatives, as well as legal compliance. It has also been translated into seven languages.



The booklet on Our Group's Code of Business Ethics and Conduct

## Articles for Emphasis in Compliance

Workplaces in each department apply compliance to daily operations, decide on the key items for compliance and each prepare Articles for Emphasis in Compliance. Although the Articles differ among workplaces, they are displayed prominently and confirmed with all employees periodically by having them read aloud in unison. Our subsidiaries and affiliates, in Japan and overseas, also undertake similar activities.

## Compliance Education Using Cartoons

Every month, the Company's internal publication contains a fourframe cartoon about compliance under the title "The Way to Become a Compliance Master." This cartoon explains compliance in an easy-to-follow style. Past cartoons have been compiled into two booklets, which were distributed to employees to raise awareness of compliance.



Mamoru-kun joined the company 16 years ago. He's a very active mid-level employee, and everyone relies on him. Mamoru-kun is able to offer appropriate advice throughout the company as a compliance master, which is especially appreciated given the spate of corporate scandals hitting Japan recently.

## Whistleblower System

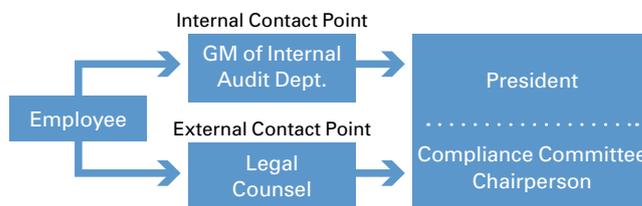
We have established a system that enables the Group's employees who have discovered a compliance violation, or suspect that there may have been a violation, to report the matter directly to a designated contact point, on the assumption that reporting to a direct supervisor is difficult. In addition to having an internal contact point at the Internal Audit Dept., employees with such information to disclose can elect to report externally via designated legal counsel. Employees can report anonymously, and the privacy of whistleblowers is rigorously protected to ensure that they are not placed at a disadvantage as a consequence of reporting violations.

Five cases were reported in fiscal 2017, but none of these involved major improprieties, including violations of laws or regulations with respect to discrimination, child labor, forced labor, improper accounting, corrupt practice, or improper or illegal conduct, including violation of antitrust law. The reported matters

were dealt with appropriately.

Additionally, subsidiaries and affiliates in Europe, North America and China have set up individual contact points, giving consideration to the local culture and legal customs, and when necessary, the head office of our company will also step in to address matters reported to these local contact points.

### Flow of the Whistleblower System



## Monitoring

In accordance with the Basic Policy on Internal Control Systems, the Internal Auditing Regulations, the Basic Rules and Regulations for Internal Control over Financial Reporting, the Environmental and Safety Auditing Regulations, the Security Trade Control Regulations and other company regulations, the Internal Audit Dept., Corporate EHS Promotion Dept., Corporate General Affairs & Legal Dept., and other departments involved in internal auditing audit and assess the compliance of the Company, its subsidiaries and affiliated companies, both in Japan and overseas, mainly by means of site audits. Audits and assessments are conducted from

the standpoint of whether the operations of departments are in compliance with relevant laws and conform to various standards. Departments where issues are identified are required to submit written reports detailing actions taken to resolve the issues.

In fiscal 2017, compliance auditing and assessment was conducted from the standpoints of environment, human rights, occupational health and safety, provision and use of products and services, management of customer information and data, proper accounting, and fair trade, with no significant violations of laws or regulations.

# Risk Management



We are strengthening risk management as one part of the foundation underpinning our business activities. These efforts will contribute to Sustainable Development Goal 16: Peace, Justice and Strong Institutions.

## Risk Management Structure

Our company views risks associated with its business from a broad perspective and is committed to always taking action from a safety standpoint, even with issues that have yet to be scientifically demonstrated. To prevent potential risks from materializing and to minimize losses, the Company has established the Risk Management Committee, which operates on a permanent basis and whose responsibilities are Groupwide in scope.

We instituted our Basic Risk Management Regulations, which establish the fundamental policy regarding the Group's risk management. The Regulations require precise management of diverse risks and implementation of appropriate measures.

In fiscal 2017, the Risk Management Committee convened on four occasions, covering measures against quality complaints, information security risk, and other topics, and then worked toward mitigating and eliminating associated risks.



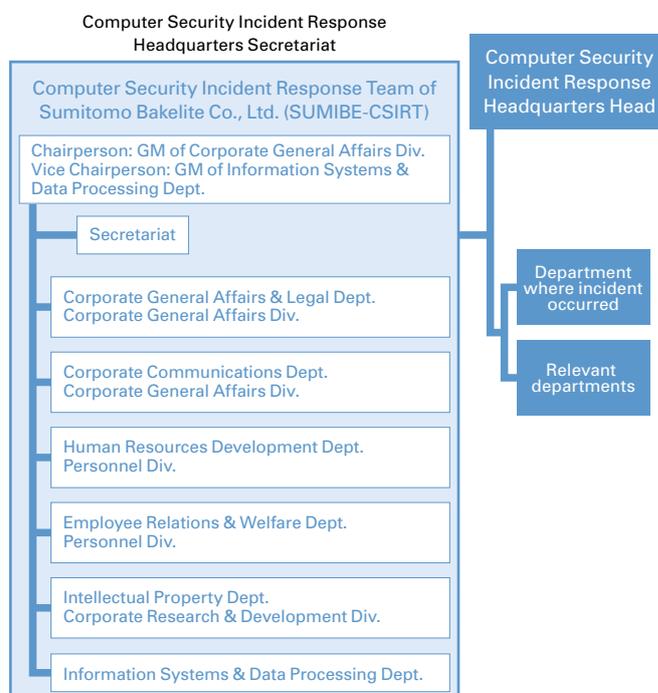
Risk Management Committee

## Information Security

We retain an extensive array of personal information on customers, shareholders, employees, and others. In addition to personal information, we also retain trade secrets and other confidential information relating to our business partners. All of this information in our possession is important and must be protected. Therefore, we are committed to ensuring that this information is never leaked.

We also have measures in place to address computer security incidents (cyber attacks, phishing sites, illegal access, malware infections, DoS, and others) in order to prevent information leakages and improve the security of the information systems we operate. In the event of a computer security incident, relevant departments such as the Corporate General Affairs & Legal Dept., Information Systems & Data Processing Dept., Intellectual Property Dept., and Corporate Communications Dept. work together to address the situation.

### System for Addressing Information Security Incidents



# CSR Procurement



We are implementing CSR procurement as one part of the foundation underpinning our business activities. These efforts will contribute to Sustainable Development Goal 12: Responsible Consumption and Production.

## Basic Approach

Our company strives to ensure compliance with the laws, regulations, and social norms of Japan and the other countries and regions in which it operates. We also require our business partners to observe these standards of fulfilling their social responsibilities given the changing social expectations placed in companies. In principle, we conclude a basic contract with each business partner we purchase from, which requires the contracting parties to fulfill their corporate social responsibilities (CSR). Our criteria for selecting business partners include their CSR and environmental impact reduction initiatives.

The Global Procurement Division is in overall charge of the purchasing of raw materials, fuel, and equipment for use at the Company's plants and the Group companies worldwide. Our procurement policy and Green Procurement Guidelines are posted on the Company's website.

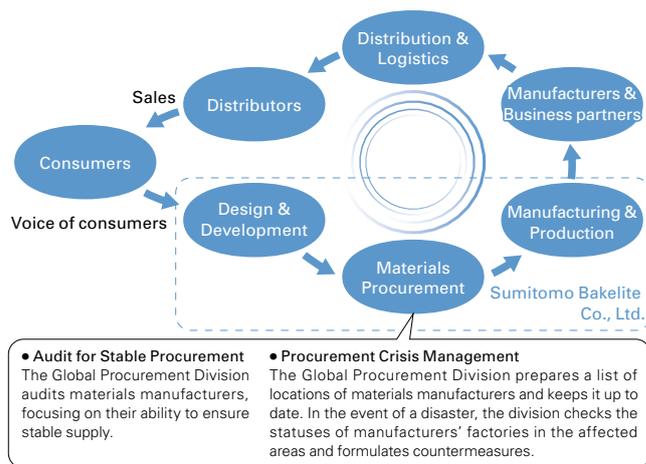
In October 2015, we amended our procurement policy. The new procurement policy is now published in Japanese, English, and Chinese. Given the standards of the Responsible Business Alliance (RBA)\*<sup>1</sup> Code of Conduct (formerly the EICC Code of Conduct) and changing frameworks for general business dealings, we are

working to observe this policy in our procurement activities, and we require our business partners to do the same, too.

\*1 See the glossary on page 78.

[Link](#) Procurement Policy

## Our Group's Supply Chain



## CSR Survey of Suppliers

In fiscal 2016, we conducted a CSR survey on our primary 59 suppliers that account for the top 80% of either raw materials purchase value or volume per segment. The survey itself is based on the sample provided by JEITA, with the addition of items taking into consideration the OECD Due Diligence Guidance for conflict minerals and the requirements of the RBA Code of Conduct (formerly the EICC Code of Conduct).

The survey involves a self-assessment on a scale of one to five covering eight fields including overall CSR, human rights and labor, health and safety, the environment, fair trade and ethics, quality

and safety, information security and social contributions. After collecting and confirming the responses of each survey, we found that all suppliers met the required score for all fields, indicating there are no suppliers with outstanding issues to address. In fiscal 2018, we will conduct a CSR survey on suppliers not covered in the fiscal 2016 survey that carry specialty materials used in products accounting for 80% or more of the Company's sales. If suppliers are found to score below the required threshold based on the results of the survey, we plan to ask these suppliers to make improvements.

## Selection of Business Partners

When selecting new business partners, the decision to commence transactions is made based on fair and impartial judgment after applying the criteria established by the Global Procurement Division. When commencing transactions, we check whether the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors applies and if it does, we commence the transaction in accordance with this law and the relevant company rules. If we find that this law applies to existing transactions, we immediately take measures to ensure the legality of these transactions under this law.

We have established company rules requiring that we check whether new raw materials comply with chemical substance controls both domestically and internationally, and new raw materials are not adopted unless they conform to these controls. Relevant departments internally work closely together to investigate and make sure that the Company does not violate chemical substance controls.

We are convinced that it is important to establish a relationship of equals based on trust with every business partner and that the transactions should be beneficial to both parties.

# Environmental Management



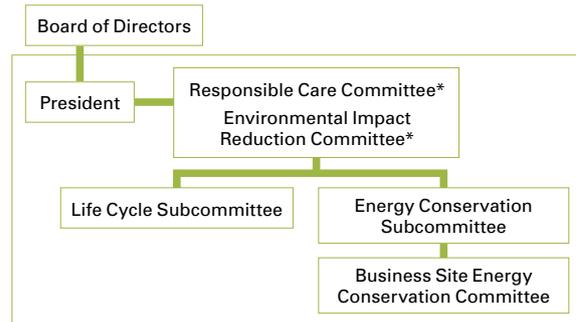
We are actively working on environmental management as an issue that ensures harmony with the natural environment. These efforts will contribute to Sustainable Development Goal 13: Climate Action.

## Environmental Management System

Our company relies upon the earth's natural resources and energy in order to do business. However, doing business will generate garbage and air and water emissions. For this reason, we believe it is important for the Company to adhere to environmental laws and regulations, conduct business in an environmentally friendly manner and engage in initiatives that reduce the environmental impact on the entire society through our products and services. The entire our group works to conserve the environment under its Responsible Care Policy, with the ultimate goal of contributing to the development of a sustainable society. To actively reduce environmental impacts, conserve biodiversity, and prevent soil and groundwater pollution, our Responsible Care Committee and Environmental Impact Reduction Committee take the lead in checking compliance with environmental laws and regulations as well as conducting environmental assessments throughout the entire life cycle, from R&D to raw materials

procurement, production, sales and final disposal. Based on the results, each workplace and work site take appropriate actions.

### Environmental Management System Diagram



\* Refer to page 28 for Responsible Care Committee and Environmental Impact Reduction Committee.

## Activities of the Environmental Impact Reduction Committee

The Environmental Impact Reduction Committee recaps each year's progress toward medium- to long-term environmental targets at the end of the fiscal year and determines the targets for the following fiscal year.

The Environmental Impact Reduction Committee works on achieving targets and reducing environmental impacts through its two subcommittees.

The Life Cycle Subcommittee continues to focus on life cycle assessment (LCA) at all R&D departments with the aim of establishing production systems with minimal environmental impacts through scientific, quantitative, and objective assessment of environmental impacts from the R&D phase onward. Another priority is the fostering of researchers and development engineers capable of performing LCA and instituting energy conservation. Additionally, production departments began performing LCA for existing products in an effort to identify the environmental impacts of all of our products. In fiscal 2018, we will further expand the number of environmentally-friendly products as well as roll out LCA for products and establish guidelines for collecting basic Scope 3 data on products that have already been assessed and work on applying these guidelines to the calculation of CO<sub>2</sub> emissions in the supply chain during LCA.

The Energy Conservation Subcommittee worked to establish across all business sites in Japan a mechanism for continuously soliciting and trying out ideas for saving energy through such means as voluntary implementation initiatives in business sites. Outside of Japan, the subcommittee worked to ensure a similar level of activities as in Japan and continued to promote the roll out of activity methods and best practices. Through these efforts,

the subcommittee successfully reduced energy consumption by as much as 2,758 kL in crude oil equivalent (4,350 t-CO<sub>2</sub>). Furthermore, the subcommittee established and successfully achieved targets by carrying out unique activities to conserve electricity in the summer and winter months. The subcommittee has established an energy conservation target for fiscal 2018, too, and will continue efforts aimed at achieving energy consumption reduction plans at the workplace level.

In particular, the subcommittee will focus on creating a system across business sites in Japan for sharing practices for reducing energy consumption and technical information related to energy saving in order to improve the level of energy-saving technology throughout the Company; and having the mother plants in Japan provide technical support to their affiliated sites through a tie-up with the Company-wide Energy Conservation Secretariat.



LCA training in progress

# Material Flows and Investments in Environmental Protection



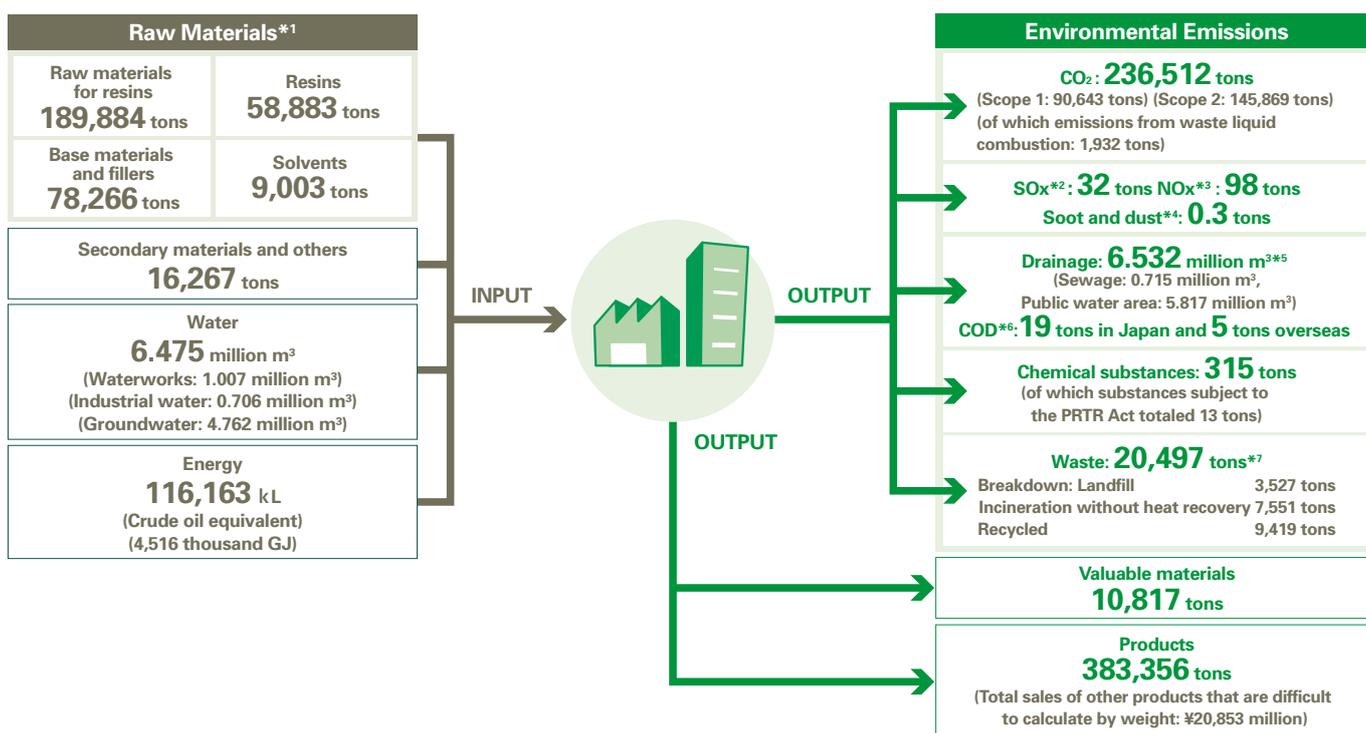
We are actively working on material flows and investments in environmental protection as an issue that ensures harmony with the natural environment. These efforts will contribute to Sustainable Development Goal 13: Climate Action.

The figure below shows inputs, including raw materials and energy, and outputs that are products and emissions released into the environment.

The Group is working to minimize its impact on the environment by means of waste reduction and resource saving through promoting more efficient use of raw materials, energy, and water.

From fiscal 2017, we added the amount of CO<sub>2</sub> emissions generated when waste liquid generated from the plants is burned.

## Material Flow



\*1 The ratio of renewable raw materials to total raw materials used is small at the current point in time, but we will continue to work on ways to increase this ratio.

\*2, 3, 4, and 6 See the glossary on page 78. SOx, NOx, and soot and dust are calculated using the company's own formula based on exhaust gas readings and fuel usage amount, among other variables. Since methods of calculating emissions of soot and dust differ among countries, this figure is compiled solely for business sites in Japan at present. COD is calculated based on the measured concentration and drainage volume. Data on overseas COD covers sites that measure COD within drainage. Data for overseas sites are stated separately because the types of oxidant (potassium dichromate is mainly used overseas) used for measurement differ from those used in Japan.

\*5 Drainage volume is determined by calculating drainage into sewages based on the breakdown of total usage. Drainage into public water areas is calculated using readings from flow meters installed at business sites; while water usage volume is used for business sites without flow meters.

\*7 The volume of hazardous waste found in total waste volume is 7,222 t (based on the definition used by each country).

## Investments in Environmental Protection

Our group has compiled data annually on the amounts of investments in environmental protection of all Group companies in Japan since 2000.

In fiscal 2017, we made large investments in categories of environmental emissions controls and introduced exhaust gas treatment equipment.

As with last year, we proactively implemented energy conservation measures and spent a total of 420 million yen, in order to maintain at least a 1% average year reduction of intensity of energy usage, which is a requirement under the Act on the Rational Use of Energy.

Note: Data covers the time period and business sites in Japan listed on page 3.

### Amounts of Investments in Environmental Protection in Fiscal 2017

| Category                                  | Investment amounts (millions of yen) |
|---|--------------------------------------|
| Emissions control                         | 147                                  |
| Energy saving                             | 268                                  |
| Waste reduction, recycling, and treatment | 8                                    |
| Total                                     | 423                                  |

# Medium- to Long-term Environmental Targets and Review of Results



We formulate medium- to long-term environmental targets as an issue that ensures harmony with the natural environment. These targets will contribute to Sustainable Development Goal 13: Climate Action.

## Medium- to Long-term Environmental Targets (For Fiscal 2020) and Review of Results

In fiscal 2009, our company drew up a medium- to long-term environmental plan up to fiscal 2020, and since then we have been implementing activities under this plan. We have already met our CO<sub>2</sub> emissions target for Japan, and are working to reduce emissions even further. However, we found there are insufficiencies in terms of complying with the Japanese government's Intended Nationally Determined Contributions (INDC) for fiscal 2030 under the Paris Agreement concluded at the 2015 United Nations Climate Change Conference, or COP 21.

We also determined that our targets for fiscal 2020 fell short of the effective response needed for achieving the Sustainable Development Goals (SDGs).

Given this situation, we carried out a review of results under our current medium- to long-term environmental targets a full three years ahead of schedule in order to enable us to carry out more effective activities within a new framework.

### Table of Business Sites in Japan

| Review of fiscal 2020 medium- to long-term targets   | Initiative   | Units               | Fiscal 2005 (base year) achievements* <sup>1</sup> | Fiscal 2017 achievements | Fiscal 2020 targets |
|--|--|---------------------|--|--------------------------|---------------------|
|  | CO <sub>2</sub> emissions  | ton-CO <sub>2</sub> |  | 137,961                  | 83,986              |
| We have already met the values of our fiscal 2020 targets due to our energy conservation activities, and are promoting further reductions. |  |                     |  |                          |                     |
| Material loss  | ton  |                     | 20,945   | 13,967                   | 13,330              |
|  | We have promoted reductions by undertaking MFCA* <sup>2</sup> , to the extent that we have been able to meet our medium- to long-term targets. |                     |  |                          |                     |
| Chemical substance emissions* <sup>3</sup>   | ton  |                     | 512  | 167                      | 102                 |
|  | We have made progress in reductions, but this has slowed slightly. We plan to promote reductions through our equipment measures.               |                     |  |                          |                     |

### Table of Overseas Business Sites

| Review of fiscal 2020 medium- to long-term targets  | Initiative  | Units               | Fiscal 2005 (base year) achievements* <sup>1</sup> | Fiscal 2017 achievements | Fiscal 2020 targets |
|---|---|---------------------|--|--------------------------|---------------------|
|   | CO <sub>2</sub> emissions   | ton-CO <sub>2</sub> |  | 163,259                  | 152,526             |
| We have developed proactive energy conservation activities, but our merger with the Vaupell Group has had an impact, and our reductions have slowed slightly. |   |                     |  |                          |                     |
| Material loss   | ton   |                     | 28,858   | 17,347                   | 17,473              |
|   | We have already met our target values for fiscal 2020 through the promotion of our MFCA.        |                     |  |                          |                     |
| Chemical substance emissions* <sup>3</sup>  | ton   |                     | 278  | 148                      | 144                 |
|   | We have advanced with reductions to the level that we have met our medium-to-long-term targets. |                     |  |                          |                     |

\*Please see the organizations listed on page 3 as to those included in the calculation.

\*For the definitions and calculation methods for CO<sub>2</sub> emissions, material loss, and chemical substance emissions, please see page 74.

\*<sup>1</sup> The base year is the basis of the Japan Business Federation (Keidanren)'s Commitment to a Low Carbon Society.

\*<sup>2</sup> See the glossary on page 78.

\*<sup>3</sup> The base year for chemical substance emissions from overseas business sites is fiscal 2010, when data collection began.

# New Medium- to Long-term Environmental Targets and Results

## Establishment of New Medium- to Long-term Environmental Targets (up to 2030) –

Taking into account the results of the review and the following trends in Japan and overseas, we have established a new medium- to long-term plan ending in fiscal 2030.

- Response to long-term development needs shared by the international community with 2030 as the target year established in the SDGs approved at the UN Summit in September 2015.
- Response to the greenhouse gas reduction target for fiscal 2030 indicated in the Japanese government's INDC in COP21.
- Response to the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures.

In addition, we are focusing our efforts on the reduction of greenhouse gas (CO<sub>2</sub> emissions) linked with the Japan Business Federation (Keidanren)'s Commitment to a Low Carbon Society, which we have participated in through the Japan Chemical Industry Association. Furthermore, as we have done in the past, we have set targets for reducing material loss (waste and valuable materials) and chemical substances emissions, are promoting initiatives to systematically reduce environmental impacts.

### Initiatives at Business Sites in Japan

CO<sub>2</sub> emissions from our domestic business sites continued to decline as with fiscal 2016. The proactive energy conservation efforts of business sites in Japan are expected to result in further reductions in fiscal 2018. Going forward, we will aim to achieve our new medium- to long-term targets by promoting energy conservation efforts.

Material loss continues to decline thanks to waste identification and reduction at plants through MFCA\*<sup>1</sup> carried out at each business site. Looking ahead, we will continue with these efforts

to rein in material loss, which will enable us to promote the more effective use of raw materials through increased recycling.

Chemical substance emissions increased temporarily due to the start of new businesses, but the introduction of processing facilities is expected to help us pursue reductions in fiscal 2018 and beyond. Also, emissions of substances subject to the PRTR Act included in chemical substance emissions increased slightly to 13 tons, similarly owing to the start of new businesses.

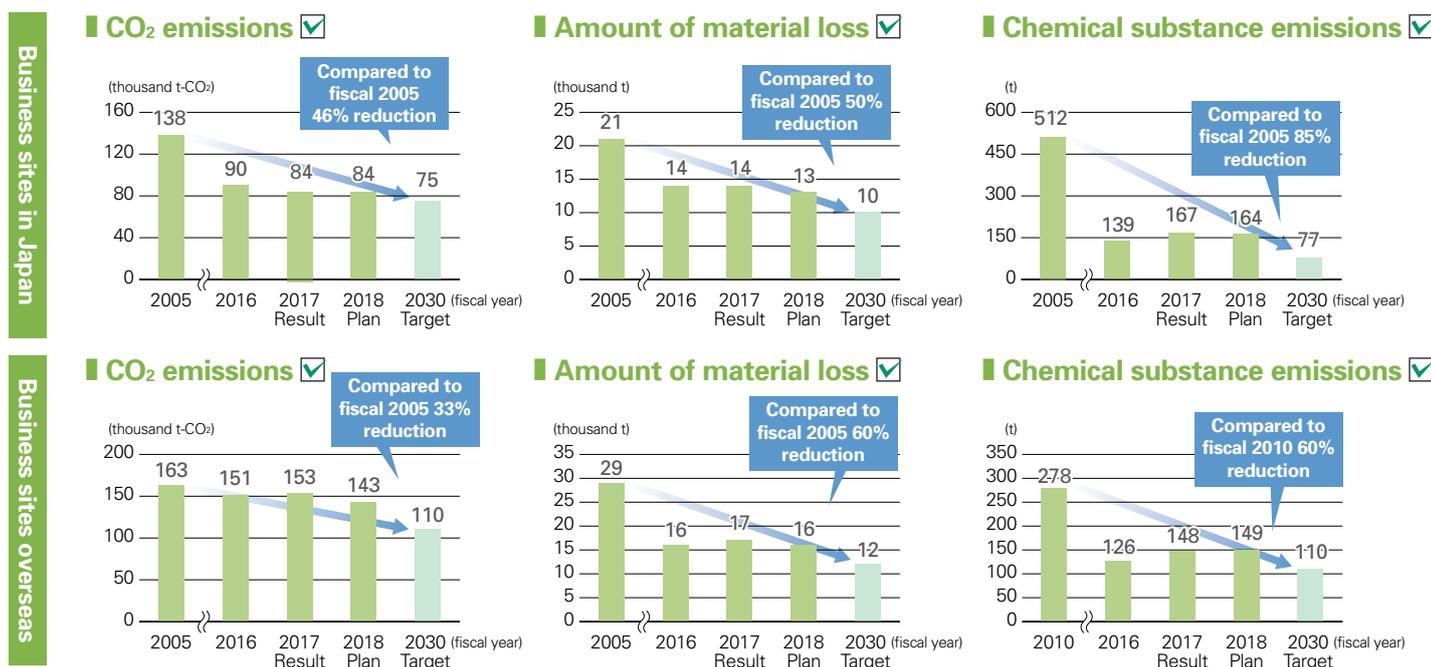
\*1 See the glossary on page 78.

### Initiatives at Overseas Business Sites

Emissions of CO<sub>2</sub> from overseas business sites increased somewhat due to the effects of increased production volume. However, as indicated on other pages, intensity is dropping both in Japan and overseas. Our overseas business sites will continue to promote reductions through energy conservation efforts similar to those in Japan.

Material loss increased slightly owing to the effects of increased production. At our overseas business sites, we will continue to reduce emissions and raise efficiencies through the promotion of MFCA, similar to in Japan, and promote the more effective use of raw materials through increased recycling.

Chemical substance emissions increased compared to fiscal 2016 due to changes in conditions used to calculate emissions and other factors, and emissions are expected to increase slightly in fiscal 2018 also due to these factors. Going forward we will work to reduce emissions of chemical substances by reducing their use at overseas business sites as well as capital expenditures and the optimization of conditions.



\*Note: See the business sites listed on page 3 about the boundary.

\*For definitions and the calculation method of CO<sub>2</sub> emissions, material loss, and chemical substance emissions, refer to page 74 on the full online version.

\*The total of the 37 substances subject to the PRTR Act included in chemical substance emissions released by the Group's sites in Japan amounted to 13 tons and the total amount transferred amounted to 115 tons. For details of the transfer and release of substances subject to the PRTR Act, refer to the Data Section on page 76.

# Environmental Performance

## Reducing Energy Use and CO<sub>2</sub> Emissions

Our company's energy conservation activities are led primarily by the Energy Conservation Subcommittee of the Environmental Impact Reduction Committee.

Our domestic business sites have been able to continually reduce both CO<sub>2</sub> emissions and energy usage. Similarly, the intensity of energy usage and CO<sub>2</sub> emissions both continue to decline.

At our overseas business sites, energy usage for production and CO<sub>2</sub> emissions both increased slightly over last year; however, increased sales have caused the intensity of both to decline from the previous year.

## Disclosure of Scope 3\*<sup>1</sup> Data

In 2015, our group began calculating and disclosing Scope 3 emissions in the supply chain of business sites belonging to Group companies in Japan because of the growing importance of understanding CO<sub>2</sub> emissions covering the entire supply chain.

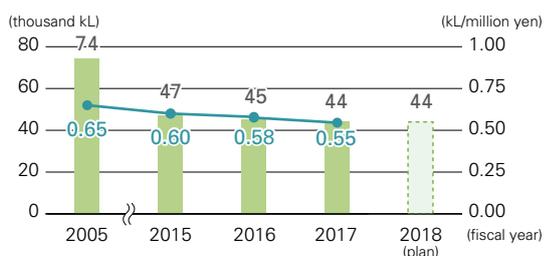
For fiscal 2017, similar to last year we disclosed data for a total of eight categories including Category 1 "Purchased goods and services." In addition, as with last year, it was also confirmed that three categories including Category 8 "Upstream leased assets" are not applicable.

Similar to fiscal 2016, Category 1 "Purchased goods and services" account for a large portion of CO<sub>2</sub> emissions.

In fiscal 2018 and onward, we will continue to calculate and disclose data on other categories and work to increase the accuracy of the data for categories disclosed on this occasion, as part of our ongoing efforts to reduce CO<sub>2</sub> emissions across the entire supply chain.

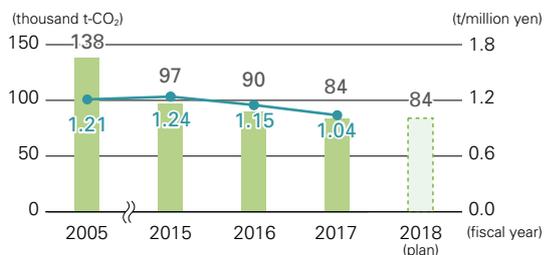
\*1 See the glossary on page 78.

### Energy usage per production amount value

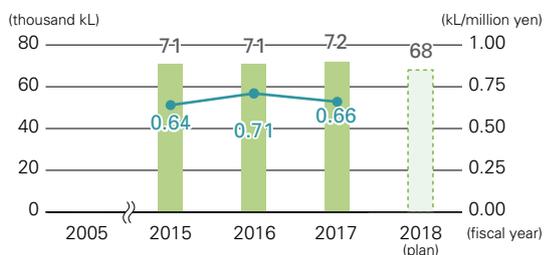


Business sites in Japan

### CO<sub>2</sub> emissions per production amount value

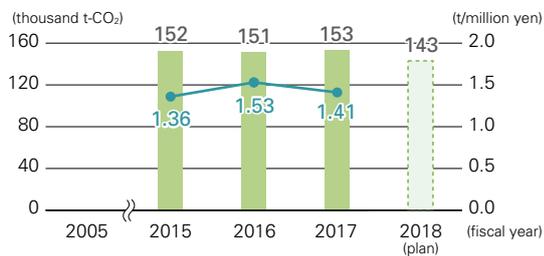


### Energy usage per production amount value



Business sites overseas

### CO<sub>2</sub> emissions per production amount value



## CO<sub>2</sub> Emissions in Certain Categories of Scope 3 and Other Scopes (Domestic Sites)

| No. | Category  | Emissions (thousand t-CO <sub>2</sub> / year) |
|-----|---|---|
| 1   | Purchased goods and services                                  | 447   |
| 2   | Capital goods   | 14  |
| 3   | Fuel- and energy-related activities not included in Scope 1&2 | 12  |
| 4   | Upstream transportation and distribution                      | 18  |
| 5   | Waste generated in operations                                 | 0.4   |
| 6   | Business travel   | 2   |
| 7   | Employee commuting  | 2   |
| 8   | Upstream leased assets  | Not applicable                                |
| 13  | Downstream leased assets                                      | Not applicable                                |
| 14  | Franchises  | Not applicable                                |
| 15  | Investments   | 0.4   |
|     | Scope 3 Total   | 495   |
|     | Scope 1 (All direct emissions)                                | 42  |
|     | Scope 2 (Indirect emissions from consumption of energy)       | 42  |

\* Data covers all the business sites in Japan listed on page 3.

Calculation method: We calculated the amount of emissions in accordance with the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain Ver. 2.1 issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry of Japan, using the emission factors stated in the basic database IDEA Ver. 2.2 Carbon Footprint Communication Program developed jointly by the National Institute of Advanced Industrial Science and Technology and the Japan Environmental Management Association for Industry as well as the Emissions Intensity Database for Calculating Greenhouse Gas Emissions of Organizations through the Supply Chain.

\*Energy usage per production amount value is determined using the following equation: Energy usage per production amount value = energy usage/(production amount x unit price)

\*CO<sub>2</sub> emissions per production amount value are determined using the following equation: CO<sub>2</sub> emissions per production amount value = CO<sub>2</sub> emissions/(production amount x unit price) Also, CO<sub>2</sub> emissions are the sum of Scope 1 and Scope 2 emissions.

Note: See the business sites listed on page 3 about the boundary.

## Reducing Material Loss

Our group is working to increase the efficiency of resource utilization because it regards the reduction of environmental impacts as an opportunity to improve profitability.

Through initiatives in material flow cost accounting (MFCA\*<sup>1</sup>), we are working to reduce not only waste, but material loss, which includes valuable materials.

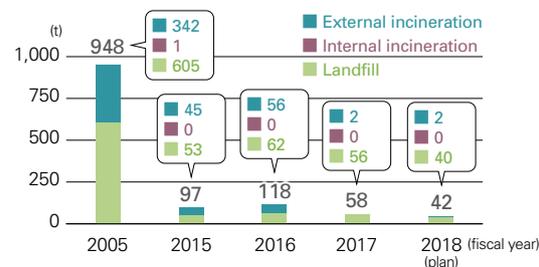
The Group is implementing measures to attain zero emissions of waste in Japan by promoting recycling and reuse instead of disposing it in landfills or treating it in simple incinerators without heat recovery, in an effort to reduce the environmental impacts of waste.

The graph shows the volume of materials subject to zero emissions measures for the base year of fiscal 2005 and recent years. The volume of externally incinerated waste in fiscal 2017 decreased due to the promotion of waste recycling through changes in contractual relationships with treatment providers. We

intend to promote further reduction through analysis of losses in our processes using MFCA.

\*1 See the glossary on page 78.

### Material Subject to Zero Emissions Measures in Japan



Notes:

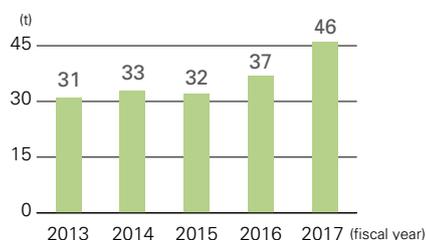
1. Zero-emissions-targeted substances comprise landfill waste, internally incinerated waste, and externally incinerated waste. No waste was internally incinerated at business sites in Japan from fiscal 2012 onward.
2. Data covers all the business sites in Japan listed on page 3.

## Emissions into the Atmosphere

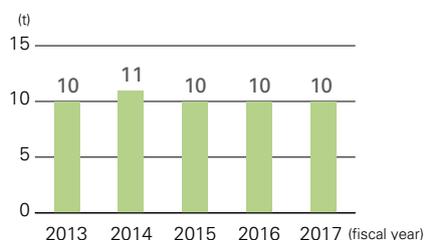
The Group's business sites in Japan have been promoting a shift of boiler fuel from heavy oil to city gas since fiscal 2004. Fuel conversion was almost completed in fiscal 2013 for areas with access to city gas. Emissions of SOx\*<sup>2</sup> and soot and dust\*<sup>3</sup> have

been low. Emissions of NOx\*<sup>4</sup> have increased due to an increase in the nitrogen content of city gas and fluctuations depending on the conditions of combustion of city gas, but these increases have been and continue to be within expectations.

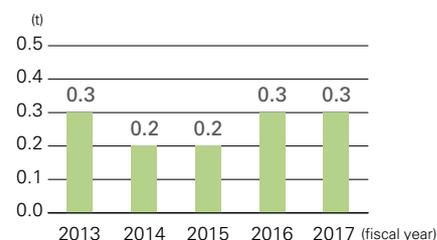
### NOx Emissions



### SOx Emissions



### Soot and Dust Emissions



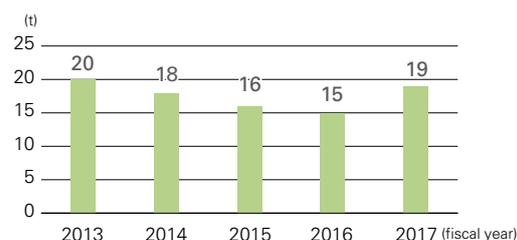
Note: Data covers all the business sites in Japan listed on page 3.  
\*2,3,4 See the glossary on page 78.

## Emissions into the Hydrosphere

Effluent discharged from plants includes pollutants, which are categorized into industrial and household sewage. Treatment facilities, such as high-concentration phenol recovery equipment and activated sludge treatment equipment, and surveillance systems for constant monitoring are in place to ensure compliance with environmental standards and laws and regulations at the national and local government levels. Additionally risk assessments are conducted on leakages into rainwater that also includes cooling water to prevent sudden and unexpected increases in environmental impacts.

COD\*<sup>5</sup>, which is used as a water quality indicator, increased somewhat in fiscal 2017 due to temporary problems with the activated sludge treatment equipment at the Shizuoka Plant, but over the long term it has remained low.

### COD

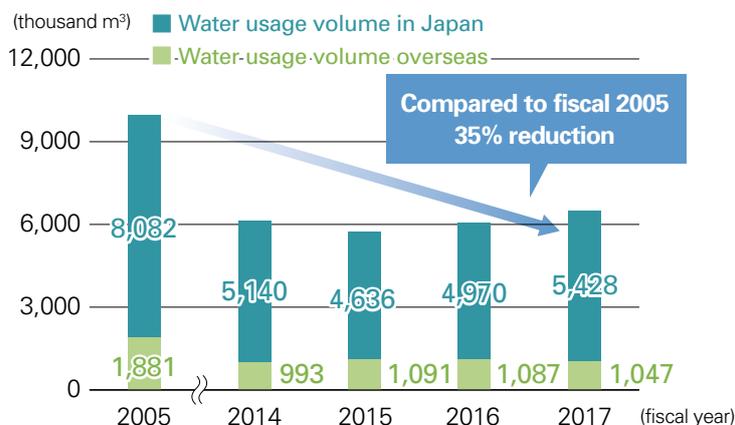


Note: Data covers all the business sites in Japan listed on page 3.  
\*5 See the glossary on page 78.

## Conservation of Water Resources

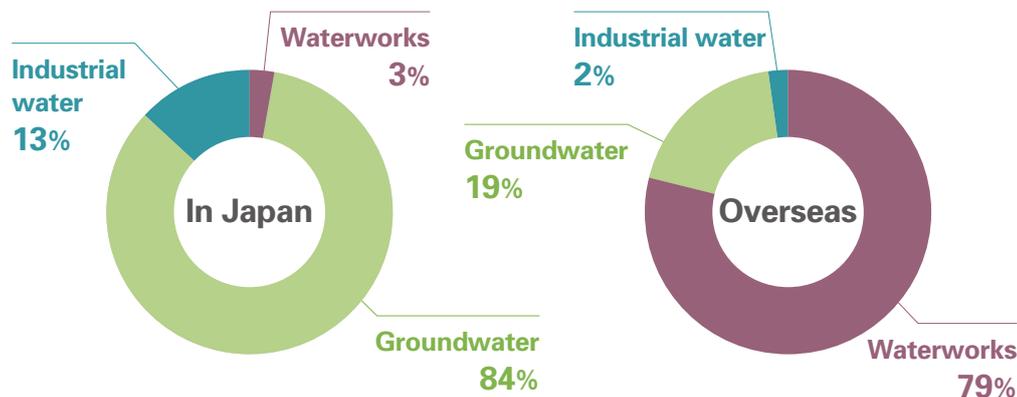
Our group's plants and offices use underground water (well water), water from waterworks, and industrial water. In Japan, the rate of ground water usage is high, while overseas the rate of waterworks is relatively higher. The water used in our plants in Japan accounts for 84% of the water used by the entire Group. The Group has been continuously working over the years to reduce the amount of water it uses through such measures as increasing the cyclic use of cooling water. In fiscal 2017, water usage increased slightly compared to fiscal 2016 due to increased usage of cooling water owing to increased production at the Shizuoka Plant, which accounts for a large percentage of the Group's water usage in Japan, but overall, water usage by the Group in Japan and overseas has been reduced 35% compared to fiscal 2005.

### Water Usage Volume



Note: Data covers all the business sites listed on page 3.

### Water Usage by Source in Fiscal 2017



### Assessment of Water-Related Risk in Fiscal 2017

From fiscal 2015, we began surveying the regional watershed risk of all major plants in the Group (11 sites in Japan and 24 sites overseas). In fiscal 2017, we made changes to risk levels based on the results of studies using the WRI Aqueduct\*1 tool and the

results of independent studies performed by each business site. We compiled the results into a table that contains the risks facing each of the regions in which the Group operates. Using these results, going forward we will continue working to preserve water resources more effectively.

\*1 A tool providing information on water risks developed and published by the World Resources Institute (WRI).

### Assessment of Water-Related Risk

| Region             |                                 | Risk level     |      |                |               | Total |     |
|--------------------|---------------------------------|----------------|------|----------------|---------------|-------|-----|
|                    |                                 | Extremely high | High | Medium to high | Low to medium |       | Low |
| Japan              | Number of bases                 |                |      | 7              | 4             | 11    |     |
|                    | Water consumption (thousand m³) |                |      | 1,192          | 4,223         | 5,414 |     |
| China (and Taiwan) | Number of bases                 |                |      | 2              | 5             | 7     |     |
|                    | Water consumption (thousand m³) |                |      | 131            | 259           | 389   |     |
| Southeast Asia     | Number of bases                 |                | 4    | 1              |               | 5     |     |
|                    | Water consumption (thousand m³) |                | 67   | 107            |               | 174   |     |
| North America      | Number of bases                 |                | 1    | 3              | 3             | 2     | 9   |
|                    | Water consumption (thousand m³) |                | 6    | 77             | 165           | 77    | 350 |
| Europe             | Number of bases                 |                |      | 3              |               |       | 3   |
|                    | Water consumption (thousand m³) |                |      | 129            |               |       | 129 |

## Soil/Underground Water Pollution Countermeasures

The Group makes efforts to decontaminate soil and groundwater found to be polluted. Risk assessments relating to leakage of chemical substances are also carried out at the Group's business sites in Japan and overseas, and we are moving forward with the creation of a preventative response framework.

In 2017, however, a leakage-related incident occurred at one of our affiliated companies in Europe.

### Spill at Sumitomo Bakelite Europe (Barcelona), S.L.U.

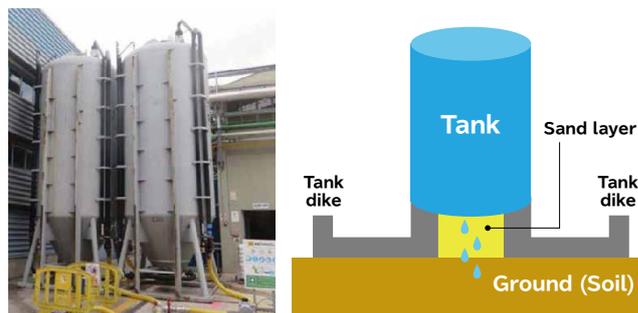
In September 2017, Sumitomo Bakelite Europe (Barcelona), S.L.U. found that 70 tons of waste liquid including phenols had leaked from a storage tank and permeated into the ground.

The company immediately informed the authorities. It was able to immediately stop the source of the leak by urgently removing the waste liquid stored in the tank.

Phenols were detected in the groundwater of wells located onsite. As a result, the company notified nearby plants in the industrial park and asked that they stop using groundwater. Under the guidance of the authorities, the scope of pollution was identified by a specialized vendor based on the flow of groundwater and an analysis of groundwater used by nearby plants. In turn, the specialized vendor removed water and cleaned up using activated carbon absorption over a period of about two months. As a result, phenol levels are now below the required threshold. Since then, regular self-monitoring by the company and confirmations performed by authorities have confirmed that phenol levels remain below the required threshold.

Fortunately, the company has confirmed that no adverse health effects or pollution in the surrounding environment occurred as a result.

The investigation into the cause of the accident revealed cracks in the bottom of the storage tank due to aging. Comprehensive inspections were carried out on tanks at Group plants both inside and outside of Japan. We are now systematically retrofitting tanks that have a similar structure.



The tank where the leakage occurred

The location where the leakage occurred

### Results of Soil and Groundwater Studies, Related Actions, and Monitoring Results

| Site                    | Results of Investigation   | Countermeasures and monitoring results   |
|-------------------------|--|--|
| Amagasaki Plant         | Lead was detected by soil content sampling in 2009 and 2010 (max. 500 mg/kg whereas the standard is 150 mg/kg). No groundwater contamination was detected. | Heavy metals exceeding the standard values of the Soil Contamination Countermeasures Act were detected at the business sites on the left. Monitoring of the groundwater is conducted at these sites every year and their contamination levels have been confirmed to be below standard values. |
| Akita Sumitomo Bakelite | Lead was detected by soil elution sampling in 2005 (max. 0.032 mg/L whereas the standard is 0.01 mg/L). No groundwater contamination was detected.         |  |

## Recycling

The Group promotes recycling as a means to make effective use of resources. This recycling includes the recovery and recycling of phenol from waste liquid produced by phenolic resin reactions during the product production process, fine grinding of offcuts from phenolic laminated sheets and decorative melamine resin laminate for use as a filler in phenolic resin molding compounds reuse of molded article by-products (sprues and runners) as raw material for molding materials, as well as reuse of excess sludge

from activated sludge effluent treatment equipment as compost (organic fertilizer).

With regard to the recycling of phenol products, we are making practical use of a chemical recycling process through which the products are reused as high value-added raw chemical materials. We were the first in the world to successfully develop and apply a supercritical fluid technology-based chemical recycling method for phenolic resin products.

# Safety and Security



We are carefully managing occupational safety and Accident Prevention. These efforts will contribute to Sustainable Development Goal 8: Decent Work and Economic Growth.

## Occupational Health and Safety Management System

The Group has established a Responsible Care Committee chaired by the director overseeing company-wide safety. This committee determines health and safety activity policies along with important measures for preventing disasters and accidents. Following this, the committee rolls out health and safety activities across the entire company.

Each of our business sites makes efforts closely in tune with the needs of individual workplaces within a shared company-wide framework and under an accountability structure involving the managers of business sites. At its monthly meetings, the Health and Safety Committee inspects health and safety management activities, ensures thorough compliance with relevant laws and ordinances, and considers investments in risk reduction activities, among other actions.

In 2009, the Group's plants and main domestic subsidiaries and affiliates in Japan began pursuing OHSAS18001 accreditation,

followed by the Group's overseas subsidiaries and affiliates from 2010. Today, a total of 23 business sites have received accreditation, including five business sites and three affiliates in Japan and 15 affiliates overseas.

### Management Structure



## Machinery and Equipment Risk Reduction Activities

All new machinery and equipment installed at domestic production plants and subsidiaries and affiliates from 2008 and at overseas subsidiaries and affiliates from 2009, have been designed in compliance with ISO12100. We repeatedly carry out risk assessments even for existing facilities in an effort to make machinery and equipment fundamentally safer.

## Risk Reduction Activities relating to Chemical Substances

In 2012, we introduced chemical substance risk assessment at plants in Japan and subsidiaries and affiliates worldwide. Since then, we periodically verify our evaluation results and review our risk calculation methods, aiming to prevent adverse health affects on employees and to prevent accidents or disasters caused by explosions or fires.

## Complaints from Authorities, Local Governments and Local Communities

Our business sites in Japan along with subsidiaries and affiliates worldwide comply with laws and ordinances and address prevention needs in order to preserve the environment. In fiscal 2017, we received three complaints concerning the environment.

These comprised two complaints relating to environmental impacts and one complaint concerning odors. We addressed each of these complaints in an appropriate manner.

## Health and Safety Education

We carry out measures to reduce the risks posed by machinery and chemical substances in order to ensure safety on sites where these are used. At the same time, we conduct hazard prediction training as well as initiatives, such as "pointing and calling" and making proposals for reducing near-miss accidents. We have introduced "Safety Gyms" at each production plant to allow employees to learn about the fundamentals of safety. They are able to improve their safety consciousness and learn hazard

prediction skills and risk identification skills.

We also conduct safety education at every level. This includes safety meetings in which all plant managers participate to share policies on safety activities they spearheaded, dedicated safety education for managers, basic correspondence education on safety for mid-level employees, and experience-based danger education for new employees.



Special training on handling cranes of less than five tons



Experience-based danger education for new hires



Crossroad format study meeting held for natural disaster preparation



Disaster prevention drill (rescue from debris)

## Occupational Accident Figures

### Trends in the Frequency Rate of Accidents at Sumitomo Bakelite and Subsidiaries and Affiliates Worldwide

The graph on the right shows the overall frequency rate\*<sup>1</sup> of occupational accidents including, those occurring at subsidiaries and affiliates world wide.

The number of accidents resulting in lost workdays declined worldwide in 2017 compared to 2016 and the frequency rate dropped as well.

\*1 Frequency rate = (Deaths and injuries/total working hours) x 1,000,000  
Notes: Data covers each calendar year.  
See the business sites listed on page 3 about the boundary.

### Trends in Occupational Accidents at Sumitomo Bakelite and Subsidiaries and Affiliates Worldwide

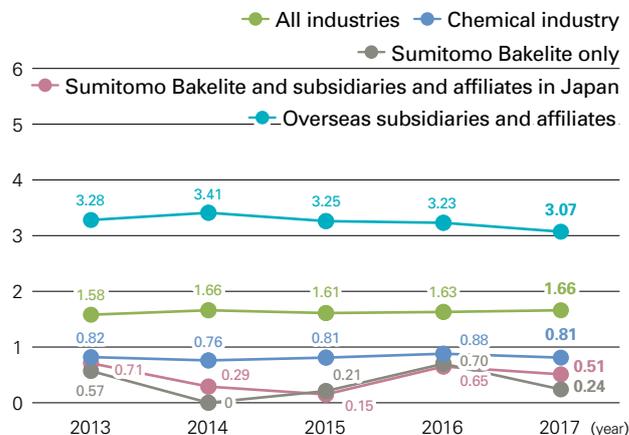
#### Number of Employees Injured as a Result of Occupational Accidents

The graph on right shows the number of employees injured as a result of occupational accidents at our company as well as subsidiaries and affiliates in Japan. In 2017, the number of employees injured as a result of occupational accidents (including both those resulting in lost workdays and those not resulting in lost workdays) declined compared to 2016, and was close to 2015 when figures were at their lowest level on record.

#### Occupational Accidents by Type

Occupational accidents categorized by type are shown in the graph on right. In 2017, incidents involving cuts and abrasions caused by sharp objects accounted for 40% of occupational accidents. Since the majority of these were due to unsafe actions, such as not wearing safety equipment or deficiencies in work method, we are working to raise sensitivities to danger among employees through safety videos and the use of experience-based danger education machines. Over the last five years 40% of occupational accidents have been the result of the following two causes: pinching/entanglement and cuts and abrasions. We are now implementing preventative measures targeting technical and human factors to reduce the number of occupational accidents.

### Frequency Rate of Occupational Accidents at Sumitomo Bakelite and Subsidiaries and Affiliates Worldwide

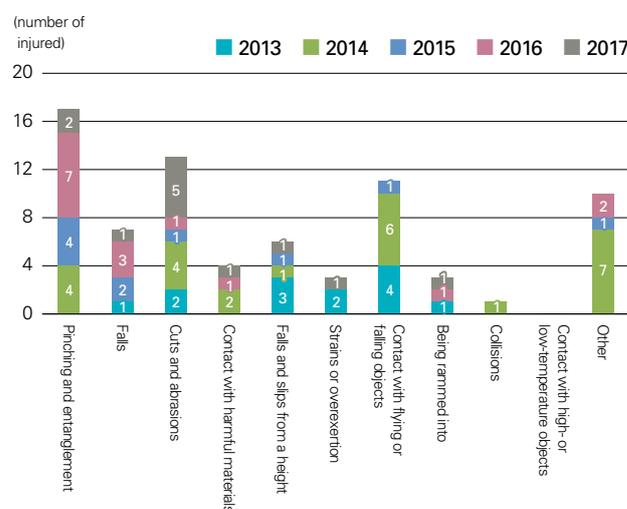


### Number of Employees Injured as a Result of Occupational Accidents (in Japan)



Notes: Data covers each calendar year.  
See the business sites in Japan listed on page 3 about the boundary.

### Occupational Accidents by Type (in Japan)



## Trends in Occupational Accidents at Overseas Subsidiaries and Affiliates

### Number of Employees Injured as a Result of Occupational Accidents

The graph below shows the number of employees injured as a result of occupational accidents at our overseas subsidiaries and affiliates. Compared to 2016, in 2017 there was a slight decline in occupational injuries resulting in lost workdays and a slight increase in occupational injuries not resulting in lost workdays. However, there was one fatality at Vaupell when a heavy metal die fell on a male worker. In addition, Sumitomo Bakelite (Dongguan) Co., Ltd. achieved one million consecutive hours of operation without an occupational accident.

### Number of Employees Injured as a Result of Occupational Accidents (Overseas)



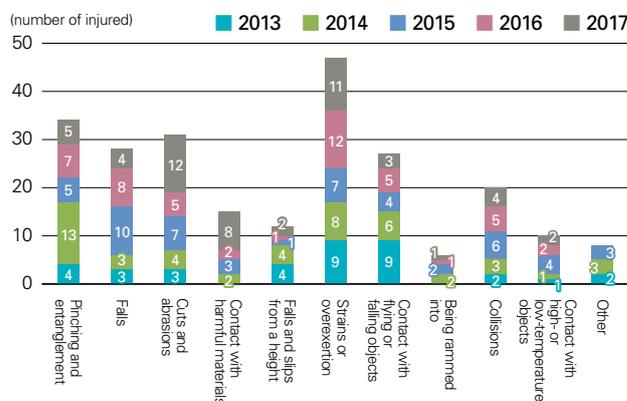
Notes: Data covers each calendar year. See the business sites in Japan listed on page 3 about the boundary.

### Occupational Accidents by Type

The graph below shows occupational accidents categorized by type. In 2017, around 60% of occupational accidents occurred as a result of employees' unsafe actions, such as reactive movements and ergonomically incorrect postures, in addition to a sharp increase in the number of cuts and abrasions caused by sharp objects like in Japan, and an increase in injuries caused by contact with chemical substances or hot water.

Similar to Japan, we continue to raise safety awareness through the use of safety videos and introduction of hazard prediction training. As for trends over the previous five years, a large proportion of accidents have resulted from pinching, falls, cuts and abrasions and reckless actions. Therefore, we will work to reduce occupational accidents by making machinery and equipment more intrinsically safe and by implementing ergonomic-based measures.

### Occupational Accidents by Type (Overseas)



## Topic Health and Safety Activities at an Overseas Business Site

### Sumitomo Bakelite (Dongguan) achieves one million consecutive hours of operation without an occupational accident

Sumitomo Bakelite (Dongguan) Co., Ltd. achieved one million consecutive hours of operation without an occupational accident for the period from October 2016 to October 27, 2017. In recognition of this achievement, the company was presented with a letter of commendation and shield from then Sumitomo Bakelite President Hayashi.



## Accident Prevention

Accident Prevention is the top priority of all our business sites. Our objective is to make business sites safer and more secure, and thus earn the confidence of the local community, ensure employee safety, and maintain stable supplies of products to customers.

Each business site formulates action plans and continually implements education and training designed to maintain workplaces that are free of accidents. The company also carries out disaster prevention measures and training for minimizing damage should an accident occur.



Firefighting drill at Sumitomo Bakelite Europe (Barcelona)



Spill response drill at Sumitomo Bakelite Macau



Late-night evacuation drill at the Amagasaki Plant



Joint firefighting drill for safety managers of each company held at SBP Indonesia's training center

# Chemical Substance Management



We are carefully managing chemical substances to ensure safety and peace of mind. These efforts will contribute to Sustainable Development Goal 12: Responsible Consumption and Production.

## Chemical Substance Management throughout Product Life Cycles

The targets for 2020 agreed upon at the WSSD\*<sup>1</sup> call for the worldwide and comprehensive management of chemical substances throughout the product life cycle, from development to manufacturing, use and disposal, by 2020 in order to minimize the significant adverse effects on human health and the environment caused by the manufacture and use of chemical substances. Following this trend, the regulatory environment is changing, as new regulations on the management of chemical substances have been established not only in Europe and the United States, but also in Asian countries since 2015.

In September 2015, the Sustainable Development Goals (SDGs) were adopted at the U.N. Summit. They comprise 17 goals and 169 targets to be achieved by 2030 to create a sustainable world.

Aimed at achieving the SDGs in 2030, the governments of each country have begun taking proactive actions. The Group (each of our plants and research institutes worldwide) is working on the SDGs through the management of chemicals carried out as part of our Responsible Care activities.

In terms of its management of chemical substances, the Group has a system in place for studying and reviewing chemical substance-related laws and regulations in Japan and throughout the world from the product development phase onward. We manage the chemical substances contained in products in order to comply with the laws of the countries where we operate and to minimize environmental impacts throughout product life cycles.

\*1 See the glossary on page 78.

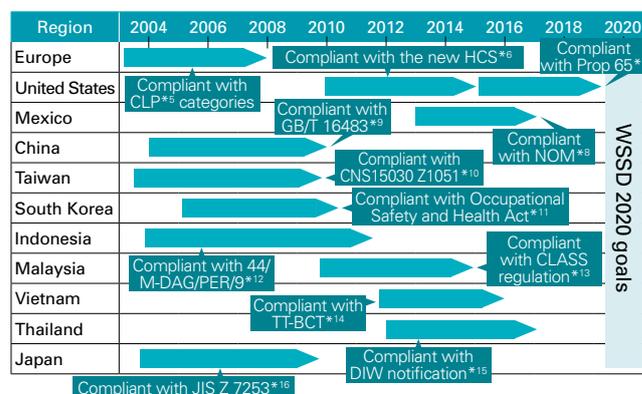
## Chemical Substance Management System

We are focussing on promoting the use of SDSs\*<sup>2</sup> across the Group not only for disclosing information related to chemical substances under regulatory control in Japan and overseas, but also for disclosing relevant information voluntarily so as to improve the quality of Group's information disclosure practices. We were among the first to introduce MSDgen\*<sup>3</sup> in response to the GHS.\*<sup>4</sup> This has enabled us to provide SDSs that are compliant with the regulations of 39 countries, including Japan, in the official languages of those countries.

In 2018, we will make modifications to SDS in compliance with Proposition 65, a new regulation established by the state of California in the United States.

\*2,3,4 See the glossary on page 78.

### ■ Status of GHS implementation and countries in which we provide SDS



Countries in which we provide SDS: 39 (North America/Latin America: 4 countries, Europe: 24 countries, Asia/Oceania: 10 countries, Japan)

\*5 to 16 See the glossary on page 78.

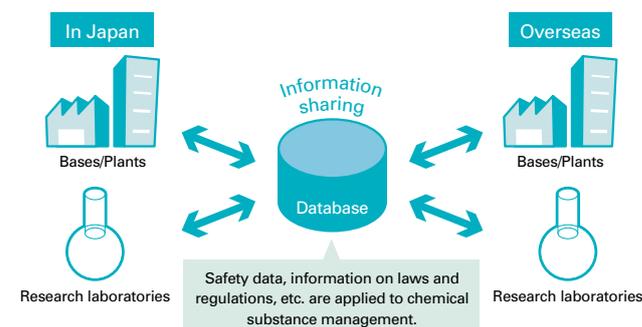
## Chemical Substance Management System

We are creating a comprehensive chemical substance management system to centrally manage all chemical substances contained in products and raw materials handled by the Group. Introducing this system allows us to speed up chemical substance-related investigations (inventory in each country, the safety of products and raw materials, regulatory information, etc.) and to provide accurate information. We are now rolling out the system to plants that manufacture molded articles\*<sup>17</sup> and expanding application of volume tracking management to products for Taiwan and South Korea, in addition to Japan's Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture and Industrial Safety and Health Act as well as Europe's REACH.\*<sup>18</sup> We will continue to enhance our system for managing chemical substances in order to ensure even more meticulous management of these substances.

\*17 "Molded articles" here refers to all molded articles that have a defined shape with dimensions that can be measured. This applies to molded products and parts of devices, electronic components, paper, packaging materials, etc.

\*18 See the glossary on page 78.

### ■ Chemical Substance Management System



# Product Liability

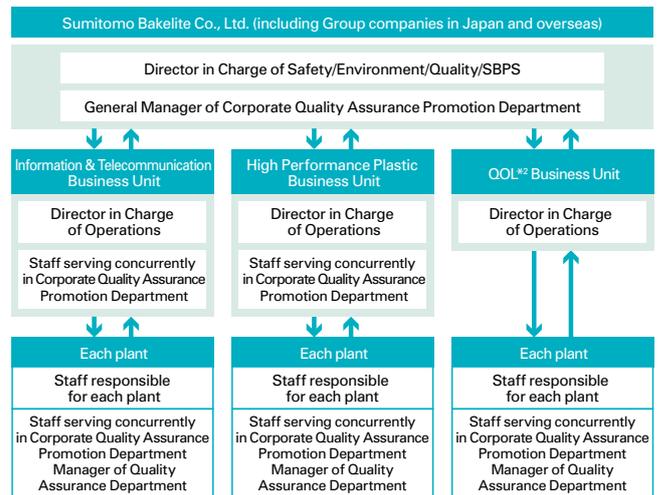


We are addressing product liability as an issue for ensuring safety and peace of mind. These efforts will contribute to Sustainable Development Goal 12: Responsible Consumption and Production.

## The Group's Basic Policy and System for Quality Assurance

The Group has established quality management systems (QMS) based on ISO 9001 and is continuing to acquire relevant certifications (a total of 38 sites have been certified as of May 1, 2018). Recognizing the provision of products and services that customers can always feel satisfaction and peace of mind in using is an important social mission for our company, all relevant departments collaborate on all processes—from product planning, research, design & development, preparation for production, production, sales & service, to quality assurance—with an awareness of the importance of ensuring the safety of products, and create and appropriately implement and management frameworks within which to enhance and maintain product safety and quality. We formulated our Quality Management Policy to ensure that every employee of the Group systematically implements quality assurance initiatives in accordance with QMS.

### Quality Management System



\*2 See the glossary on page 78.

### Quality Management Policy for FY2018

#### Basic Policy

In mind with Customer First and Quality First, we (all SB Group employees) shall contribute to increasing the company's profits by creating an efficient workflow of quality formation for fundamental improvements, and at the same time we shall contribute to the society in conformity with SDGs:

\*\*\*\*\* One Sumibe / Zero Defect / Proactive \*\*\*\*\*

#### Action Plan: SDGs Goal 12. Ensure sustainable consumption and production patterns

- I. Working toward Ensuring Quality Realizing Safety and Providing Peace of Mind (QA Department's Role and Responsibility)
- II. Quality Improvement Activities of Existing Businesses (Complaints Handling Aimed at Improving Customer Satisfaction)
- III. Reducing Risks to New Products or New Businesses
- IV. Improvement of the Entire Total Manufacturing (Monozukuri) Process through Daily Inspection/Review and Monozukuri Audit
- V. Skill Enhancement for Preventing Risks in Design & Development Process and Each Operational Process

### QMS Certification Received

| Certification Standard   | Business/products   |
|--------------------------|---|
| ISO9001                  | Quality of life products (packaging films for food and pharmaceutical products, bio-based products, construction materials, waterproofing products, etc.) |
|                          | High-performance plastics (included molded articles)  |
|                          | Semiconductor-related materials   |
| ISO/TS16949 or IATF16949 | High-performance plastics (included molded articles)  |
|                          | Semiconductor-related materials   |
| ISO13485                 | Medical products  |
| ISO15378                 | Packaging Materials for Pharmaceuticals   |
| FSSC22000                | Packaging films for food  |
| AS9100 or JIS Q9100      | Aircraft components   |

## Future State Vision of Appropriate New-Product Development and Commercialization Processes of the Group



## Quality Improvement Activities for Existing Business

We are working to enhance the quality of our existing products through such efforts as ensuring rapid response to complaints, taking measures to prevent reoccurrences of problems, and rigorous 4M change control. Cross-functional responses are made

to rapidly solve not only serious but also minor complaints. In order to prevent new occurrences and recurrence of issues leading to complaints and process abnormality, we use "Why-Why Analysis" and "Further Investigation" to identify what happened, causes, and

countermeasures, among other factors, concerning these issues. This information is organized as knowledge that can be shared and used at any time by relevant divisions.

In fiscal 2017, we established focus items from among our product lines and established a workflow where countermeasures are carried out following FTA\*<sup>3</sup>, FMEA\*<sup>4</sup> and then a QC Process Chart,

in order to reinforce our foundation for preventing new occurrences of complaints. This workflow of FTA, FMEA and QC Process Chart has been established for 60% of these focus items and is currently in operation. In fiscal 2018, we will entrench this workflow and begin rolling it out to all products.

\*3,4 See the glossary on page 78.

## Reducing Risk Relating to New Business

There is a need to improve (optimize) the output quality (degree of perfection) of product designs and process designs when developing new products and to shorten (minimize) the time required for the development process by minimizing rework.

### 1 Shortening New-Product Development Periods and Improving Work Quality

In new product development, initial plans are often delayed because of the tendency for a variety of problems requiring reworking to arise. To prevent this, we implement the Plan-Do-Check-Action (PDCA) cycle to increase the degree of perfection of design quality and shorten the development period through collaboration of all the divisions concerned from the initial phases. Furthermore, we implement the following to ensure that the problems do not recur in subsequent development work.

- i) **Feedback Review Analysis to identify problems through reviews of development processes over time.**
- ii) **Why-Why Analysis and Further Investigation to identify root causes of the occurrence and out-flowing of problems in terms of technology and management. Why-Why Analysis and Further Investigation are also used to determine why problems were not prevented in terms of organizations, allocation of functions, systems, frameworks, and culture and to identify measures for preventing recurrence and new occurrences.**

### 2 Proactive Use of Various Quality Control Techniques

In addition to design review (DR) during each stage of product

design and process design, we conduct Failure Modes and Effects Analysis (FMEA) to predict potential failures or abnormalities by analyzing health and safety risks on people including customers related to our products, along with Design Review Based on Failure Mode (DRBFM) that focuses on changes to the design and changes to conditions and the environment. In turn, we implement risk reduction measures in all processes of DR, FMEA and DRBFM as well as during technical verification at the time of using new raw materials. In addition, we use Fault Tree Analysis (FTA) that rationally analyzes accidents and defects in a hierarchical manner to discover root causes and fundamental solutions for preventing recurrence.

We use FMEA, DRBFM, FTA not only for new product development but also for preventing quality-related problems that tend to occur in the 3H situations (Hajimete: when something is performed for the first time; Henkou & Henka: when there is a change or difference from the previous time; Hisashiburi: when something reoccurs for the first time after a long interval). In fiscal 2017, during the initial development phase of products for new businesses, we continued to carry out an expanded form of FMEA involving experts from outside each applicable business unit in an effort to reduce quality risks.



Quality education (on FTA / FMEA) for second year engineering employees held in June 2017

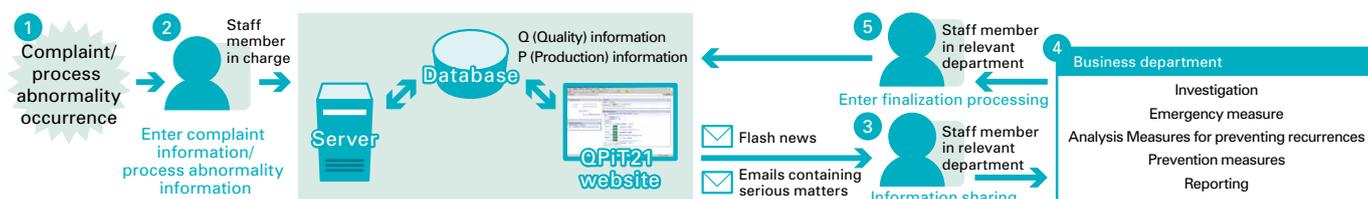
## The “QPiT” System for Processing Quality-Related Complaints

We manage complaints relating to quality using the “QPiT21” system. QPiT21 (Quality & Production information Tools 21) is a system that allows the central management of quality- and production-related information, and it has been built into the Group-wide intranet. The system was introduced in order to accelerate the communication of quality- and production-related information within the Group, facilitate the sharing of information, and encourage the integration and effective utilization

of information levels. With this system it is possible to respond efficiently, rapidly and appropriately to complaints.

In fiscal 2017, to detect and prevent growing concerns over risks posed in complaints, we created and began operating a system in which emails containing serious matters detected in complaints are sent out to relevant parties, in addition to conventional flash reports provided via the “QPiT” system. The new system enables us to further accelerate the processing of complaints by closely sharing critical complaint information between relevant parties.

### Complaint Processing Flow



When a complaint or process abnormality occurs, an employee enters the information into the QPiT21 system.

This information is sent to all staff members in charge, and the relevant business units investigate the complaint or process abnormality, and provide an emergency response, carry out analysis, implement measures to prevent recurrences and other similar occurrences, report back to customers, etc.

## Internal Quality Auditing and Daily Inspection/Review

For quality audits performed in fiscal 2017, we launched a new system called 'Monozukuri' Audits (see below) jointly conducted the three departments of quality assurance, EHS, and SBPS within the Corporate Production Management & Engineering Division. The Corporate Quality Assurance Promotion Department inspects and examines operations daily from a customers' perspectives through support of R&D activities at research departments (participation in DR, cooperation with FMEA,

etc.) and support of production activities at each business department (change control, FEMA, FTA, Why-Why Analysis and Further Investigation, participation in quality meetings and DR, maintaining/managing quality information and quality data, and checking the appropriateness of complaint countermeasures, etc.). It also carries out activities to raise awareness about quality improvement.

### 'Monozukuri' Audits

#### Issues in Conventional Audits

We faced difficulty in identifying root issues facing each business site through the quality audits and environment and safety audits conducted every year on each business site by the Corporate Quality Assurance Promotion Department and Corporate EHS Promotion Department within the Corporate Production Management & Engineering Division. This difficulty was due to not enough man-hours and days spent on audits, the insufficient skill level of auditors, and a lack of information provided beforehand, among other factors. At the same time, the internal audits conducted by each business site focused on the management system, making it difficult to identify the root cause of issues, prevent their reoccurrence, and prevent issues from arising.

#### Purpose and Method of 'Monozukuri' Audits

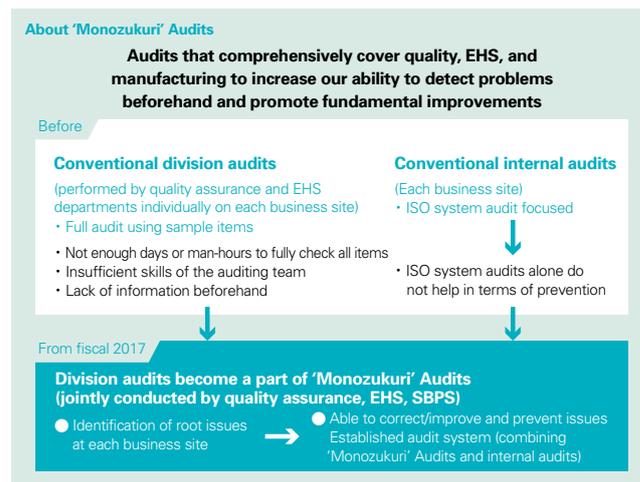
As a result, we established a new audit system (combining 'Monozukuri' Audits and internal audits) that can identify the root issues facing each business site as well as to correct/improve the situation and/or prevent these issues.

- (1) Audits will be conducted in greater detail (review of questions on check sheet) to inspect and cover audit points that could pose or predict problems in terms of quality, EHS, or production that occurred last year.
- (2) Business sites will be inspected jointly by the three promotion departments (quality assurance, EHS, SBPS) within the Corporate Production Management & Engineering Division ('Monozukuri' Audits).
- (3) Internal audits conducted by each business site will contain inspection items from 'Monozukuri' Audits to enable business sites to correct/improve issues autonomously using the PDCA cycle.
- (4) 'Monozukuri' Audits will inspect internal audit results, the status of corrective actions or improvements, and important matters, and also involve follow-up, etc.

#### Results of 'Monozukuri' Audits

In fiscal 2017, 'Monozukuri' Audits were conducted on our six main business sites in Japan (Shizuoka Plant, Kanuma Plant, Utsunomiya Plant, Amagasaki Plant, Kyushu Sumitomo Bakelite, and Akita Sumitomo Bakelite) and four business sites in North America.

Findings from internal audits and 'Monozukuri' audits indicate items that are or could become root issues. We believe the function of these audits to identify root issues has been nearly achieved. In addition, to roll out risk reduction measures, we shared the findings of other business sites with our six business sites in Japan, and asked each to conduct self-inspections and take corrective action or make improvements where needed. Issues that were found sporadically at certain business sites included items that could not be inspected due to time constraints as well as problems related to the skill level of internal auditors and 'Monozukuri' auditors. As a result, in fiscal 2018, we will keep these issues in mind as we make improvements.



'Monozukuri' Audit in progress at Durez Canada

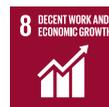


'Monozukuri' Audit at Durez Corporation (Niagara Falls Plant)



'Monozukuri' Audit in progress at the Kanuma Plant

# Enhancing Customer Satisfaction (CS)



We are working to enhance customer satisfaction (CS) as an issue impacting society. These efforts will contribute to Sustainable Development Goal 8: Decent Work and Economic Growth.

## CS Promotion System

Our company has established a basic policy on the promotion of CS through the CS\*1 Promotion Committee. In accordance with this basic policy, divisions and Group companies work together to share the voice (needs) of the customers and improve business processes based on this.

We invite customers in an annual conference to listen to their voices, deepen mutual understanding and trust through questionnaires and other means. Internally, we hold CS discussion meeting annually to share CS activities and enhance awareness of CS. Each business site and business division creates their own CS Declaration comprised of five principles to suit the nature of

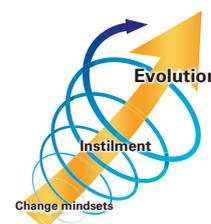
its business and environment, all employees continue to evolve. Also, we utilize the company newsletter to convey our philosophy toward CS activities to employees.

\*1 See the glossary on page 78.

### CS Promotion System



### Spiraling up of CS activities



## Promoting One Sumibe Activities

With customer satisfaction (CS) a top priority, we have established the slogan "One Sumibe" under which we engage in marketing activities covering all products sold to customers, deepen relationships with customers, and actively work together with entities both inside and outside the Group. Through these activities, we combine information, technologies, and ideas that could not be shared through conventional activities focused exclusively on individual businesses, with the goal of proposing

and selling products across business lines. In fiscal 2017, we set up cross-functional teams to propose products to customers, and created opportunities so that various departments can easily share information or consult with one another.

In fiscal 2018, we are working on educating employees using e-learning and other means to further penetrate these activities across the company.

## Utilizing QPiT Information to Enhance CS

We are utilizing various kinds of information accumulated in the QPiT, our Group's system for managing quality-related information such as complaints and customer requests, to enhance CS. There are common threads within complaints and customer requests and such information can be useful for other divisions.

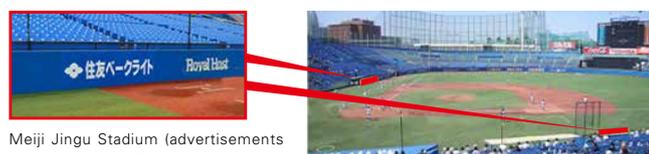
By analyzing the content and trends of such information and implementing measures to address the issues while building a framework to improve these and sharing these internally, a wide range of divisions can work to achieve the aim of improving CS.

[Link](#) → Page 49 The QPiT system for processing complaints relating to quality

## Dissemination of Corporate Information

In order to help stakeholders gain a better understanding of the Group's diverse activities, we strive to ensure that all our communications comply with applicable laws, regulations and inhouse rules, and use honest, appropriate, and easy to understand display methods and expressions.

Besides the disclosure of corporate information as mandated by law, we use diverse media to disseminate information, such as press releases, advertising in newspapers and magazines, booklets, as well as advertisements in airports, train stations,



Shinkansen carriages, and baseball stadiums, signage, along with our website. We made our corporate website compatible with smartphone viewing (Japanese, English and Chinese language versions) in fiscal 2016.

In addition, we display finished products and digital signage that use our products as components or materials at exhibition corners at our business sites and at some product expositions to help customers and business partners understand our products better.

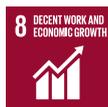


Signage on the 3F of the Haneda Airport International Passenger Terminal | Corner with digital signage displaying products at our head office

# Recruiting and Employment

The Group's business activities would not be possible without its employees.

Recruiting and employment is an important aspect underpinning the continuity of our business operations. We carry out



We are working to enhance the recruiting and employment experience as an issue impacting society. These efforts will contribute to Sustainable Development Goal 5: Gender Equality and Sustainable Development Goal 8: Decent Work and Economic Growth.

recruitment under a policy for the fair selection of talent with an eye on employee diversity. The Responsible Care Committee monitors, reviews and makes changes to our recruitment practices.

## Number of Group Employees and Executive Officers

### Number of Employees in Japan and Overseas (as of March 31, 2018) ✓

|                                      | Directors | Executive officers | Employees | Temporary employees*1 | Total |
|--------------------------------------|-----------|--------------------|-----------|-----------------------|-------|
| Sumitomo Bakelite Co., Ltd.          | 10        | 12                 | 1,676     | 212                   | 1,910 |
| Subsidiaries and affiliates in Japan | 22        | —                  | 759       | 216                   | 997   |
| Overseas subsidiaries and affiliates | 21        | —                  | 3,230     | 257                   | 3,508 |
| Total                                | 53        | 12                 | 5,665     | 685                   | 6,415 |

\* The number of employees (consolidated) on page 29 includes our company employees who serve as directors of subsidiaries and affiliates.

\* The numbers of directors of subsidiaries and affiliates in Japan and overseas represent the number of full-time directors including our company employees who serve as directors of subsidiaries and affiliates, but excluding those serving concurrently as directors of our company.

\*1 Part-time and casual workers

### Employees by Region/Proportion of male and female employees (as of March 31, 2018) ✓

|           |        | Japan | Europe | North America | East Asia | Southeast Asia | Total |
|-----------|--------|-------|--------|---------------|-----------|----------------|-------|
| Employees | Male   | 2,153 | 304    | 725           | 738       | 486            | 4,406 |
|           | Female | 282   | 56     | 320           | 510       | 91             | 1,259 |
| Total     |        | 2,435 | 360    | 1,045         | 1,248     | 577            | 5,665 |

\*The total for Japan includes domestic subsidiaries and affiliates.

### Breakdown of Employees by Age and by Gender (as of March 31, 2018)

|           |        | Age 29 or younger | Age 30 to 49 | Age 50 or older | Total |
|-----------|--------|-------------------|--------------|-----------------|-------|
| Employees | Male   | 114               | 946          | 416             | 1,476 |
|           | Female | 26                | 130          | 44              | 200   |
|           | Total  | 140               | 1,076        | 460             | 1,676 |

### Number of Newly Recruited Employees (Including new graduates and mid-career personnel) ✓

|                           | Fiscal 2013 | Fiscal 2014 | Fiscal 2015 | Fiscal 2016 | Fiscal 017 | Fiscal 2018 (planned) |
|---------------------------|-------------|-------------|-------------|-------------|------------|-----------------------|
| Number of people employed | 34          | 50          | 38          | 34          | 30         | 30                    |
| Male                      | 28          | 42          | 31          | 31          | 21         | —                     |
| Female                    | 6           | 8           | 7           | 3           | 9          | —                     |

\* Does not include persons forwarded from other companies or employees reassigned from subsidiaries or affiliates in Japan.

\* Includes temporary employees who are not post-retirement hires.

\* Since employee recruitment is gender-neutral, the gender composition of the planned intake of new employees for fiscal 2018 is unknown.

### Breakdown of Recruitment in Fiscal 2017 (By Gender and By Age)

|  | Age 29 or younger | Age 30 to 49 | Age 50 or older |
|--|-------------------|--------------|-----------------|
| Number of Newly Recruited Employees in Fiscal 2017 | 21                | 9            | 0               |
| Male   | 14                | 7            | 0               |
| Female   | 7                 | 2            | 0               |

### Retention of Newly Graduated Recruits (Retention rate three years after hiring) ✓

|  | Fiscal 2013 | Fiscal 2014 | Fiscal 2015 |
|--|-------------|-------------|-------------|
| Retention rate after three years of employment | 89.3%       | 93.9%       | 93.9%       |

\* The numbers in the table represent the rate among newly graduated recruits with at least a bachelor's degree.

\* For fiscal 2015, this indicates the percentage of employees hired on April 1, 2015 who were still employed with the company on March 31, 2018.

### Employee Turnover and Turnover Rate in Fiscal 2017 (By Gender and By Age)

|   | Male | Female | Total | Age 29 or younger | Age 30 to 49 | Age 50 or older | Total |
|---|------|--------|-------|-------------------|--------------|-----------------|-------|
| Number of persons                       | 74   | 2      | 76    | 11                | 17           | 48              | 76    |
| Ratio of employees as of March 31, 2018 | 5.0% | 1.0%   | 4.5%  | 7.9%              | 1.6%         | 10.4%           | 4.5%  |

\* Turnover does not include post-retirement hiring.

## Continued employment beyond the age of retirement

Following the passing of the Act on Stabilization of Employment of Elderly Persons, we established a system to enable personnel who have reached the mandatory retirement age of 60 to continue working as contract employees.

By facilitating post-retirement hiring, this initiative harnesses the knowledge, technical skills, and knowhow that employees have accumulated over the course of their careers.

### Continued employment after retirement

|                                    | Fiscal 2013 | Fiscal 2014 | Fiscal 2015 | Fiscal 2016 | Fiscal 2017 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Number of retirement-age employees | 37          | 34          | 43          | 18          | 18          |
| Number of post-retirement rehires  | 23          | 27          | 31          | 16          | 13          |
| Rehiring ratio                     | 62%         | 79%         | 72%         | 89%         | 72%         |

Note: For the rehiring ratio, the first decimal place was rounded to the nearest whole number.

## Regarding Retirement Benefit Obligations

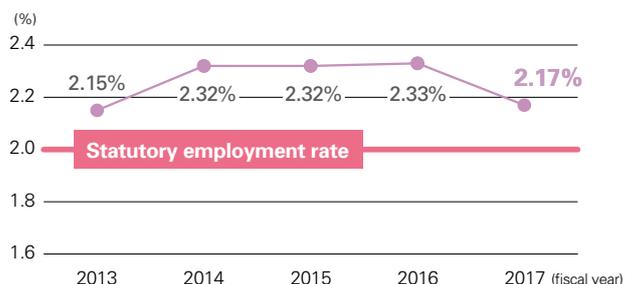
Regarding retirement benefit systems, the Company employs a defined-benefit system in Japan. Overseas, some consolidated subsidiaries concurrently use defined-contribution and defined-benefit systems. The consolidated retirement benefit obligations for fiscal 2017 totaled ¥32.3 billion, ¥31.0 billion of which was for pension funds.

[Link](#) → Securities Report (Yuka Shoken Hokokusho (Japanese only))

## Employment of People with Disabilities

Our company considers the employment of people with disabilities, as stipulated by law, to be an integral part of corporate social responsibility. While giving the necessary consideration to enabling those with disabilities to carry out their work, we endeavor to offer workplaces that are as safe and secure for those with disabilities as they are for others, and that allow employees to continuously hone and cultivate their skills. We are also making continuous efforts to employ new graduates with disabilities by, for example, accepting students with disabilities for internships so as to provide them with opportunities that suit their conditions and workstyle needs. These initiatives are approved, monitored, reviewed and modified by our Responsible Car Committee.

### Employment Rate of People with Disabilities over the Past Five Years (As of March 31, 2018)



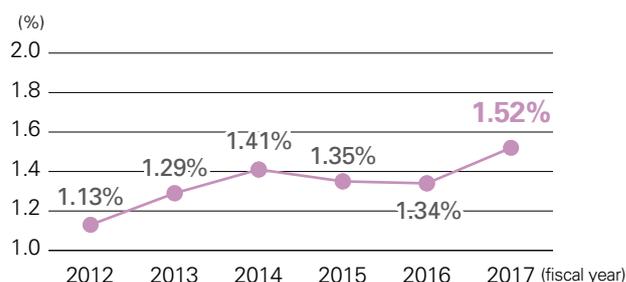
## Initiatives to Promote the Advancement of Women

We acknowledge that it is important for each of our employees to be able to play active their roles and demonstrate their individuality so that we are able to respond to the diverse needs of our customers, and we promote this diversity of talent. Within this, we recognize there are issues that we must actively address concerning the promotion of female advancement, and we are working to provide gender-neutral personnel training and create workplaces in which people can play active roles regardless of their gender. These initiatives are monitored and reviewed by the Responsible Care Committee.

We are carrying out initiatives following the action plan for the promotion of women's advancement that was decided in FY2015. In the four years from April 2016, we are aiming to solve the issues of there being few female management staff and the short length of service of women employed in career track positions. We have set the target of doubling the number of female management staff compared to the end of March 2014. At the end of March 2018, compared to the number of female management staff the previous year there was a 0.18%

increase to 1.52%. We are also offering career education to raise awareness of diversity management in relation to management staff, and to foster awareness of career development for female employees.

### Trends in the proportion of female management staff



\*"Management staff" refers to Sumitomo Bakelite Co. Ltd. employees at or above the level of superintendent and engineer, excluding executive officers.

\*Includes those seconded to other companies with qualifications as managerial staff.

\*The ratios are values for the end of each fiscal year.

# Work-Life Balance



We are working to promote work-life balance as an issue impacting society. These efforts will contribute to Sustainable Development Goal 5: Gender Equality and Sustainable Development Goal 8: Decent Work and Economic Growth.

## Our Position on Work-Life Balance

Our company promotes the creation of workplaces conducive to successful work-life balance of employees.

In 2008, our company formed its Work/Life Balance Labor Study Group to consider the options, formulate policies and commence their implementation. The objectives are:

- 1 To promote flexible approaches to work, while also reducing overtime hours and promoting the full use of annual leave entitlements, and encourage employees to devote the additional time available to worthwhile non-work activities, such as educational pursuits and activities related to family and communities.
- 2 To offer a greater diversity of working styles that benefit employees who must deal with major life events, such as marriage, childbirth, and child rearing, and thus contribute to nurturing the next generation.

In fiscal 2011, our company increased the number of accumulated annual paid vacation days (annual unused paid vacation days accrued) that may be carried over from 30 days to 40. In fiscal 2013, we expanded the application requirements to allow use for participation in volunteer activities and use in half-day increments. In fiscal 2014, we increased the number of days of leave for those attending the birth of their child from three days to five days. In 2016, we eliminated the number of days of accumulated annual paid vacation attached to family care leave and in 2017 we introduced a half-day leave system for days off in lieu.

We will continue to implement such initiatives as part of efforts to further promote better work/life balance.

### Number of Overtime Hours Worked and Days of Paid Leave Taken by Regular Employees

|  | Fiscal 2013 | Fiscal 2014 | Fiscal 2015 | Fiscal 2016 | Fiscal 2017 |
|--|-------------|-------------|-------------|-------------|-------------|
| Average number of overtime hours (per annum) | 139.9       | 140.4       | 124.5       | 93.6        | 146.6       |
| Average number of days of paid leave used    | 13.3        | 13.1        | 13.3        | 14.3        | 12.1        |

Note: "Regular employees" means our company (non-consolidated basis) personnel working during daytime hours, excluding managerial personnel.

## Employee Support for Various Life Events

We are focusing on creating an environment in which our employees can achieve their goals for both work and life events (such as childbirth and childcare).

We are also encouraging employees to proactively utilize various programs provided by the Group to help them deal with important

life events, and since the implementation of childcare leave and nursing care leave programs, the proportion of employees returning to work after taking childcare or nursing leave has been almost 100%. In fiscal 2017 six employees took childcare and no employees took nursing care leave.

Furthermore, we are implementing more employee support programs than the ones mandated by law to make it easier for our employees to continue working as they go through critical life events.



Next-generation Certification Mark: "Kurumin"

## Programs Relating to Childbirth and Childcare

| Items   | Details   |
|---|---|
| Childcare Leave Program                                   | Childcare leave can be taken until children reach the age of two (until the day before a child's second birthday)   |
| Altering work start times for workers caring for children | Employees with children in the sixth grade at elementary school or lower are able to shift their work start time in 30 minute increments up to either one hour forward or one hour back with the provision that there is no change to the length of their set work day.   |
| Reduced work hours for the purpose of childcare           | Employees with children in the sixth grade at elementary school or lower may, if they wish, reduce the length of their work days by up to two hours.  |
| Child nursing care leave                                  | Employees with children in the third grade at elementary school or lower who have been employed at the Company for six months or more can take child nursing care leave in addition to annual paid leave or missing work due to nursing care when any of the following applies.<br>1. A child is injured or is infected with a contagious disease<br>2. A child requires a vaccination or a checkup<br>• The number of days of child nursing care leave is up to five days per year for one child and up to 10 days per year for two or more children<br>• Child nursing care leave can be taken in half day increments<br>• Wages will not be paid during leave, but annual paid leave can be used |
| Childbirth leave  | Female employees are granted six weeks' leave prior to giving birth (14 weeks in case of multiple pregnancy) and eight weeks' leave after giving birth.   |
| Outpatient leave  | • Pregnant employees can take leave during pregnancy and after giving birth for receiving health guidance from a health professional or receiving postnatal checkups.<br>• Wages will not be paid during leave, but annual paid leave can be used   |
| Exemption from overtime work                              | Eligibility: Employees with a child under the age of three who request it<br>Details: Exempted from overtime work   |
| Limitation on overtime work                               | Eligibility: Employees with a pre-school age child who request it<br>Details: Cannot be ordered to work more than 24 hours of overtime per one month or over 150 hours per year   |
| Limitations on night work                                 | Eligibility: Employees with a pre-school age child who request it<br>Details: Cannot be ordered to work late at night   |

## Programs Relating to Nursing

| Items                          | Details   |
|--------------------------------|---|
| Nursing leave programs         | Employees are able to split leave up to three separate occasions for each situation where a family member requires care<br>Total period of leave: 1 year  |
| Change of work start time      | Employees are able to shift their work start time in 30 minute increments up to either one hour forward or one hour back with the provision that there is no change to the length of their set work day   |
| Nursing leave                  | <ul style="list-style-type: none"> <li>Nursing leave can be taken in half day increments up to five days per year when there is one family member requiring care or up to 10 days when there are two or more family members requiring care</li> <li>Wages will not be paid during leave, but annual paid leave can be used</li> </ul> |
| Limitations on overtime work   | Eligibility: Employees with a family member requiring care<br>Details: Cannot be ordered to work more than 24 hours of overtime per one month or over 150 hours per year  |
| Exemption from overtime work   | Eligibility: Employees with a family member requiring care who request it<br>Details: Exempted from overtime work   |
| Limitations on late night work | Eligibility: Employees with a family member requiring care who request it<br>Details: Cannot be ordered to work late at night   |

### Feedback from a user of our system

### I was able to spend a fulfilling time caring for my children

I took childcare leave for around three months from November 2017 when my eldest son (my second child) was born. My reason for taking childcare leave was because I wanted to lessen the burden on my wife a little by helping with the children, as we already had our eldest daughter (who was two years old), and my wife had given birth via C-section, as she did when our daughter was born. I explained the circumstances to my senior co-workers and my boss, and I was readily granted childcare leave. I started my leave from the day my son was born, and I noticed several things in the time until it ended. I took my daughter to nursery school and picked her up again instead of my wife and I looked after my son, and perhaps because my wife was able to rest, she seemed to recover from her C-section faster than she did when our daughter was born, meaning we were able to focus on caring for our children properly together as a couple. Being able to spend time watching my son grow day by day was an incredibly valuable experience. Plus, my daughter hugged me more than she did before my leave, maybe because I was spending more time with her, and I felt the importance of spending time with my children.

By taking childcare leave, I understood the fun and difficulties of childcare and housework, and I was able to have a fulfilling time. I'm extremely thankful to my workplace and company for readily granting me childcare leave.



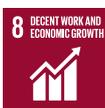
Corporate Production Engineering Department, Kanuma Plant  
**Akito Iemura**

## Human Resources Development

We believe that the growth of each and every employee is a driving force behind the sustainable growth of our businesses. For this reason, we recognize that human resources development is a critical aspect of management. We have established a policy

### The type of personnel we look for

Our company seeks to hire and foster people who will share and commit to its Business Philosophy—"Our company places prime importance on trust and sureness, and shall commit itself to contributing to the progress of society and enhancement of people's welfare and livelihood through its business activities." Furthermore, we need people who will embrace the Company's mission to become an excellent global enterprise that helps enhance customer value through its products and services, creating plastics with more sophisticated functions, and can achieve sustainable growth in the advanced chemical products sector. Specifically we seek personnel with the four characteristics listed on the right.



We are working on human resource development and education as an issue impacting society. These efforts will contribute to Sustainable Development Goal 5: Gender Equality and Sustainable Development Goal 8: Decent Work and Economic Growth.

on human resources development and actively offer education so that employees can take action toward their own personal and professional growth. The Responsible Care Committee monitors and reviews these initiatives.

### Key characteristics of the autonomously motivated personnel Sumitomo Bakelite seeks

- 1. People who are growth-oriented**  
and have the drive to acquire new skills and knowledge necessary for their jobs;
- 2. People with a pro-reform stance**  
who are not satisfied with the status quo, but are always looking for ways to do a better job;
- 3. People with a team-oriented approach**  
who can combine their individual strengths with the strengths of those around them to deliver better results; and
- 4. People with professionalism**  
who possess outstanding skills and know-how and can produce results through their work anywhere in the world.

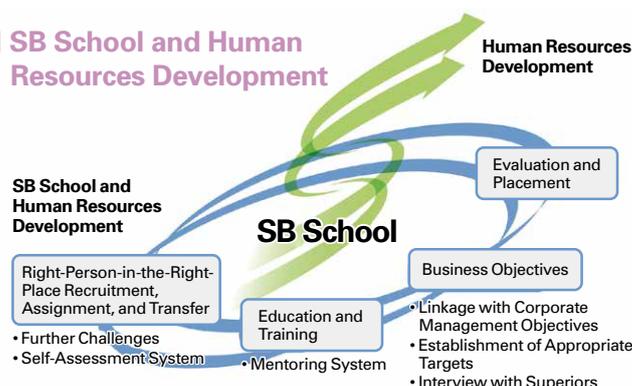
## The Group's in-house training institute, "SB School"

In September 2007, we opened the Sumitomo Bakelite School (SB School) as an in-house training institute.

The aim of SB School is to provide lifelong education and training courses that help our group achieve sustainable growth of business operations while maximizing corporate value. The school offers courses for all grades of employees from all departments. These include "all-employee education" courses that confirm and reinforce employees' awareness of the Company's Business Philosophy as well as fundamental knowledge about such issues as enhancement of CS, compliance, human rights, occupational safety, quality, and environmental protection. The school also systematically plans and implements various other kinds of educational and training courses needed by employees. From April 2017 through March 2018, the cumulative participation in SB School courses was about 17,000 employees, and the number of hours of education provided was approximately 26,000. We will plan and implement an increasingly wide range of programs to develop the capabilities of all employees—the Company's

most precious management resource. In addition, we implement life planning education as a program for providing necessary information for life planning after retirement and rethinking one's career direction. This program was revamped in fiscal 2017 to provide not only information about social insurance systems, but also opportunities to learn about second careers and health. In fiscal 2017, 54 employees took part.

### SB School and Human Resources Development



### Education and Training Structure of SB School

|                        | All-employee education   | Training by corporate departments | Special purpose training  | Education for each employee grade   | Self-development support   |
|------------------------|--|-----------------------------------|---|---|--|
| Executive officers     | Basic policies/compliance<br>Safety<br>Quality<br>Environment<br>CS (emphasizing customer satisfaction)<br>Human rights in the workplace |                                   |   | Education for executive officers  | Self-development/English conversation training<br>Correspondence courses |
| Management staff       |  |                                   |   | Education for management staff  |  |
| Department managers    |  |                                   |   | Education for line managers (advanced)<br>Education for line managers (basic) |  |
| Section chiefs         |  |                                   |   | Education for newly appointed section chiefs                                  |  |
| Supervisors/engineers  |  |                                   | <Specialist Education><br>CS and legal affairs, labor, accounting, IT, intellectual property, environment, safety, quality, SBPS, manufacturing technology, R&D | Education for newly appointed management staff                                |  |
| Leaders (team leaders) |  |                                   |   | Education for site leaders  |  |
| Sixth year             |  |                                   |   | Statutory education for superintendents                                       |  |
| Second year            |  |                                   |   | Education for mid-career employees  |  |
|                        |  |                                   |   | Education for employees in their third year in the company                    |  |
| New recruits           |  |                                   |   | Follow-up education for new recruits<br>Education for new recruits            |  |



Education for team leaders



Life plan education



Education for newly appointed management staff

### SB School Course Participation (fiscal 2017)

Unit: Persons

| Type of course                                 | Number of participants |
|--|------------------------|
| Education for line managers (basic)            | 18                     |
| Education for line managers (advance)          | 18                     |
| Education for newly appointed section chiefs   | 37                     |
| Education for newly appointed management staff | 36                     |
| Education for team leaders                     | 20                     |
| Education for mid-career staff                 | 25                     |

| Type of course   | Number of participants |
|--|------------------------|
| Education for employees in their third year in the company | 24                     |
| Follow-up education for new employees                      | 19                     |
| Education for new employees                                | 19                     |
| Life plan education  | 54                     |
| Total  | 270                    |

## Topic Manufacturing-oriented SBPS Education

SBPS activities originally began as an offshoot of on-site kaizen (improvement) activities but are now implemented throughout the Company in order to generate the values demanded by customers and society.

The activities are aimed at securing the revenue and safety (personnel, facilities, environmental, and quality) that our company requires to achieve sustainable development. The activities involve setting specific targets (financial, quantitative,

and delivery), planning who needs to achieve each of these targets by when, and implementing these plans without delay, meaning the activities are just the same as the daily work tasks carried out by employees.

We believe that, through the ages, technical capabilities, knowledge, experience, and tireless will that each individual has who promotes these activities will always bring about our required results.

Based on this idea, we have organized education programs targeting each employee grade and level as part of the SB School system. The planning and operation of the education is in principle carried out by employees themselves.

Employees receiving training are required to submit reports once the training has ended. These reports make it possible to ascertain how well employees have understood what they have learned and also make it possible to gather employees' opinions about the training and their feedback on how the training could be improved, and this information is reflected in the planning of subsequent training sessions. With regard to employees who participate in specialist training courses, we not only have them submit their reports but also focus on making them implement their learning in their workplaces and, for that purpose, following up on them with regular verification.



Example of employee grade-specific education  
"SBPS Education for new recruits"

Through lecture sessions on the Company's kaizen (improvement) concepts and practical training sessions using assembly kits, new recruits learn about the basics of manufacturing. An on-site learning-based orientation course lasting approximately two months is also provided.



Example of specialist education  
"Training course for foreman"

Workplace management, human resources development and promoting improvement are all required duties of a foreman. During this training course, participants learn necessary approaches and skills through case studies and on-site inspections.

## Quality Control Skill Enhancement

We offer 31 quality-training programs at our SB School to increase our employees' awareness of quality, to prevent quality problems, and to improve quality techniques. November every year is designated as "quality month," and quality education via e-learning is provided for all employees.

In fiscal 2017 we switched quality education for second year engineering employees from an outside educational institution to in-house education. This training involves easy-to-understand

lectures and practice regarding our quality policy and quality stance, regulations, quality management system, problem solving methods (FTA, FMEA, Why-Why Analysis, and Further Investigation), and statistical methods for employees newly assigned to research and design/development departments and production engineering departments. We will continue this training in fiscal 2018 as well.

## Environmental Education

Our laboratories and plants handle a wide range of chemical substances. We conduct periodic group education programs for employees, including new employees, with the objective of protecting the environment in the vicinity of our business sites and ensuring that employees work in safety. These programs are designed to enhance employees' understanding of the properties of chemical substances and the content of relevant laws and regulations, thus enabling them to handle chemical substances appropriately.

In addition to group education programs, environmental education by e-learning is conducted every year for all employees in June, a month dedicated to enhancement of environmental protection. Given that the SDGs are in the spotlight recently, this education examines the fundamentals and world view of the SDGs as well as provides an overview of the various activities

being implemented by the company, including the relationship between Responsible Care and the SDGs, to deepen employees' understanding.



## R&D and Tech Day Held

On November 9, 2017 we held the “2017 SB R&D and Tech Day” to share information about technology across the boundaries of the various departments and businesses that we operate with the aim of enhancing our overall Group-wide technological capabilities. More than 270 staff members from Japan and overseas, primarily from research departments, manufacturing-related departments, marketing, and sales participated in the meeting. After introducing case studies based on 10 different themes in the morning and 43 themes in the afternoon representing seven categories, a poster session was held while technical exchanges were also conducted. The case studies that were introduced in the morning were streamed online to over 150 employees at eight business sites in Japan.



Awarding of the Grand Prize at 2017 SB R&D and Tech Day

## 'Gemba Kaizen' Activity Presentation Meeting Held

On May 23, 2017, we held SB 'Gemba Kaizen' Activity Presentation Meeting 2017 as a venue for presenting successful outcomes of daily improvements at each business location. Twelve groups selected in advance gave presentations in front of the more than 150 employees in attendance. In addition, around 130 employees from eight business locations in Japan participated via the online broadcast. Information about daily improvements was also shared among those in attendance through short presentations and poster exhibits held after the main presentations.



Presentation by the top award winners from the Polymer Manufacturing Dept. of Shizuoka Plant

## Human Rights Education

We strictly prohibit discrimination and harassment in “Our Standards of Conduct” and other policies and this applies throughout the Group. Employees receive education about the Standards of Conduct when they join the company in an effort to raise awareness of human rights issues. We consider and implement human right education commensurate as a company, and urge each employee to gain a correct understanding of discrimination and harassment in society as a whole. In fiscal 2017, we implemented education for all employees on the theme of human rights in the workplace. This education deepened employees' understanding of harassment, which has become a major social issue in recent years and taught them key points to be aware of in stopping harassment. We aim to create amicable and lively workplaces in which employees honor and respect each individual's personality and rights.



We are working to raise awareness of human rights as an issue impacting society. These efforts will contribute to Sustainable Development Goal 5: Gender Equality and Sustainable Development Goal 8: Decent Work and Economic Growth.



Employees receiving computer-based human rights education

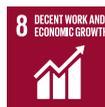
## Health Management

Our company strives to create workplaces conducive to the maintenance of employees' good health, both physical and mental. Our employee health management activities are primarily based on the results of regularly scheduled health checks. In particular, employees over 30 years old are entitled to receive cancer screening (stomach and colon) and those over 40 years old can receive abdominal ultrasonography as well. By ensuring that employees properly understand the results of health checks and receive timely diagnoses and guidance from in-house and external industrial physicians and other medical staff, the Company is contributing to the prevention or amelioration of lifestyle diseases. In addition, employees engaged in work that involves use of organic solvents and specified chemical substances receive special health checkups twice a year for early detection and prevention of health problems attributable to occupational diseases. We also provide opportunities for employees to receive health consultations at their own discretion with industrial medical staff who offer advice on physical and mental health issues. In fiscal 2012, we began offering health guidance to employees to help prevent lifestyle diseases such as diabetes, hypertension and dyslipidemia. In addition, based on the awareness that the preventive efforts of each employee are important for health

enhancement, we are also stepping up employee education concerning health-related matters. With regard to mental health, recognizing the importance of detecting a mental disorder in its early stage, we are conducting "line care" courses for managerial personnel who are responsible for managing other employees in order for them to increase and refine their knowledge about mental health.

With the provision of stress checks being made compulsory, from fiscal 2015 we began providing stress checks, and employees who so wish to can undergo consultations with a doctor. We are also working to put in place necessary measures based on the results of the health checks and enhance workplace environments based on the results of group analysis. In fiscal 2017, we began efforts to prevent serious illnesses (at Sumitomo Bakelite and certain subsidiaries and affiliates in Japan), to complete existing activities, as part of our data health plan.

We have also formulated a program to support people with mental health problems. The program is designed to help them return to work and to prevent relapses through a concerted effort of their superiors, people in charge of labor affairs, industrial physicians, and healthcare staff.



We are working with the labor union to help the company grow and create comfortable workplaces as an issue impacting society. These efforts will contribute to Sustainable Development Goal 8: Decent Work and Economic Growth.

### Topic Health Instruction with the Head Industrial Physician

We set up a special feature page in our company newsletter authored by our head industrial physician that provides seasonal and event-based health information useful for employees and their families to maintain and improve their health.

The special feature on infectious diseases (influenza and norovirus) covered how to prevent them and what to do if an employee actually caught one to make this important information known to all employees.

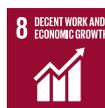


Mental health education lead by our head industrial physician

## Labor-Management Relations

We recognize that pleasant and satisfying working environments contribute to the development of the company, and therefore, good labor-management relations and the collaboration they engender are essential ingredients of such working environments. Currently, all of our regular employees are members of the Sumitomo Bakelite Union, and the percentage of all employees covered by the company's collective bargaining agreement is 54.5%.

Corporate-level meetings of the company's senior executives and representatives of the Sumitomo Bakelite Union are held twice a year at the head office. These meetings are valuable opportunities to cultivate favorable labor-management relationships by sharing frank views on the business environment and the Company's operations. Major business sites also hold monthly labor-management meetings at which information about conditions in each department is shared.



We are working with the labor union to help the company grow and create comfortable workplaces as an issue impacting society. These efforts will contribute to Sustainable Development Goal 8: Decent Work and Economic Growth.

As for health and safety, with a view to creating safe and comfortable workplaces through labor-management collaboration, we hold annual labor-management meetings on occupational health and safety based on the provisions of the labor agreement. Through a frank exchange of opinions, management and labor deepen mutual understanding.

We also recognize the occupational health and safety is an important theme to monitor between labor and management. At Sumitomo Bakelite along with its subsidiaries and affiliates with a labor union, provisions on health and safety can be found in the labor agreements officially agreed upon between the company and its labor union.

These ongoing initiatives help to further deepen long-standing labor-management relations. The Sumitomo Bakelite Union participation ratio is 100% for Sumitomo Bakelite and its subsidiaries and affiliates in Japan.

# Relationships with Shareholders and Investors



We are working on engagement with shareholders and investors as an issue impacting society. These efforts will contribute to Sustainable Development Goal 8: Decent Work and Economic Growth.

## Basic Policy on Profit Distribution

Our company is working actively to enhance our corporate value and regards returning a portion of profits generated by our businesses to shareholders as one of its most important management priorities. In allocating profits, we take into consideration the balance with retained earnings that will be

used for the future development of the business, such as R&D expenditures, capital investment, and M&A. We seek to pay stable dividends in line with consolidated financial performance. In line with the above basic policy, we paid dividends for the year ended March 31, 2018, of 12 yen per share.

## Information Disclosure

We carry out appropriate and timely disclosure of corporate information in accordance with the disclosure standards of the Tokyo Stock Exchange and in accordance with the "Information Disclosure Guidelines" in which we have set our basic approach to disclosing information to stakeholders including investors and employees simultaneously, fairly, and accurately.

We also make efforts to proactively disclose our information such as financial results, general shareholders' meeting, along with information disclosed in the manner as stated in the above paragraph, through posting them on our website.

Furthermore, for analysts and institutional investors, we host presentations on financial results twice a year, and organize individual meetings after announcement of quarterly financial results. The company's representative or officer in charge of

accounting visit institutional investors not only in Japan, but also in Europe, the United States and Southeast Asia where they explain the company's business results and business operations, and exchange opinions.



Presentation on financial results and business outlook



Business Report

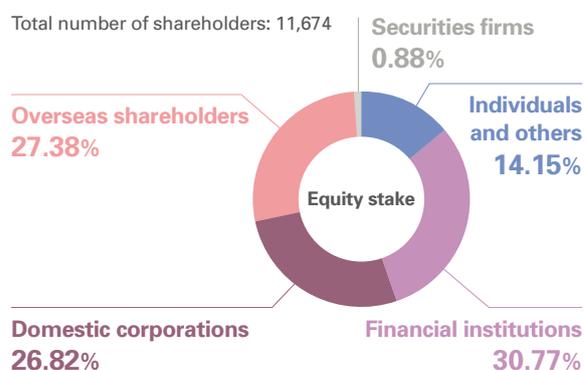
## Encouraging Exercise of Voting Rights at Shareholders' Meetings

Through such initiatives as enabling shareholders to vote by electronic means, sending early and posting on our website convening notices for general shareholders' meetings, we are working to create an environment that makes it easier for shareholders to exercise their voting rights.

### Shareholder Information and Equity Stake (as of March 31, 2018) ✓

Total number of shares issued : 247,952,394

Total number of shareholders: 11,674



# Relations with Local Communities



We are working on engagement with local communities as an issue impacting society. These efforts will contribute to Sustainable Development Goal 15: Life on Land.

## Environment-Related Initiatives

### Biodiversity Conservation Initiatives

Our company's business activities rely on nature's bounty. Following the philosophy of our Responsible Care Activity Guideline, we recognize the importance of conserving biodiversity. As such, we are a promotion partner of "The Declaration of Biodiversity by Nippon Keidanren." Understanding the importance of biodiversity outlined in the guidelines and reflecting it in the basic management stance, and following these declarations, we are promoting environmental impact reductions, compliance with

our procurement policy, and dialogue with communities through preservation activities at biotopes set up at some of our business locations. In terms of our initiatives during the product life cycle, we develop eco-friendly products, while outside of Japan we take part in local initiatives, including those that protect rare tree species.

These initiatives are approved, monitored, reviewed and modified by our Responsible Care Committee.

#### Topic Biotope Initiatives

The results of an investigation into the relationship between the business sites of our group worldwide and protected areas considered important in terms of biodiversity indicated that none of our business sites were located in these areas. Although not a protected area, the results of an ecosystem survey conducted in fiscal 2011 at the site of our Shizuoka Plant located in Fujieda City, Shizuoka Prefecture, confirmed the presence of killifish, an IA-rated endangered species. After determining the strong need for preserving the biodiversity of this site, we decided to create a company biotope. The biotope was completed in March 2017 after a five-year plan for creation and development that began in 2012. The biotope, which occupies about 5% of the Shizuoka Plant's 287,000 m2 site, is habitat for a wide variety of fauna and flora, including ancient Oga lotus and jewel beetles with rainbow-colored wings, among others, in addition to Japanese killifish.

In fiscal 2017, we opened the biotope to the general public and began showcasing it on our website. A total of 428 people comprising customers and people from the local community visited the biotope to take part in tours and other events. We engage with the local community through such activities as hands-on learning and the provision of killifish. These efforts inside and outside the company are shared and managed at regular monthly meetings of the Biotope Committee, comprised of members from plant related departments and head office administrative departments. In addition, our biodiversity conservation activities centered on Ikoi no Mori (Comfort Forest) were recognized with the Biotope Award (Biotope First Prize) by the Japan Biotope Association. Looking ahead, we will use the biotope to give back to the local community, as a venue for environmental education that raises visitor's awareness of the environment by experiencing the importance of biodiversity.



Biotope opening ceremony (April 2017)



Irodori no Oka (hill)



Event



Japanese killifish (*Oryzias latipes*)



Provision of killifish to nearby facility

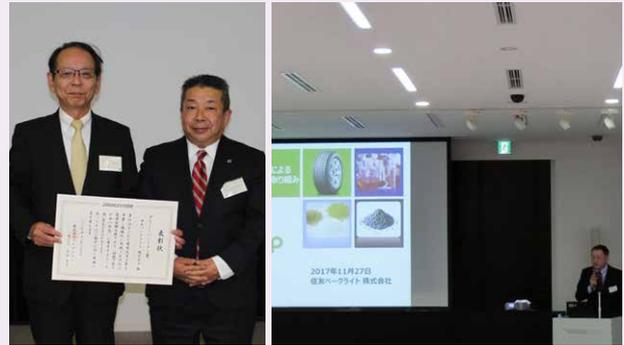


Biotope awards ceremony

**Topic** Recognized with Green Partner Award

Bridgestone Corporation selected Sumitomo Bakelite's "initiatives for biodiversity conservation through the creation of a corporate biotope" for a Green Partner Award.

The "Green Partner Award" was established by Bridgestone to recognize suppliers for their activities that help reduce environmental burdens and result in environmental contributions, based on the Environmental Mission Statement of the Bridgestone Group, "In harmony with nature," "Value natural resources" and "Reduce CO<sub>2</sub> emissions," which seeks to share the climate surrounding the industry and improve the competitiveness of the entire supply chain. Sumitomo Bakelite's "initiatives for biodiversity conservation through the creation of a corporate biotope" was selected for the award as an activity that helps reduce environmental burdens and results in environmental contributions, two areas the Bridge Group is focusing on.



Receiving the award

Keynote presentation by award winners

## Initiative to Protect Forest Ecosystems

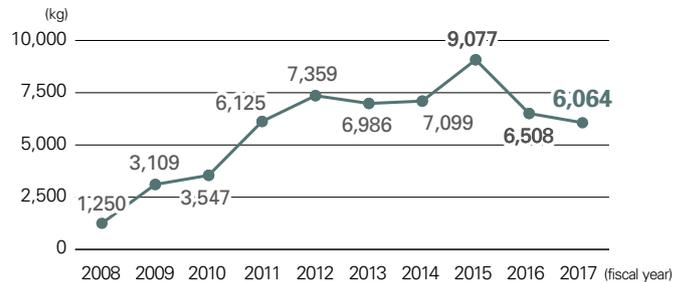
Our company contributes to conservation of biodiversity by protecting forest environments through supporting forest thinning projects and afforestation activities. Our company has supported forest thinning mainly in Iwate Prefecture since fiscal 2008 by expanding the use of Paper Products that Contribute to Forest Thinning Efforts promoted by the Morino Chonai-Kai (Forest Neighborhood Association). The cumulative amount of this paper used is approximately 57 tons, which corresponds to the thinning of 3.93 hectares.

In addition, our business site in Indonesia engages in afforestation activities for growing mangrove



forests that protect various species of marine organisms. Going forward, we will continue to conserve biodiversity tailored to the environment surrounding each of our business locations.

**Amount of Paper Products that Contribute to Wood Thinning Efforts Used by Sumitomo Bakelite**



## Environmental Conservation and Beautification Activities in the Surroundings of Plants

We are working to conserve and beautify the areas surrounding each of our production plants by cooperating with local environmental conservation activities and campaigns against illegal

dumping of waste as well as cleaning and beautification events organized by local communities.



Indopherin Jaya  
Participated in the city's environment and cleanup activities.



PT SBP Indonesia  
Participated in cleanup activities around the company's plant.



Amagasaki Plant  
Took part in the water sprinkling campaign for mitigate the heat island effect at the request of Amagasaki City.

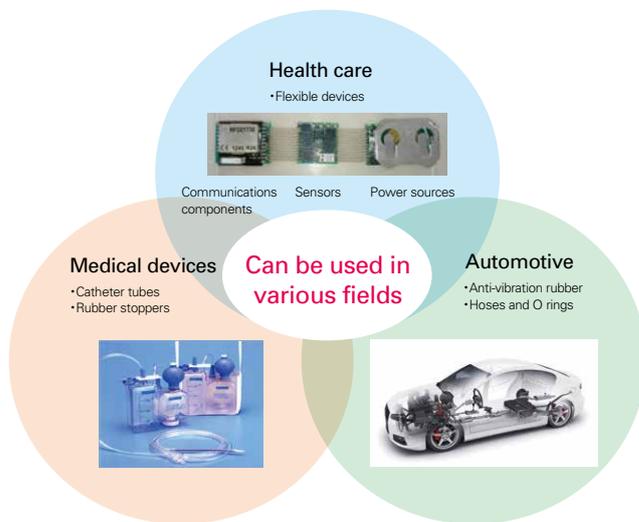


Yamaroku Kasei Industry  
Participated in the Yamato River and Ishi River cleanup campaign.

## Initiatives in Society

### Aiming for the Realization of a Sustainable Society

The transparent silicone rubber with world-leading high tear resistance we developed was recognized with the 30th The Society of Rubber Science and Technology, Japan Award. This award is given to honor research outcomes that contribute to the sustainable development of the rubber industry. We will continue to promote activities that contribute to the realization of a sustainable society through innovations in chemical technologies.



### Environmental and Social Contribution Activities

Our company participates in an environmental survey program run by NPO Earthwatch Japan as a corporate partner, as part of its educational and social contribution activities as well as to expand the scope of these educational and social contribution activities. In fiscal 2017, we took part in a tidal flats survey program (living organism survey of disaster-affected areas) to monitor the recovery of eastern Japan's greenery held in Idoura, Sendai City and Hiroura, Natori City in Miyagi Prefecture in July by dispatching personnel to assist with the research investigation.



Hiroura, Natori City, and Idoura, Sendai City, in Miyagi Prefecture (monitoring the tidal flat ecosystem)

#### Comment from an Employee who Participated

Through the survey program, I learned that environmental improvements implemented as countermeasures against natural disasters must also enable nature's benefits to be continually received; instead of creating artificial objects such as breakwaters that cut off our connection with nature. The data obtained from this monitoring is indispensable for such considerations, while the program itself was a very meaningful experience as a social contribution. I also learned, in a hands-on manner, about the extinction mechanisms of living organisms caused by cutting off natural connections. As a result, I felt the importance of encouraging team work and horizontal connections within our company and reaffirmed the importance of the One Sumibe activities we are currently implementing.



Corporate Communications Department  
Corporate General Affairs Division  
Sumitomo Bakelite  
Daiki Sakaniwa

#### Message from Earthwatch Japan

People to whom "ecosystem" and "biodiversity" were just words are now considering them to be something of their own - this is the result obtained from participation in Earthwatch surveys. The staff who participated have told people around them about their experiences, and made their opinions known. This experience will also be used business initiatives. We hope that Sumitomo Bakelite will work with us in planning survey programs for issues thought to be particularly important, and there will be more opportunities for staff participation.

NPO Earthwatch Institute  
Executive Director  
Tomoko Nunoi



## Relations with Local Residents and Participation in Local Events

We are working to enhance the welfare of local communities by proactively interacting with local residents and participating in

local events to deepen our ties with them, as well as engaging in volunteer activities and making donations.



**Kobe Facility Office**  
Hosted a volunteer booth at the summer festival of the industrial park in which the plant is situated



**Shizuoka Plant**  
Held exchanges with an NGO and hosted a flower planting event



**Indopherin Jaya**  
Donated food to an orphanage foundation



**PT SBP Indonesia**  
Held an EHS exchange with a drinking water company and exchanged information on EHS around the plant

## Donations

Under the Sumitomo Bakelite Group's business philosophy (Company Policy), we donate directly and to specific groups across a wide range of fields including schools and education, social welfare, academic promotion, R&D, regional development, international exchange, and sports for people with disabilities. This includes cooperating with cultural and academic activities such as

symphony orchestras and environmental conservation activities such as nature protection funds. Through these donations, we are helping to create a better environment and support the development of the next generation. Looking ahead, we will continue to this support to create a brighter future for all people.

## Supporting Japan's Bid to Host the World Expo 2025

Osaka Prefecture is vying to host the World Expo scheduled to take place in 2025. The bid committee established by the Kansai Economic Federation for the World Expo is planning various programs to secure Osaka Prefecture's bid ahead of the official

announcement in November 2018. Sumitomo Bakelite supports the bid and is cooperating in various ways.



OSAKA-KANSAI/JAPAN EXPO2025

## Partnership Agreement with the Japan Inclusive Football Federation

On March 1, 2018, we concluded a partnership agreement with the Japan Inclusive Football Federation (JIFF)\*<sup>1</sup>, as a new initiative from the standpoint of respect for diversity and contributing to the realization of a society where everyone can live in harmony. We identify with the activities and philosophy of the JIFF which is committed to creating a vibrant society that respects each person's uniqueness through the benefits of sports and soccer regardless of disability. By becoming an official partner and

fulfilling part of our social responsibilities as a corporation, we will support the JIFF in building a society where people with and without disabilities interact through soccer.

\*1 The Japan Inclusive Football Federation is an organization that brings together seven inclusive football sports associations. JIFF carries out activities under its commitment to create a vibrant society that respects each person's uniqueness through the benefits of sports and soccer regardless of disability.



Image courtesy of the Japan Blind Football Association (JBFA)

### Topic

### Chairman Honored with the Commander of the Order of the Crown by the King of Belgium

Shigeru Hayashi, Chairman and Representative Director of Sumitomo Bakelite, was honored with the Commander of the Order of the Crown by the King of Belgium. He was presented with the honor by the Ambassador of the Kingdom of Belgium to Japan on September 27, 2018.

The Commander of the Order of the Crown is bestowed upon persons who make important contributions to Belgium by the King of Belgium. The award recognized the Sumitomo Bakelite Group's contributions to the economic and industry through proactive investments in the country because its main business sites for Bakelite (phenol resin), a core product in the Group's high-performance resins segment, are located in the cities of Genk and Ghent.



Gunther Sleeuwagen, Ambassador of the Kingdom of Belgium to Japan (left), and Chairman and Representative Director Shigeru Hayashi (right)

## Initiatives Relating to Fostering the Next Generation

### Support for Education of the Next Generation (Fujieda City Science Education Support Project)

We are taking the lead in providing support for the education of the next generation as part of an industry-government-academia partnership in cooperation with other companies with production plants located in and around Fujieda City.

On January 19, 2018, the 9th Fujieda City Science Education Support Project was held in the Tokai Plant of Meiji Corporation. As with previous years, the event drew a large number of participants that included not only science teachers from public junior high schools in Fujieda City, but also staff from the Education Department and Industrial Promotion Department of Fujieda City as well as employees from companies located in Fujieda City. Meiji Corporation gave a presentation on chocolate and explained the botany of cacao beans and the characteristics of oils used in chocolate, among other topics.

The principal in charge of the event commented, "Science

education at the junior high school level has recently shifted to science in our everyday lives. This event carries with it great help and meaning for educators today. I sincerely appreciate the support we received from our corporate sponsors."



Tokai Plant of Meiji Corporation



Presentation on chocolate

### Event Hosted by the Biotope Club

The biotope club hosted a gathering on September 9, 2017 that included a tour of the biotope and accessory-making class. A total of 24 people, including participants and lecturer, spent around one hour walking around the biotope. This was followed by an

accessory-making class (key chains and straps) using the wings of jewel beetles.



Making accessories



The group happening upon a jewel beetle during the tour



Key chains and straps



Participants of the biotope tour and accessory-making class

### Welcoming Next Generation Internships and Factory Visits

In order to support the growth of the next generation of students we proactively accept student interns and also welcome students to company briefings and site visit events (factory tours) to aid

their understanding of our business and the work carried out at our production plants.



S.B. Techno Plastics (Head Office Plant)  
Hosted an internship for Kodamahakuyo High School.



Akita Sumitomo Bakelite  
Hosted a plant tour for National Institute of Technology, Akita College.



Promerus  
Hosted an internship for the University of Akron.

# Site Report

Below you will find detailed information about each business site and affiliated company.

\* Air and water quality conservation: "No problems" indicates no particular environmental impacts were detected during the period from April 2017 to March 2018 in measurements and assessments on air and water quality in the form of values exceeding the regulated threshold to be complied with (prefectural ordinances, regional agreements, our own standards, etc.). Data for certain business sites covers the period from January to December 2017.

## Japan

### Kobe Facility Office



|   |   |             |                            |
|---|---|-------------|----------------------------|
| Address                                       | 1-1-5 Murotani, Nishi-ku, Kobe-shi, Hyogo   |             |                            |
| Number of employees                           | 44  |             |                            |
| Commencement of operations                    | 1991  |             |                            |
| Total site area                               | 16,530㎡   |             |                            |
| Month/year of management system certification | Environmental   | ISO 14001   | December 2003              |
|   | Occupational Health and Safety  | OHSAS 18001 | September 2015             |
|   | Quality   | ISO 9001    | 2010 (S-BIO Business Div.) |
| Principal R&D themes                          | Development of high-performance plastics and R&D of technologies for bioplastics and other products |             |                            |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No problems   |             |                            |

Our office is working collectively to promote energy conservation and other activities for the reduction of environmental impact. In addition, we are working to make newly developed products more environmentally friendly from the design stage. We are committed to giving back to the community, while promoting engagement and disclosure of information needed for the community to develop a correct understanding of our operations.

Director  
Masaya Fumita



### Shizuoka Plant



|   |  |              |   |
|---|--|--------------|---|
| Address                                       | 2100 Takayanagi, Fujieda-shi, Shizuoka   |              |   |
| Number of employees                           | 567  |              |   |
| Commencement of operations                    | 1962   |              |   |
| Total site area                               | 287,000 ㎡  |              |   |
| Month/year of management system certification | Environmental  | ISO 14001    | March 1999                                |
|   | Occupational Health and Safety   | OHSAS 18001  | March 2008                                |
|   | Quality  | ISO 9001     | 1995 (laminates, PM, PR, molded products) |
|   |  | ISO/TS 16949 | 2007 (laminates, PM, PR, molded products) |
| Principal R&D themes                          | Epoxy resin copper-clad laminates, epoxy resin coating powder, phenolic resins, thermoset molding compounds, melamine resin decorative laminates, formalin, molded products and dies, substrate materials for semiconductor packages |              |   |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems   |              |   |

We are pursuing initiatives to reduce the environmental burden of all our processes. In fiscal 2017, we achieved our target to reach a 50% reduction in negative costs by MFCA. The biotope we opened to the general public welcomed 428 visitors, contributing to both biodiversity preservation and environmental education. In fiscal 2018, we will continue advancing our efforts to be an environmentally friendly plant.

Plant Manager  
Toshihide Kanazawa



### Kanuma Plant



|   |   |             |            |
|---|---|-------------|------------|
| Address                                       | 7-1 Satsuki-cho, Kanuma-shi, Tochigi  |             |            |
| Number of employees                           | 260   |             |            |
| Commencement of operations                    | 1970  |             |            |
| Total site area                               | 75,878 ㎡  |             |            |
| Month/year of management system certification | Environmental   | ISO 14001   | March 2000 |
|   | Occupational Health and Safety  | OHSAS 18001 | March 2008 |
|   | Quality   | ISO 9001    | 2003       |
| Principal R&D themes                          | Hard resin sheets made from polycarbonate, polystyrene, PET, ABS, PVC, etc.; waterproofing materials incorporating waterproofing processed steel products |             |            |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems  |             |            |

We aim to be a plant that is trusted by customers and the local community. Under our energy conservation activities, in fiscal 2017 we reduced power consumption by 3% over the previous year. In fiscal 2018, we plan to reduce power consumption by a further 3%. In terms of material flow costs, we are actively working to achieve the target of 45% in fiscal 2018, with the goal of a 50% reduction compared to fiscal 2013. Looking ahead, we will focus on product development and manufacturing with an emphasis on the SDGs (Sumitomo Spirit).

Plant Manager  
Haruhisa Toda



### Utsunomiya Plant



|   |  |             |               |
|---|--|-------------|---------------|
| Address                                       | 20-7, Kiyohara Kogyo Danchi, Utsunomiya-shi, Tochigi   |             |               |
| Number of employees                           | 215  |             |               |
| Commencement of operations                    | 1984   |             |               |
| Total site area                               | 99,000 ㎡   |             |               |
| Month/year of management system certification | Environmental  | ISO 14001   | December 1997 |
|   | Occupational Health and Safety   | OHSAS 18001 | March 2008    |
|   | Quality  | ISO 9001    | 1991          |
| Principal R&D themes                          | ISO/TS 16949   |             |               |
|   | 2006   |             |               |
| Principal R&D themes                          | Paste for die bonding, liquid resins for encapsulation of semiconductors, substrate materials for semiconductor packages |             |               |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems   |             |               |

The plant works on collective EHS activities having developed a culture that always takes ownership and is mindful of accidents and disasters and learns from the behavior of others. To this end, we added a policy for improving awareness and taking immediate action through employee-centered "Ceaseless Monitoring." By achieving our goals for no accidents and no injuries along with environmental impact reductions, we will now aspire to be a plant that is trusted by both customers and the local community.

Plant Manager  
Keisuke Kurachi



## Amagasaki Plant



|   |  |                    |   |
|---|--|--------------------|---|
| Address                                       | 2-3-47, Higashi-Tsukaguchi-cho, Amagasaki-shi, Hyogo   |                    |   |
| Number of employees                           | 419  |                    |   |
| Commencement of operations                    | 1938   |                    |   |
| Total site area                               | 46,000 m <sup>2</sup>  |                    |   |
| Month/year of management system certification | Environmental  | ISO 14001          | October 1998  |
|   | Occupational Health and Safety   | OHSAS 18001        | October 2009  |
|   |  | ISO 9001           | 1994 (film sheets and cover tape)                         |
|   | Quality  | ISO 13485          | 2016 (medical devices product warehouse)                  |
|   |  | ISO 15378          | 2017 (primary packaging materials for medicinal products) |
| FSSC22000                                     |  | 2017 (Food safety) |   |
| Principal R&D themes                          | Multilayered films for food packaging, PTP materials for pharmaceuticals, tapes for mounting electronic components |                    |   |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems   |                    |   |

The plant is working to prevent pollution and promote environmental impact reductions, including reducing CO<sub>2</sub>, material flow costs, and chemical substance emissions. We are now making the necessary investments and developing our human resources toward this end. We are committed to giving back to the community, while promoting engagement and disclosure of information needed for the community to develop a correct understanding of our operations.

Plant Manager  
Masaya Fumita



## Affiliated Companies in Japan

### S.B. Sheet Waterproof Systems Co., Ltd. (Nara Plant)



|   |  |             |            |
|---|--|-------------|------------|
| Address                                       | 1-2 Techno Park, Nara Kogyo Danchi, Sugawa-cho, Gojo-shi, Nara |             |            |
| Number of employees                           | 47   |             |            |
| Commencement of operations                    | 1991   |             |            |
| Total site area                               | 20,357 m <sup>2</sup>  |             |            |
| Month/year of management system certification | Environmental  | ISO 14001   | April 2000 |
|   | Occupational Health and Safety                                 | OHSAS 18001 | March 2008 |
|   | Quality  | ISO 9001    | 2003       |
| Principal R&D themes                          | Waterproof sheets  |             |            |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems                       |             |            |

We are working to mitigate environmental impact through energy conservation activities and reduction in material flow costs, among other initiatives. We reduced power consumption by 5% in 2017 by streamlining production. In 2018, we are promoting energy efficiency through the streamlining of energy use. Through our environmentally friendly activities, we aim to be a plant trusted by the local community.

Plant Manager  
Masamori Miura



### Kyushu Sumitomo Bakelite Co., Ltd.



|   |   |              |               |
|---|---|--------------|---------------|
| Address                                       | 40-1 Oaza-Kamizakai Aza-Mizumachi, Nogata-shi, Fukuoka  |              |               |
| Number of employees                           | 289   |              |               |
| Commencement of operations                    | 1972  |              |               |
| Total site area                               | 50,000 m <sup>2</sup>   |              |               |
| Month/year of management system certification | Environmental   | ISO 14001    | December 1998 |
|   | Occupational Health and Safety  | OHSAS 18001  | December 2007 |
|   |   | ISO 9001     | 1994          |
|   | Quality   | ISO/TS 16949 | 2010          |
| Principal R&D themes                          | Epoxy molding compounds for encapsulation of semiconductor devices, liquid photosensitive coating resins for semiconductor wafers |              |               |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems  |              |               |

The plant produces environmentally conscious products along with epoxy molding compounds and wafer coating resins for energy efficient equipment. We are now working to contribute the improvement of the corporate value of customers through the improvement and evolution of initiatives mindful of the environment, such as our efforts to halve material flow costs and to improve energy efficiency, contributing to society and the local environment.

Plant Manager  
Shigehisa Ueda



### Yamaroku Kasei Industry Co., Ltd.



|   |   |           |           |
|---|---|-----------|-----------|
| Address                                       | 19-10 Katayama-cho, Kashiwara-shi, Osaka                              |           |           |
| Number of employees                           | 49  |           |           |
| Commencement of operations                    | 1948  |           |           |
| Total site area                               | 5,411 m <sup>2</sup>  |           |           |
| Month/year of management system certification | Environmental   | ISO 14001 | June 2005 |
|   | Quality   | ISO 9001  | 2003      |
| Principal R&D themes                          | Phenolic molding compounds, melamine phenolic resin molding compounds |           |           |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities        |           |           |

We continue to work diligently on activities to reduce environmental impact with MFCA, a key management indicator. We have steadily boosted the effects of these activities through various environmental preservation actions, such as promoting energy conservation and a reduction in negative effects by improving yield, as well as stabilizing our cooling water recycling system. Also, we continue to be actively involved in the local community through our annual clean-up event.

President and Representative Director  
Tamotsu Ishida



### S.B. Techno Plastics Co., Ltd. (Head Office Plant)



|                                    |   |  |  |
|------------------------------------|---|--|--|
| Address                            | 300-2, Motohara Kamikawa-cho, Kodama-gun, Saitama               |  |  |
| Number of employees                | 33  |  |  |
| Commencement of operations         | 1964  |  |  |
| Total site area                    | 13,000 m <sup>2</sup>   |  |  |
| Principal R&D themes               | Plastic sheets, plastic chopping boards, ceramics made in molds |  |  |
| Air and water quality conservation | <Air> No relevant facilities<br><Water> No problems             |  |  |

### S.B. Techno Plastics Co., Ltd. (Kitsuregawa Plant)



|                                    |   |  |  |
|------------------------------------|---|--|--|
| Address                            | 60-1, Saotome, Sakura-shi, Tochigi                  |  |  |
| Number of employees                | 13  |  |  |
| Commencement of operations         | 2002  |  |  |
| Total site area                    | 3,638 m <sup>2</sup>                                |  |  |
| Principal R&D themes               | Industrial helmets, injection molding products      |  |  |
| Air and water quality conservation | <Air> No relevant facilities<br><Water> No problems |  |  |

We began collecting used chopping boards free of charge from customers and then recycling these materials into landscaping products in 2001; an initiative we continue today. We are the only chopping board manufacturer to implement such an initiative. We plan to continue with this initiative with the pride in knowing we are making a difference in the effective use of our planet's limited resources.

President and Representative Director  
Shunichi Kuribara



## Akita Sumitomo Bakelite Co., Ltd.



|   |  |             |                          |
|---|--|-------------|--------------------------|
| Address                                       | 27-4, Aza Nakashima-shita, Souzen-machi, Tsuchizakiminato, Akita-shi, Akita    |             |                          |
| Number of employees                           | 229  |             |                          |
| Commencement of operations                    | October 1970   |             |                          |
| Total site area                               | 255,568 m <sup>2</sup>   |             |                          |
| Month/year of management system certification | Environmental  | ISO 14001   | January 2001             |
|   | Occupational Health and Safety   | OHSAS 18001 | September 2008           |
|   | Quality  | ISO 9001    | 2010 (bio), 2010 (resin) |
|   |  | ISO 13485   | 2005 (medical)           |
| Principal R&D themes                          | Medical products and laboratory wares, phenolic resins, formalin and adhesives |             |                          |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems                                       |             |                          |

We are working to raise awareness of safety through various all-hands-on-deck activities, including experience-based education and inter-departmental RA. Additionally, we are working to reduce environmental impact by rolling out material flow cost analysis to improve yield in the healthcare division and by reducing waste from activated sludge in the resins division. We will continue to address the needs and expectations of various stakeholders.



President and Representative Director  
Noboru Yamawaki

## Hokkai Taiyo Plastic Co., Ltd.



|   |  |           |            |
|---|--|-----------|------------|
| Address                                       | 2-763-7, Shinko-Chuo, Ishikari-shi, Hokkaido   |           |            |
| Number of employees                           | 28   |           |            |
| Commencement of operations                    | 1964   |           |            |
| Total site area                               | 13,650 m <sup>2</sup>  |           |            |
| Month/year of management system certification | Environmental  | ISO 14001 | April 2005 |
|   | Principal R&D themes Polyethylene pipes, polyethylene films                            |           |            |
|   | Air and water quality conservation <Air> No relevant facilities<br><Water> No problems |           |            |

We produce and sell polyethylene pipes and films for water supply and sewage applications. We ensure the health and safety of employees by reducing energy consumption as targeted by promoting environmental impact reduction activities, fully complying with laws and ordinances, carrying out various risk assessments, and monitoring work environments. Each and every one of us at our plant is passionately committed to environmental preservation activities.



President and Representative Director  
Syuichi Tsukamoto

## Overseas: China, Macau, and Taiwan

### Sumitomo Bakelite (Suzhou) Co., Ltd.



|   |   |              |                        |
|---|---|--------------|------------------------|
| Address                                       | 140 Zhongxin Avenue West, Suzhou Industrial Park, Suzhou, Jiangsu, 215021, P.R. China |              |                        |
| Number of employees                           | 197   |              |                        |
| Commencement of operations                    | 1997  |              |                        |
| Total site area                               | 30,000 m <sup>2</sup>   |              |                        |
| Month/year of management system certification | Environmental   | ISO 14001    | November 2001          |
|   | Occupational Health and Safety  | OHSAS 18001  | November 2010          |
|   | Quality   | ISO 9001     | 1999 (EME), 2015 (CRM) |
|   |   | ISO/TS 16949 | 2006 (EME)             |
| Principal R&D themes                          | Epoxy molding compounds for encapsulation of semiconductors, die attach pastes        |              |                        |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities                        |              |                        |

We consume a large amount of energy in order to produce semiconductor encapsulation materials, and so we are pursuing energy conservation activities on an ongoing basis. In 2018 onward, we will begin full-scale production of CRM, which should result in much larger use of chemical substances and energy. We will implement an energy conservation plan similar or greater than 2017 to further save energy. Striving to be a company trusted by the local community, we give back to society through exchanges with the local community and companies.



President  
Hiroshi Fujita

### Sumitomo Bakelite (Shanghai) Co., Ltd.



|   |   |              |            |
|---|---|--------------|------------|
| Address                                       | No. 88, Aidu Road, China (Shanghai) Pilot Free Trade Zone, Shanghai 200131 P.R. China |              |            |
| Number of employees                           | 112   |              |            |
| Commencement of operations                    | 2000  |              |            |
| Total site area                               | 8,698 m <sup>2</sup>  |              |            |
| Month/year of management system certification | Environmental   | ISO 14001    | April 2007 |
|   |   | ISO 9001     | 2002       |
|   | Quality   | ISO/TS 16949 | 2013       |
| Principal R&D themes                          | Molded products for automotive applications (plastic mechanical and structural parts) |              |            |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No problems                                   |              |            |

We produce molded mechanical and structural parts made of phenolic resins for use in automobiles. We are working actively to reduce waste by reducing the number of defects. In fiscal 2018, we aim to reduce power consumption by increasing the molding cycle and lessen waste by reducing sprues and runners occurring at the time of producing molded products.



President  
Yasuhiro Takenaka

### Sumitomo Bakelite (Nantong) Co., Ltd.



|   |  |              |   |
|---|--|--------------|---|
| Address                                       | No. 81, Tongda Road, Port Industrial Park 3, Economic Technological Development Area, Nantong, Jiangsu, 226017 P.R. China                                      |              |   |
| Number of employees                           | 259  |              |   |
| Commencement of operations                    | 2009   |              |   |
| Total site area                               | 100,000 m <sup>2</sup>   |              |   |
| Month/year of management system certification | Environmental  | ISO 14001    | May 2010  |
|   |  | ISO 9001     | 2010 (PM, PR)<br>2014 (film sheets)<br>2016 (ECR) |
|   | Quality  | ISO/TS 16949 | 2014 (PM, PR)                                     |
| Principal R&D themes                          | Phenolic resins, phenolic molding compounds, liquid epoxy resins, coextruded multilayered films and sheets for food packaging, tapes for electronic components |              |   |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems   |              |   |

We operate four plants (phenolic resin, phenolic resin molding materials, liquid epoxy resin, and co-extruded film sheets) that consume large amounts of energy, and for this reason, we are continuously working to cut back on their power consumption. With China's environmental regulations becoming tighter in recent years, we strive to comply with these environmental regulations at an early stage and work to reduce waste.



President  
Yoshihisa Fujimura

## Sumitomo Bakelite (Dongguan) Co., Ltd.



|   |   |             |                |
|---|---|-------------|----------------|
| Address                                       | No. 2 Qiao Lin Road, Ling Tou Industrial District, Qiao Tou Town, Dongguan, Guangdong, P.R. China |             |                |
| Number of employees                           | 401   |             |                |
| Commencement of operations                    | 1994  |             |                |
| Total site area                               | 32,930 m <sup>2</sup>   |             |                |
| Month/year of management system certification | Environmental   | ISO 14001   | September 2004 |
|   | Occupational Health and Safety  | OHSAS 18001 | September 2013 |
|   |   | ISO 13485   | 2005 (medical) |
| Principal R&D themes                          | Medical products  |             |                |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems  |             |                |

We currently manufacture medical products only, following the relocation of the molded products business to Sumitomo Bakelite (Shanghai) in September 2017. In October 2017, we achieved one year without injuries covering a period of some one million hours, following a similar feat accomplished last year. In 2017, we lowered our energy costs by around 5% over the previous fiscal year. This year we will once again focus on safety and environmental education for employees, and we will actively carry out energy conservation activities, too.

President  
Hiroshi Hiraoka



## Sumitomo Bakelite Macau Co., Ltd.



|   |   |           |            |
|---|---|-----------|------------|
| Address                                       | Zona Ind. do Aterro Sanitario de Seac Pai Van Lote A, junto a Estrada de Seac, Pai Van, Coloane, Macau  |           |            |
| Number of employees                           | 162   |           |            |
| Commencement of operations                    | 2003  |           |            |
| Total site area                               | 27,513 m <sup>2</sup>   |           |            |
| Month/year of management system certification | Environmental   | ISO 14001 | April 2005 |
|   | Quality   | ISO 9001  | 2003       |
| Principal R&D themes                          | Epoxy resin copper-clad laminates   |           |            |
| Air and water quality conservation            | <Air> No problems<br><Water> Readings for phosphorous, ammonia and total nitrogen, etc., increased temporarily due to household sewage (washing machine wastewater) combining with rainwater, but the readings were normalized after taking measures, including relocating the washing machine. Also, there was a temporary increase in SO <sub>3</sub> , but this was later determined to have been caused by using the wrong type of chemical agent in the cooling tower. In addition, Legionnaire's bacteria increased slightly momentarily in the cooling water tower, but the reading has since normalized after using the correct disinfectant. |           |            |

We produce and sell epoxy resin copper-clad laminates. We use large boilers and handle organic solvents. We are promoting environmental improvements to comply with the air, water and odor regulations passed by Macau, a major tourist destination. There are few waste processing facilities, so we promote MFCA activities to reduce waste, defective products, and offcuts. We are working to become a company that is environmentally friendly and trusted by the local community.

Managing Director  
Kenichi Hasegawa



## Sumitomo Bakelite (Taiwan) Co., Ltd.



|   |  |             |               |
|---|--|-------------|---------------|
| Address                                       | No. 1, Hwa Syi Road, Ta Fa Industries District, Ta Liao 831, Kaohsiung, Taiwan, R.O.C  |             |               |
| Number of employees                           | 113  |             |               |
| Commencement of operations                    | 1998   |             |               |
| Total site area                               | 22,334 m <sup>2</sup>  |             |               |
| Month/year of management system certification | Environmental  | ISO 14001   | May 2003      |
|   | Occupational Health and Safety   | OHSAS 18001 | February 2012 |
|   | Quality  | ISO 9001    | 2003          |
| Principal R&D themes                          | Epoxy molding compounds for encapsulation of semiconductor devices   |             |               |
|   |  |             |               |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> Circulating water overflowed due to a damaged three-way valve causing the COD level in sewage to increase temporarily. The level has since been normalized after the valve was repaired. |             |               |

Our company researches, manufactures and sells epoxy molding compounds for encapsulation of semiconductor devices. We added our own individual plan to the energy conservation project prepared with the support of the head office; and in fiscal 2017, we reduced our intensity of energy usage by 16% compared with the previous year. In fiscal 2018, we will continue to work on energy conservation while also reducing waste by improving yield.

President  
Seiji Shima



## Vaupell China (Dongguan) Co., Ltd.



|   |   |          |      |
|---|---|----------|------|
| Address                                       | No. 2 Qiao Lin Road, Ling Tou Industrial District, Qiao Tou Town, Dongguan, Guangdong, P.R. China |          |      |
| Number of employees                           | 165   |          |      |
| Commencement of operations                    | 2007  |          |      |
| Total site area                               | Located at Sumitomo Bakelite (Dongguan) Co., Ltd.   |          |      |
| Month/year of management system certification | Quality   | ISO 9001 | 2011 |
|   |   | AS 9100  | 2011 |
| Principal R&D themes                          | Plastic products  |          |      |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities                                    |          |      |

Vaupell China Dongguan (VCD) has been operating the new Dongguan facility since June 2018. During this time, VCD encountered many problems and also discovered many opportunities.

We are still focusing on timely delivery, and we passed the Boeing audit, Airbus audit, and FACC audit. VCD works towards becoming a 1st class plastic mold and molding manufacturer. We will focus on enhancing productivity and lowering energy consumption, in addition to providing a safe, comfortable and fair working environment and growth opportunities for all our employees.

General Manager  
NANDEKAR SUMIT ARVIND



## Overseas: Southeast Asia

### SNC Industrial Laminates Sdn. Bhd.



|   |  |             |              |
|---|--|-------------|--------------|
| Address                                       | PLO 38, Jalan Keluli Satu, Pasir Gudang, Industrial Estate, 81700 Pasir Gudang, Johor, Malaysia      |             |              |
| Number of employees                           | 129  |             |              |
| Commencement of operations                    | 1992   |             |              |
| Total site area                               | 60,000 m <sup>2</sup>  |             |              |
| Month/year of management system certification | Environmental  | ISO 14001   | April 2001   |
|   | Occupational Health and Safety   | OHSAS 18001 | August 2012  |
|   | Quality  | ISO 9001    | 2002         |
|   |  | AS 9100     | October 2017 |
| Principal R&D themes                          | Phenolic resin copper-clad laminates, phenolic resin laminates, aluminum-based copper-clad laminates |             |              |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems   |             |              |

We produce and sell paper substrate copperclad laminates based mainly on phenolic resin. Our manufacturing processes tends to be energy intensive as we use large equipment. In fiscal 2017, we continued our shift to LED lighting, changing over about 40%. We will now switch blower fans to inverters and upgrade pumps to more energy efficient models to reduce energy consumption even further.

Managing Director  
Tomoyoshi Honjo



### Sumitomo Bakelite Singapore Pte. Ltd.



|   |   |              |              |
|---|---|--------------|--------------|
| Address                                       | 1 Senoko South Road, Singapore 758069, Singapore  |              |              |
| Number of employees                           | 182   |              |              |
| Commencement of operations                    | 1989  |              |              |
| Total site area                               | 22,276 m <sup>2</sup>   |              |              |
| Month/year of management system certification | Environmental   | ISO 14001    | July 1997    |
|   | Occupational Health and Safety  | OHSAS 18001  | October 2009 |
|   | Quality   | ISO 9001     | 1993         |
|   |   | ISO/TS 16949 | 2005         |
| Principal R&D themes                          | Epoxy molding compounds for encapsulation of semiconductors, paste for die bonding, liquid resins for encapsulation of semiconductors |              |              |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems  |              |              |

Our company develops, manufactures, and sells epoxy molding compounds, used for encapsulation of semiconductor devices, and semiconductor die attaching paste. We continue with efforts to reduce energy usage by not only developing products that are environmentally conscious, but also shifting to more energy efficient equipment that is also more eco-friendlier. We are also reducing waste through various measures, including improving yield.

Managing Director  
Yukihiko Okabe



### SumiDurez Singapore Pte. Ltd.



|   |  |             |                |
|---|--|-------------|----------------|
| Address                                       | 9 Tanjong Penjuru Crescent Singapore 608972, Singapore |             |                |
| Number of employees                           | 54   |             |                |
| Commencement of operations                    | 1989   |             |                |
| Total site area                               | 18,000 m <sup>2</sup>                                  |             |                |
| Month/year of management system certification | Environmental  | ISO 14001   | September 1998 |
|   | Occupational Health and Safety                         | OHSAS 18001 | March 2015     |
|   | Quality  | ISO 9001    | 2003           |
|   |  | IATF 16949  | 2018           |
| Principal R&D themes                          | Phenolic resin molding compounds                       |             |                |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems               |             |                |

We manufacture and sell phenolic molding compounds. We continued with energy conservation activities, including replacing facilities with higher efficiency models, which helped us to reduce power consumption by 5% compared to last year. Also, we worked to reduce waste by improving yield. We aim to be a company mindful of safety and the environment by further promoting waste reduction along with energy conservation activities, in addition to our initiatives for workplace safety.

Senior Plant Manager  
Tomoyuki Saito



### P.T. Indopherin Jaya



|   |   |             |               |
|---|---|-------------|---------------|
| Address                                       | JL. Brantas No.1, Probolinggo, East Java, Indonesia |             |               |
| Number of employees                           | 114   |             |               |
| Commencement of operations                    | 1996  |             |               |
| Total site area                               | 18,000 m <sup>2</sup>                               |             |               |
| Month/year of management system certification | Environmental                                       | ISO 14001   | January 2001  |
|   | Occupational Health and Safety                      | OHSAS 18001 | December 2012 |
|   | Quality   | ISO 9001    | 2001          |
| Principal R&D themes                          | Phenolic resins                                     |             |               |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems            |             |               |

We develop, manufacture and sell phenolic resins. In fiscal 2017, we reduced environmental impacts by updating environmental facilities and reducing waste using soft means following an increase in production capacity. We will continue to develop products conscious of the environment, reduce waste by conserving energy and addressing facilities to increase productivity, and aim to be a safe and secure plant that is trusted by customers and the local community.

Factory Director  
Masaaki Fujita



### P.T. SBP Indonesia



|   |  |             |               |
|---|--|-------------|---------------|
| Address                                       | Kawasan Industri MM2100, JL. Irian Blok NN-1-1, Kec.Cikarang Barat, Bekasi, 17520, Indonesia |             |               |
| Number of employees                           | 93   |             |               |
| Commencement of operations                    | 1996   |             |               |
| Total site area                               | 30,000 m <sup>2</sup>  |             |               |
| Month/year of management system certification | Environmental  | ISO 14001   | February 2010 |
|   | Occupational Health and Safety   | OHSAS 18001 | July 2014     |
|   | Quality  | ISO 9001    | 2003          |
| Principal R&D themes                          | Polycarbonate extruded resin sheets (for signage and construction applications)              |             |               |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities                               |             |               |

We manufacture and sell extruded polycarbonate sheets. In fiscal 2017, we switched to and reduced numbers of energy efficient compressors and LED lighting, and reduced compressor operations by inspecting for air leaks. In terms of MFCA, we recycled finely shredded offcuts normally thrown out and reduced the amount of recycling by shorting lead time when switching start plans.

President Director  
Takahiro Kitakoji



## Overseas: North America

### Sumitomo Bakelite North America, Inc. (Manchester Plant)



|   |  |             |               |
|---|--|-------------|---------------|
| Address                                       | 24 Mill Street, Manchester, Connecticut 06042, USA |             |               |
| Number of employees                           | 70   |             |               |
| Commencement of operations                    | 1920   |             |               |
| Total site area                               | 14,000 m <sup>2</sup>                              |             |               |
| Month/year of management system certification | Environmental                                      | ISO 14001   | November 2014 |
|   | Occupational Health and Safety                     | OHSAS 18001 | November 2014 |
|   | Quality  | ISO 9001    | 2003          |
| Principal R&D themes                          | Thermoset composites                               |             |               |
| Air and water quality conservation            | <Air> No problems                                  |             |               |
|   | <Water> No problems                                |             |               |

Safety is always the number one priority in Manchester and will to continue to be our most critical focus throughout 2018. Manchester's safety performance will be a reflection of the actions and involvement of all employees. Our environmental efforts are driven toward waste and emission reduction, parallel with meeting all regulatory requirements and exist in harmony with our neighbors of the community.



Plant Manager  
Dan Higgins

### Durez Corporation (Kenton Plant)



|   |  |             |           |
|---|--|-------------|-----------|
| Address                                       | 13717 U.S. Route 68 South Kenton, Ohio 43326, USA  |             |           |
| Number of employees                           | 60   |             |           |
| Commencement of operations                    | 1955   |             |           |
| Total site area                               | 263,100 m <sup>2</sup>   |             |           |
| Month/year of management system certification | Occupational Health and Safety   | OHSAS 18001 | July 2011 |
|   | Quality  | ISO 9001    | 2003      |
| Principal R&D themes                          | Phenolic resins  |             |           |
| Air and water quality conservation            | <Air> No relevant facilities   |             |           |
|   | <Water> The capacity of cleaning equipment using biological processing was temporarily exceeded due to changes in the occurrence of wastewater. Ways to increase wastewater processing capacity are now being considered. In addition, dirt from equipment caused by flooding temporarily contaminated wastewater, but this situation was rectified in a short period of time. |             |           |

Safe and environmentally responsible operations are critical to the success of the Kenton plant and the company and remain the highest priority in any decisions that are made. We continue to find creative ways to reduce our impact on the environment through recovery of waste products and reusing materials to reduce total landfill waste. We remain committed to ensuring the safety of all employees and the surrounding community through our safety programs and environmental management systems.



Operations Manager  
Scott Franks

### Durez Corporation (Niagara Falls Plant)



|   |   |             |               |
|---|---|-------------|---------------|
| Address                                       | 5000 Packard Road, Niagara Falls, NY 14304, USA |             |               |
| Number of employees                           | 60  |             |               |
| Commencement of operations                    | 1930  |             |               |
| Total site area                               | 18,960 m <sup>2</sup>                           |             |               |
| Month/year of management system certification | Occupational Health and Safety                  | OHSAS 18001 | December 2011 |
|   | Quality   | ISO 9001    | 2003          |
| Principal R&D themes                          | Phenolic resins                                 |             |               |
| Air and water quality conservation            | <Air> No relevant facilities                    |             |               |
|   | <Water> No problems                             |             |               |

Safety remains the top priority for the Niagara Falls site. Review of past incidents and confirmation that corrective actions remain in place is a focus area. Any new incident or near miss is investigated thoroughly with the goal to identify and eliminate root cause. The site continues to drive the reduction and management of hazardous waste.



Plant Manager  
Barbara Pilmore

### Durez Canada Co., Ltd.



|   |  |             |               |
|---|--|-------------|---------------|
| Address                                       | 100 Dunlop Street, Fort Erie, Ontario L2A 4H9, Canada  |             |               |
| Number of employees                           | 70   |             |               |
| Commencement of operations                    | 1970   |             |               |
| Total site area                               | 93,000 m <sup>2</sup>  |             |               |
| Month/year of management system certification | Occupational Health and Safety   | OHSAS 18001 | November 2014 |
|   | Quality  | ISO 9001    | 1988          |
| Principal R&D themes                          | Phenolic resin and molding materials   |             |               |
| Air and water quality conservation            | <Air> Phenols temporarily exceeded the regulatory requirement after reviewing the emissions coefficient based on talks with the province of Ontario. New exhaust gas incinerator was introduced and emission concentrations have since been reduced. |             |               |
|   | <Water> No problems  |             |               |

In FY2017, the focus for safety continued on ergonomics and safety behaviours. Our Energy Management Information System that resulted in receiving a "Special Award" at the SBJ Kaizen Presentations in May 2017. Our new environmental permit resulted in the need to do some on-going remediation.



Plant Manager  
Robert Hunt

## Promerus LLC



|   |  |          |      |
|---|--|----------|------|
| Address                                       | 9921 Brecksville Road, Brecksville, Ohio 44141-3247, USA |          |      |
| Number of employees                           | 28   |          |      |
| Commencement of operations                    | 2001   |          |      |
| Total site area                               | 3,875 m <sup>2</sup>                                     |          |      |
| Month/year of management system certification | Quality  | ISO 9001 | 2006 |
| Principal R&D themes                          | Functional polynorbornenes                               |          |      |
| Air and water quality conservation            | <Air> No problems<br><Water> No relevant facilities      |          |      |

In FY2017, Promerus continued to emphasize safety and environmental awareness in all we do. For example, Promerus is reviewed Sumitomo Bakelite Global incidents and the Promerus safety failure calendar on monthly basis at our safety meetings in order to increase organizational awareness. Additional emphasis was placed on proper work coverage and non-routine work hazard assessments in order to reduce incidents.

Senior Manager  
Larry Rhodes



## Vaupell Industrial Plastics, Inc.



|   |  |          |      |
|---|--|----------|------|
| Address                                       | 1144 N.W. 53rd Seattle, Washington, 98107, USA                 |          |      |
| Number of employees                           | 324  |          |      |
| Commencement of operations                    | 1947   |          |      |
| Total site area                               | 10,219 m <sup>2</sup>  |          |      |
| Month/year of management system certification | Quality  | ISO 9001 | 2004 |
|   |  | AS 9100  | 2004 |
| Principal R&D themes                          | Airlanes   |          |      |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities |          |      |

Vaupell Northwest remains committed to the highest standards of corporate responsibility and leadership in our community. We are mindful of our daily impact to our environment. We strive every day to find innovative and responsible methods to reduce our carbon footprint and enhance our contributions towards a sustainable future.

General Manager  
Joseph Kamin



## Vaupell Molding & Tooling, Inc. (Agawan, Massachusetts Plant)



|   |  |           |      |
|---|--|-----------|------|
| Address                                       | 101 HP Aimgren Dr. Agawam, Massachusetts 01001, USA                              |           |      |
| Number of employees                           | 95   |           |      |
| Commencement of operations                    | 2005   |           |      |
| Total site area                               | 9,290 m <sup>2</sup>   |           |      |
| Month/year of management system certification | Quality  | ISO 9001  | 2012 |
|   |  | ISO 13485 | 2007 |
|   |  | AS 9100   | 2012 |
| Principal R&D themes                          | Injection molding for certain markets including medical product components, etc. |           |      |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities                   |           |      |

Vaupell NE has been committed to "safety first" in many ways and will continue to do so over the coming years. The NE division has formed a very active Safety committee and participates in the semi-annual Plant Manager Safety Meetings with SBHPP. We continue to re-cycle most regrind and we resell most of our waste in cardboard and gaylords. As with the other divisions, we always strive for continuous improvement and will remain committed to reducing our carbon footprint wherever possible.

Plant Manager  
John Sulikowski



## Vaupell Molding & Tooling, Inc. (Constantine, Michigan Plant)



|   |  |           |               |
|---|--|-----------|---------------|
| Address                                       | 485 Florence Road Constantine, Michigan 49042, USA             |           |               |
| Number of employees                           | 196  |           |               |
| Commencement of operations                    | 1969   |           |               |
| Total site area                               | 7,525 m <sup>2</sup>   |           |               |
| Month/year of management system certification | Environmental  | ISO 14001 | December 2009 |
|   |  | ISO 9001  | 2009          |
|   | Quality  | ISO 13485 | 2012          |
|   |  | AS 9100   | 2009          |
| Principal R&D themes                          | Medical devices made by injection molding                      |           |               |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities |           |               |

Vaupell Constantine remains very watchful of our environmental impact. We recycle all waste possible. We made a change on FY2017 to another recycler for plastic parts, scrap, and resins. They provide a more timely service to our facility which has helped reduce the length of time we store scrap.

Plant Manager  
Keith Bridgford



## Vaupell Molding & Tooling, Inc. (Hudson, New Hampshire Plant)



|   |  |          |      |
|---|--|----------|------|
| Address                                       | 20 Executive Drive Hudson, New Hampshire 03051-4917, USA   |          |      |
| Number of employees                           | 44   |          |      |
| Commencement of operations                    | 1995   |          |      |
| Total site area                               | 3,500 m <sup>2</sup>   |          |      |
| Month/year of management system certification | Quality  | ISO 9001 | 2011 |
| Principal R&D themes                          | SLA/SLS, resin cast molding, CNC work, DMLS, molds for injection molding, molding, painting, CAD services, assembly, and inspection services |          |      |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities   |          |      |

Vaupell Rapid Solutions is focused on providing our customers with product life cycle solutions from concepts to complete components and devices. Offering a wide range of support services from Rapid Prototyping through Injection molded parts and assemblies. Our commitment to our employees is to provide them with a safe, hazardous free work place and a growth path for further professional development.

Plant Manager  
Roger Spurrell



## Russell Plastics Technology Company, Inc.



|   |  |         |      |
|---|--|---------|------|
| Address                                       | 521 W. Hoffman Ave Lindenhurst, New York 11757, USA            |         |      |
| Number of employees                           | 89   |         |      |
| Commencement of operations                    | 1941   |         |      |
| Total site area                               | 5,575 m <sup>2</sup>   |         |      |
| Month/year of management system certification | Quality  | AS 9100 | 2005 |
| Principal R&D themes                          | Components for rotary wing aircraft, and OEM interior products |         |      |
| Air and water quality conservation            | <Air> No relevant facilities<br><Water> No relevant facilities |         |      |

Vaupell Composites continues to be responsible to our community and employees by providing a safe and environmentally friendly facility. We continue to manage our processes to ensure no harm or negative impact. We have recently undergone an independent EHS compliance assessment and plan on working closely with them to manage and enhance safety and environmental practices through training and implementing stronger procedures.

Plant Manager  
Richard Spero



## Overseas: Europe

### Sumitomo Bakelite Europe NV



|   |  |             |              |
|---|--|-------------|--------------|
| Address                                       | Henry Fordlaan 80, B-3600 Genk, Belgium  |             |              |
| Number of employees                           | 154                                      |             |              |
| Commencement of operations                    | 1967                                     |             |              |
| Total site area                               | 110,000 m <sup>2</sup>                   |             |              |
| Month/year of management system certification | Environmental                            | ISO 14001   | January 2001 |
|   | Occupational Health and Safety           | OHSAS 18001 | July 2012    |
|   | Quality                                  | ISO 9001    | 1992         |
| Principal R&D themes                          | Phenolic resins, polyester resins        |             |              |
| Air and water quality conservation            | <Air> No problems<br><Water> No problems |             |              |

In 2017, EHS - activities have been initiated and implemented as well internally as externally. Internally, the Genk plant continued to focus on the daily safety patrols and the resulting action points, as well as on contractor safety by implementing a new gate - instruction system and emphasizing on permit - compliancy. Externally, SBE started the introduction of ULM resins (Ultra Low Monomer) to the market. This way, SBE contributes to a safer and more sustainable society.

Managing Director  
Jan Schreurs



### Sumitomo Bakelite Europe (Barcelona), S.L.U.



|   |   |             |               |
|---|---|-------------|---------------|
| Address                                       | Gran Vial, 4 Montornes del Valles (Barcelona) 08170, Spain  |             |               |
| Number of employees                           | 90  |             |               |
| Commencement of operations                    | 1949  |             |               |
| Total site area                               | 19,856 m <sup>2</sup>   |             |               |
| Month/year of management system certification | Environmental   | ISO 14001   | March 2005    |
|   | Occupational Health and Safety  | OHSAS 18001 | February 2013 |
|   | Quality   | ISO 9001    | 2002          |
| Principal R&D themes                          | Phenolic resins, friction particles, adhesives  |             |               |
| Air and water quality conservation            | <Air> No problems<br><Water> Phenols leaked from a wastewater storage tank due to a crack and permeated into the ground. As a countermeasure, water was removed and activated carbon used to treat the water, but the concentration of phenols in wastewater after this processing exceeded the regulatory requirement. The pollution was cleaned up in two months and wastewater readings have now returned to normal. |             |               |

In FY2017, the facility for wastewater treatment based on phenol extraction by solvent was consolidated, started running in January 2018; it will help to the plant for reducing the operation cost. Regarding environment, we had a significant phenol waste water leakage that contaminated the wells; we acted fast and in the correct way, being one important remark the communication to the authorities and also to SB Co. Finally, to remark that the official audit regarding ISO 9001:2015 and ISO 14001:2015 was carried out successfully.

Site Manager  
José Miralles



### Vyncolit NV



|   |   |             |              |
|---|---|-------------|--------------|
| Address                                       | Wiedauwkaai 6, B-9000 Ghent, Belgium  |             |              |
| Number of employees                           | 137   |             |              |
| Commencement of operations                    | 1992  |             |              |
| Total site area                               | 22,683 m <sup>2</sup>   |             |              |
| Month/year of management system certification | Environmental   | ISO 14001   | 1999         |
|   | Occupational Health and Safety  | OHSAS 18001 | January 2013 |
|   | Quality   | ISO 9001    | 1992         |
| Principal R&D themes                          | Thermoset molding compounds   |             |              |
| Air and water quality conservation            | <Air> Phenols in wastewater are controlled using filters. Regular measurement readings temporarily exceeded the regulatory requirement by a small amount, but readings returned to normal after the filter was replaced.<br><Water> No problems |             |              |

Vyncolit has a Safety First policy and we created extra awareness in operations to give the team new clothing with a safety logo on the back "100% Safe at Work". To comply with EHS legislation we eliminated the last 2 old high tension cabinets and executed an ATEX project on a post blending line. Waste levels were under control and we started with ergonomic projects to support operations in their daily tasks.

Plant Manager  
Gerard Wildeman



## Trends in Environmental Performance

### Business Sites in Japan

| Item  | Unit                             | 2005    | 2010    | 2011   | 2012    | 2013    | 2014    | 2015   | 2016   | 2017   | 2018 (Plan) | 2030 (Target) |       |
|---|----------------------------------|---------|---------|--------|---------|---------|---------|--------|--------|--------|-------------|---------------|-------|
| CO <sub>2</sub> emissions                       | t-CO <sub>2</sub>                | 137,961 | 101,181 | 93,300 | 103,165 | 104,556 | 101,790 | 97,238 | 89,667 | 83,966 | 83,627      | 75,037        |       |
| Energy usage                                    | Crude oil equivalent (kL)        | 74,370  | 58,156  | 53,307 | 52,320  | 50,276  | 48,845  | 47,199 | 45,115 | 44,051 | 45,583      | —             |       |
|   | (thousand GJ)                    | 2,883   | 2,254   | 2,066  | 2,028   | 1,949   | 1,893   | 1,829  | 1,749  | 1,721  | 1,689       | —             |       |
| Material loss                                   | Waste generated                  |         |         |        |         |         |         |        |        |        |             |               |       |
|   | Landfill                         | ton     | 605     | 33     | 29      | 18      | 13      | 16     | 53     | 62     | 56          | 40            | 30    |
|   | External intermediate processing | ton     | 342     | 6      | 6       | 5       | 5       | 7      | 45     | 56     | 2           | 2             | 2     |
|   | Internal intermediate processing | ton     | 0.5     | 0      | 0       | 0       | 0       | 0      | 0      | 0      | 0           | 0             | 0     |
|   | External recycling               | ton     | 10,495  | 7,511  | 7,338   | 7,794   | 7,477   | 7,987  | 7,665  | 6,090  | 6,402       | 6,169         | 5,118 |
|   | Total waste generated            | ton     | 11,444  | 7,550  | 7,373   | 7,817   | 7,494   | 8,010  | 7,762  | 6,207  | 6,459       | 6,211         | 5,150 |
| Valuable materials                              | ton                              | 9,501   | 9,174   | 7,970  | 7,930   | 8,633   | 8,326   | 8,008  | 7,762  | 7,508  | 7,069       | 5,323         |       |
| Total material loss                             | ton                              | 20,945  | 16,724  | 15,343 | 15,748  | 16,127  | 16,337  | 15,770 | 13,970 | 13,967 | 13,280      | 10,473        |       |
| Chemical substance emissions                    | ton                              | 512     | 273     | 249    | 230     | 268     | 202     | 171    | 139    | 167    | 164         | 77            |       |
| Emissions of substances subject to the PRTR Act | ton                              | 81      | 17      | 16     | 12      | 15      | 15      | 13     | 8      | 13     | 7           | —             |       |

### Overseas Business Sites

| Item                         | Unit                             | 2005    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    | 2018 (Plan) | 2030 (Target) |       |
|------------------------------|----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|---------------|-------|
| CO <sub>2</sub> emissions    | t-CO <sub>2</sub>                | 163,259 | 160,989 | 152,735 | 141,491 | 144,508 | 142,830 | 151,698 | 151,272 | 152,526 | 143,450     | 109,509       |       |
| Energy usage                 | Crude oil equivalent (kL)        | 82,906  | 78,702  | 76,533  | 71,013  | 68,231  | 66,466  | 70,874  | 70,710  | 72,111  | 68,241      | —             |       |
|                              | (thousand GJ)                    | 3,213   | 3,050   | 2,966   | 2,752   | 2,567   | 2,576   | 2,747   | 2,741   | 2,795   | 2,645       | —             |       |
| Material loss                | Waste generated                  |         |         |         |         |         |         |         |         |         |             |               |       |
|                              | Landfill                         | ton     | 6,586   | 4,050   | 4,093   | 3,138   | 3,027   | 2,873   | 3,066   | 3,455   | 3,471       | 3,354         | —     |
|                              | External intermediate processing | ton     | 3,547   | 3,462   | 4,951   | 3,885   | 4,122   | 3,580   | 3,637   | 3,737   | 3,848       | 3,131         | —     |
|                              | Internal intermediate processing | ton     | 8,196   | 6,003   | 5,620   | 3,217   | 2,869   | 3,105   | 2,833   | 2,671   | 3,701       | 3,016         | —     |
|                              | External recycling               | ton     | 1,564   | 4,332   | 1,874   | 2,540   | 3,034   | 4,387   | 3,712   | 2,919   | 3,018       | 3,149         | —     |
|                              | Total waste generated            | ton     | 20,163  | 17,847  | 16,537  | 12,780  | 13,053  | 13,945  | 13,247  | 12,782  | 14,038      | 12,650        | 9,000 |
| Valuable materials           | ton                              | 8,695   | 4,010   | 4,079   | 3,609   | 2,956   | 2,800   | 4,522   | 3,065   | 3,309   | 3,239       | 2,600         |       |
| Total material loss          | ton                              | 28,858  | 21,857  | 20,617  | 16,389  | 16,009  | 16,746  | 17,770  | 15,847  | 17,347  | 15,889      | 11,600        |       |
| Chemical substance emissions | ton                              | —       | 278     | 191     | 245     | 204     | 164     | 147     | 126     | 148     | 149         | 110           |       |

Notes: Data covers all the business sites listed on page 3.

## Definitions/Calculation Method

### CO<sub>2</sub> emissions and energy consumption (crude oil equivalent)

The calculation of CO<sub>2</sub> emissions and energy consumption covers energy (fuel, heat, electricity, etc.) associated with all business activities. CO<sub>2</sub> emissions are calculated based on the Manual for Calculating and Reporting Greenhouse Gas Emissions (Ministry of the Environment and Ministry of Economy, Trade and Industry; June 2018). For city gas and electricity, the coefficient for each business released by each company is used. Energy consumption is calculated as a crude oil equivalent based on the Act on the Rational Use of Energy. Overseas business locations use the applicable domestic laws of each country. In the calculation of CO<sub>2</sub> emissions, the latest conversion coefficient at the start of the fiscal year of each city gas and electricity provider supplying each business site is used for city gas and electricity. In case the emissions coefficient of the electricity provider is unknown, the coefficient as of the start of each fiscal year for which data is released by the International Energy Agency is used.

### Waste generated

Total of aggregate volume of industrial and general waste from business sites. Definitions of each type of waste are as follows.

- (1) Landfill: waste disposed of in landfills by the Company or outsourced contractors
- (2) External intermediate processing: waste incinerated or treated by other means by outsourced contractors (without energy recovery)
- (3) Internal intermediate processing: waste incinerated or treated by other means in-house (without energy recovery)
- (4) External recycling (expenses paid): waste recycled with payment made to cover processing costs (including energy recovery)

### Valuable materials

The volume of valuable materials that are generated at business sites and sold and that are neither products nor raw materials.

### Material loss

Total of the volume of waste generated and the volume of valuable materials. Waste generated owing to the retirement of facilities, repairs, building demolition (in-house demolition work), etc., is not included in the scope of waste, nor is dismantling scrap material of value sold, facilities resold, or construction material waste (for which a manifest is issued by the Company).

### Chemical substance emissions

Total emissions into the air, bodies of water, and the ground (aggregate volume) of chemical substances targeted by the Japan Chemical Industry Association (JCIA)'s Pollutant Release and Transfer Register (PRTR) assessments (including substances subject to the reporting requirements of "The Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof" of Japan [PRTR system]). The emissions calculation method used is based on the latest Manual for Calculating PRTR Emissions (Ministry of the Environment and Ministry of Economy, Trade and Industry). JCIA changed the chemical substances subject to survey in fiscal 2013 and the Group reflected the change in the overall results from fiscal 2014 onward. Major substances that were excluded from the scope of calculation include ammonia and sulfuric acid.

## Response to Energy Saving/Global Warming Prevention Acts

|   | Unit                                     | FY2010                    | FY2011 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 |        |
|---|--|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sumitomo Bakelite   | CO <sub>2</sub> emissions                | t-CO <sub>2</sub>         | 84,035 | 75,883 | 81,541 | 81,471 | 79,822 | 76,989 | 70,764 | 66,915 |
|   | Energy usage                             | Crude oil equivalent (kL) | 48,903 | 43,464 | 42,314 | 40,661 | 39,747 | 38,600 | 36,567 | 35,974 |
|   | Year-on-year intensity of energy usage   | %                         | 96.8   | 101.3  | 92.1   | 96.5   | 96.4   | 100.5  | 100.2  | 91.0   |
|   | Average change in intensity over 5 years | %                         | -      | -      | -      | 96.6   | 96.5   | 96.3   | 98.4   | 96.9   |
| Kyushu Sumitomo Bakelite                                      | CO <sub>2</sub> emissions                | t-CO <sub>2</sub>         | 6,050  | 6,325  | 7,470  | 8,038  | 7,835  | 7,037  | 6,365  | 5,802  |
|   | Energy usage                             | Crude oil equivalent (kL) | 3,740  | 3,715  | 3,437  | 3,247  | 3,159  | 2,957  | 3,008  | 3,012  |
|   | Year-on-year intensity of energy usage   | %                         | 96.1   | 101.1  | 97.9   | 94.3   | 93.3   | 98.1   | 98.4   | 90.9   |
|   | Average change in intensity over 5 years | %                         | -      | -      | -      | 97.3   | 96.6   | 95.9   | 96.0   | 95.1   |
| Akita Sumitomo Bakelite                                       | CO <sub>2</sub> emissions                | t-CO <sub>2</sub>         | 8,583  | 6,183  | 6,776  | 6,429  | 6,016  | 5,176  | 5,079  | 4,797  |
|   | Energy usage                             | Crude oil equivalent (kL) | 3,751  | 2,728  | 2,806  | 2,547  | 2,393  | 2,070  | 2,095  | 2,018  |
|   | Year-on-year intensity of energy usage   | %                         | 123.2  | 90.4   | 121.8  | 86.1   | 88.0   | 98.0   | 95.4   | 93.3   |
|   | Average change in intensity over 5 years | %                         | -      | -      | -      | 104    | 95.6   | 97.5   | 91.8   | 93.6   |
| S.B. Sheet Waterproof Systems (started reporting from FY2012) | CO <sub>2</sub> emissions                | t-CO <sub>2</sub>         |        |        | 3,645  | 4,285  | 4,098  | 3,865  | 3,397  | 3,220  |
|   | Energy usage                             | Crude oil equivalent (kL) |        |        | 1,941  | 2,017  | 1,913  | 1,807  | 1,683  | 1,683  |
|   | Year-on-year intensity of energy usage   | %                         |        |        | -      | 96.4   | 97.8   | 94.8   | 95.4   | 93.8   |
|   | Average change in intensity over 5 years | %                         |        |        | -      | -      | -      | -      | 96.1   | 95.4   |

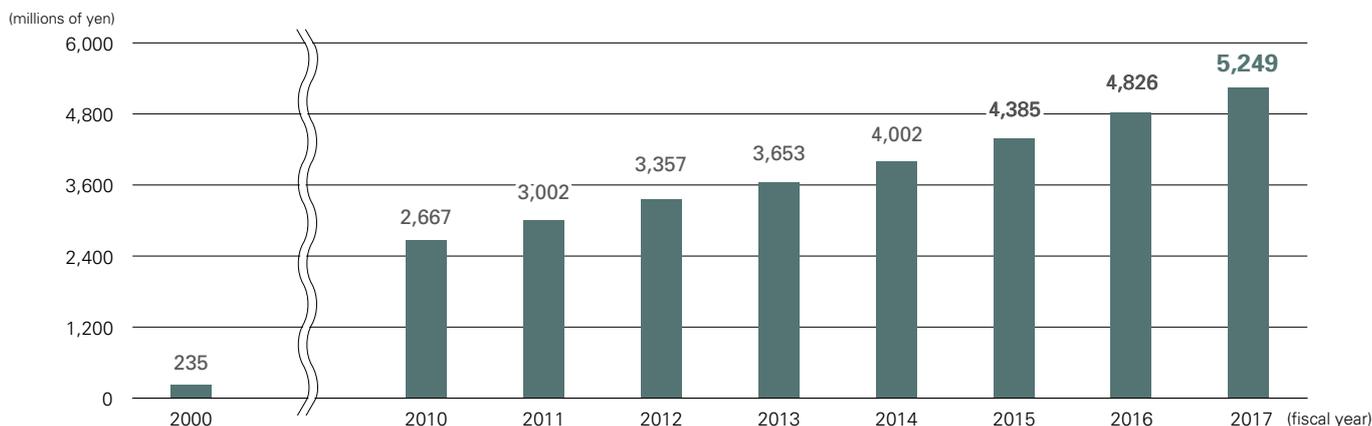
## Distribution-Related Energy Conservation Measures

|  | Unit  | FY2006             | FY2010 | FY2011 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 |        |
|--|---|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Transportation ton-kilometer                           | thousand t-km   | 30,297             | 37,271 | 33,663 | 29,267 | 29,117 | 29,626 | 30,413 | 30,399 | 30,643 |        |
| CO <sub>2</sub> emissions associated with energy usage | t-CO <sub>2</sub>   | 5,090              | 5,780  | 5,208  | 4,592  | 4,610  | 4,499  | 4,476  | 4,623  | 4,744  |        |
| Intensity of energy usage                              | Energy usage (Crude oil equivalent [kL] / Transportation thousand ton-km) | kL/thousand ton-km | 0.0632 | 0.0583 | 0.0582 | 0.0590 | 0.0596 | 0.0571 | 0.0555 | 0.0573 | 0.0583 |
|  | Year-on-year reduction (FY2006=100%)                                      | %                  | 100    | 92.2   | 92.1   | 93.4   | 94.3   | 90.3   | 87.8   | 90.7   | 92.2   |

## Fiscal Year and Accumulated Investments for Environmental Protection

|                  | Unit            | FY2000 | FY2010 | FY2011 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 |
|------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Fiscal year      | millions of yen | 235    | 290    | 335    | 355    | 296    | 350    | 383    | 441    | 423    |
| Cumulative total | millions of yen | 235    | 2,667  | 3,002  | 3,357  | 3,653  | 4,002  | 4,385  | 4,826  | 5,249  |

### Accumulated Investments for Environmental Protection



## Transfer and Release of Substances Subject to the PRTR Act (Fiscal 2017 Performance)

The amounts of the 37 substances subject to the PRTR Act (PRTR system\*<sup>1</sup>) released and transferred by the Group's business sites in Japan are presented in the table below.

(tons/year)

| Government order number | Substance                                      | Amount used<br>(manufactured) | Release    |            |           | Transfer          |           |
|-------------------------|--|-------------------------------|------------|------------|-----------|-------------------|-----------|
|                         |  |                               | Into air   | Into water | Into soil | As waste material | As sewage |
| 1                       | Zinc compounds (water-soluble)                 | 18.5                          |            |            |           |                   |           |
| 18                      | Aniline  | 229.6                         |            |            |           |                   | 1.0       |
| 31                      | Antimony and its compounds                     | 52.0                          |            |            |           |                   | 1.9       |
| 37                      | Bisphenol A                                    | 205.9                         |            |            |           |                   | 0.1       |
| 51                      | 2-ethylhexanoic acid                           | 1.5                           |            |            |           |                   |           |
| 53                      | Ethyl benzene                                  | 29.3                          |            |            |           |                   | 5.1       |
| 56                      | Ethylene oxide                                 | 1.0                           | 0.1        |            |           |                   |           |
| 57                      | Ethylene glycol monoethyl ether                | 11.1                          |            |            |           |                   |           |
| 71                      | Ferric chloride                                | 1.3                           |            |            |           |                   | 1.3       |
| 78                      | 2,4-xylenol                                    | 10.9                          |            |            |           |                   |           |
| 79                      | 2,6-xylenol                                    | 10.9                          |            |            |           |                   |           |
| 80                      | Xylene   | 40.8                          |            |            |           |                   | 10.9      |
| 82                      | Silver and its water-soluble compounds         | 12.4                          |            |            |           |                   |           |
| 86                      | Cresol   | 1,532.5                       |            |            |           |                   | 0.9       |
| 136                     | Salicylaldehyde                                | 4.2                           |            |            |           |                   |           |
| 207                     | 2,6-di-tert-butyl-4-cresol                     | 1.5                           |            |            |           |                   |           |
| 218                     | Dimethylamine                                  | 1.7                           |            |            |           |                   |           |
| 232                     | N, N-dimethyl formamide                        | 338.8                         | 1.7        |            |           |                   | 11.8      |
| 239                     | Organic tin compounds                          | 23.6                          |            |            |           |                   | 2.9       |
| 258                     | Hexamethylenetetramine                         | 1,046.2                       |            |            |           |                   | 23.1      |
| 265                     | Tetrahydromethylphthalic anhydride             | 277.6                         |            |            |           |                   |           |
| 277                     | Triethylamine                                  | 1.7                           |            |            |           |                   |           |
| 296                     | 1,2,4-trimethylbenzene                         | 1.0                           |            |            |           |                   |           |
| 300                     | Toluene  | 126.0                         | 9.7        |            |           |                   | 11.8      |
| 302                     | Naphthalene                                    | 2.2                           |            |            |           |                   |           |
| 309                     | Nickel compounds                               | 2.0                           |            |            |           |                   | 0.1       |
| 320                     | Nonylphenol                                    | 3.1                           |            |            |           |                   |           |
| 330                     | Bis (1-methyl-1-phenylethyl) = peroxide        | 5.9                           |            |            |           |                   |           |
| 349                     | Phenol   | 23,568.1                      | 0.2        |            |           |                   | 36.1      |
| 352                     | Diallyl phthalate                              | 5.9                           |            |            |           |                   |           |
| 355                     | Bis (2-ethylhexyl) phthalate                   | 1.2                           |            |            |           |                   |           |
| 392                     | n-hexane                                       | 1.7                           | 0.4        |            |           |                   | 0.1       |
| 401                     | 1,2,4-benzene tricarboxylic acid 1,2-anhydride | 12.8                          |            |            |           |                   | 1.0       |
| 405                     | Boron and its compounds                        | 11.9                          |            |            |           |                   | 1.3       |
| 411                     | Formaldehyde                                   | 8,693.6<br>(11,109.1)         | 0.5<br>0.3 |            |           |                   | 5.1       |
| 413                     | Phthalic anhydride                             | 1.4                           |            |            |           |                   | 0.2       |
| 438                     | Methylnaphthalene                              | 21.3                          | 0.1        |            |           |                   |           |

Specific Class 1 designated chemical substances \*1 See the glossary on page 78.

## Memberships in Leading Organizations (Classifications of Organizations Have Been Omitted)

| Organization  | Role of Sumitomo Bakelite  |
|---|--|
| Keidanren (Japan Business Federation)                           | Participates in task forces such as the Nature Protection Deliberation Council and the 1% (One Percent) Club   |
| Japan Thermosetting Plastics Industry Association               | Participates in the phenol resin/amino resin extrusion materials subcommittee, laminated panel subcommittee, phenol resin subcommittee, adhesives subcommittee, melamine resin decorative panel subcommittee, electronics materials subcommittee, and environment/recycling research subcommittee    |
| The Japan Chemical Industry Association                         | Serves in the General Affairs Department, Technical Affairs Committee, Environmental Safety Committee, Responsible Care Committee and Chemicals Management Committee   |
| The Japan Plastics Industry Federation                          | Participates in the chemicals management committee   |
| Japan Plastic Sheet Association                                 | Hard vinyl chloride plate Subcommittee, Poly carbonate plate Subcommittee, environmental committee, and Japan PCV Environmental Affairs Council as an officer of the Association   |
| Japan Electronics Packaging and Circuits Association            |  |
| Medical Technology Association of Japan                         | Participates in the raw materials committee, regulatory affairs committee, distribution committee, microbe reduction committee, and other committees   |
| Japan Chemical Exports and Imports Association                  | Participates in the chemical substance safety, environmental committee   |
| Japan Environmental Management Association for Industry (JEMAI) | Dispatches lecturers to LCA seminars, provides database for LCA use, participates in LCA Japan Forum   |
| Japan Industrial Safety & Health Association                    | Dispatches lecturers for internal training seminars on labor health and safety, participates in seminars   |
| Japan Association for Chemical Innovation (JACI)                | Participates in the Planning & Management Council as a member on the board of directors. Participates in several committees and subcommittees, including Strategy Committee, Strategic Planning Subcommittee, and Frontier Coordination Committee, and assists in information collection and events. |

## Environmental Protection Activities

| Year | Sumitomo Bakelite Group's Initiatives  | Social developments   |
|------|--|---|
| 1969 | <ul style="list-style-type: none"> <li>● Pollution countermeasures secretariat established</li> </ul>  |   |
| 1973 | <ul style="list-style-type: none"> <li>● Environmental Management Division established</li> <li>● Environmental auditing of domestic business sites commenced</li> </ul>   |   |
| 1974 | <ul style="list-style-type: none"> <li>● Environmental management departments established for all business sites</li> </ul>  |   |
| 1978 | <ul style="list-style-type: none"> <li>● Environmental auditing of domestic subsidiaries and affiliates commenced</li> </ul>   |   |
| 1987 |  | <ul style="list-style-type: none"> <li>● Montreal Protocol on Substances that Deplete the Ozone Layer adopted</li> </ul>  |
| 1990 | <ul style="list-style-type: none"> <li>● Environmental Issue Action Committee established. Appointment of director in charge</li> </ul>  |   |
| 1991 | <ul style="list-style-type: none"> <li>● Recycling Technology Action Office established</li> </ul>   | <ul style="list-style-type: none"> <li>● Law Promoting the Use of Recycled Resources enacted</li> </ul>   |
| 1992 | <ul style="list-style-type: none"> <li>● S.B. Recycle established</li> </ul>   | <ul style="list-style-type: none"> <li>● United Nations Conference on Environment and Development (UNCED or Earth Summit) results in the "Rio Declaration on Environment and Development", "Agenda 21", etc.</li> </ul>   |
| 1993 | <ul style="list-style-type: none"> <li>● Environment and Safety Voluntary Plan drafted</li> <li>● Environment and safety management regulations established</li> <li>● Environmental audits of overseas subsidiaries and affiliates commenced</li> </ul>   | <ul style="list-style-type: none"> <li>● The Basic Environment Law enacted</li> </ul>   |
| 1994 | <ul style="list-style-type: none"> <li>● Use of certain CFCs and 1,1,1-trichloroethane ceases</li> </ul>   |   |
| 1995 | <ul style="list-style-type: none"> <li>● Responsible Care Committee established</li> <li>● The Company joins the Japan Responsible Care Council as a founding member</li> </ul>  | <ul style="list-style-type: none"> <li>● Japan Responsible Care Council (JRCC) established</li> <li>● Law for Promotion of Sorted Collection and Recycling of Containers and Packaging enacted</li> </ul>   |
| 1997 | <ul style="list-style-type: none"> <li>● Corporate Policies for Safety, Health, and the Environment revised, and Utsunomiya Plant and Sumitomo Bakelite Singapore obtain ISO 14001 certification</li> </ul>  | <ul style="list-style-type: none"> <li>● Kyoto Protocol adopted by the Third Conference of the Parties of the United Nations Framework Convention on Climate Change (COP3)</li> </ul>   |
| 1998 | <ul style="list-style-type: none"> <li>● First Environmental Activities Report issued</li> </ul>   |   |
| 1999 | <ul style="list-style-type: none"> <li>● All Sumitomo Bakelite plants obtain ISO14001 certification</li> </ul>   | <ul style="list-style-type: none"> <li>● Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management enacted</li> <li>● Law Concerning Special Measures against Dioxins enacted</li> </ul>   |
| 2000 | <ul style="list-style-type: none"> <li>● Environmental accounting implemented</li> </ul>   | <ul style="list-style-type: none"> <li>● Basic Law for Establishing the Recycling-Based Society enacted</li> </ul>  |
| 2001 | <ul style="list-style-type: none"> <li>● Environmental Report issued (independent reviews conducted)</li> </ul>  | <ul style="list-style-type: none"> <li>● Law Concerning Special Measures against PCB Waste enacted</li> </ul>   |
| 2002 | <ul style="list-style-type: none"> <li>● Scope of Environmental Report expanded to include subsidiaries and affiliates in Japan</li> <li>● Tokyo Kakohin receives an award for promoting a "3R" policy of reduce, reuse, and recycle</li> <li>● Risk Management Committee established</li> </ul>   | <ul style="list-style-type: none"> <li>● Soil Contamination Countermeasures Act enacted</li> <li>● Japan adopts COP3 Kyoto Protocol</li> <li>● World Summit on Sustainable Development adopts Johannesburg Declaration on Sustainable Development</li> </ul>  |
| 2003 | <ul style="list-style-type: none"> <li>● Yamaroku Kasei Industry certified as the Company's first zero waste emissions plant</li> <li>● Compliance Committee established</li> </ul>  | <ul style="list-style-type: none"> <li>● Building Code revised to resolve "sick building" syndrome</li> </ul>   |
| 2004 | <ul style="list-style-type: none"> <li>● Shizuoka Plant commences operations of a cogeneration system</li> </ul>   | <ul style="list-style-type: none"> <li>● Air Pollution Prevention Law revised to reduce volatile organic compound (VOC) emissions</li> </ul>  |
| 2005 | <ul style="list-style-type: none"> <li>● Title of annual Environmental Report changed to Environmental &amp; Social Report to reflect broader coverage of social initiatives</li> <li>● Sumitomo Bakelite (Taiwan) recognized as the Sumitomo Bakelite Group's first overseas zero emissions production business site</li> </ul>   | <ul style="list-style-type: none"> <li>● Kyoto Protocol goes into effect</li> <li>● Ordinance on Prevention of Health Impairment due to Asbestos</li> </ul>   |
| 2007 |  | <ul style="list-style-type: none"> <li>● The new EU Regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) comes into force</li> </ul>   |
| 2008 | <ul style="list-style-type: none"> <li>● Thirty of the business sites of the Sumitomo Bakelite Group in Japan and overseas obtained ISO14001 certification (as of July)</li> <li>● Start of soil and groundwater pollution remediation measures at a site owned by Sano Plastic following the dismantling of a factory building there (February)</li> <li>● The company signs Responsible Care Global Charter (November)</li> <li>● Start of mechanical equipment risk assessment</li> </ul> | <ul style="list-style-type: none"> <li>● G8 Hokkaido Toyako Summit</li> </ul>   |
| 2009 | <ul style="list-style-type: none"> <li>● Inauguration of multilingual Material Safety Data Sheet (MSDS) system</li> <li>● Begins participating as a partner in the Declaration of Biodiversity of the Japan Business Federation (Nippon Keidanren)</li> </ul>  | <ul style="list-style-type: none"> <li>● Revised Act on the Rational Use of Energy takes effect</li> <li>● The 15th Conference of the Parties (COP15) held with the United Nations Climate Change Conference</li> </ul>   |
| 2010 | <ul style="list-style-type: none"> <li>● Establishment of the Environmental Impact Reduction Committee</li> <li>● The Sumitomo Bakelite Group begins leakage risk assessments at its business sites in Japan and overseas</li> </ul>   | <ul style="list-style-type: none"> <li>● The 10th Conference of the Parties (COP10) to the Convention on Biological Diversity</li> </ul>  |
| 2011 | <ul style="list-style-type: none"> <li>● Presentation to Tochigi Prefectural Government of the report on the remediation construction work conducted at the Sano Plastic site (July)</li> <li>● Standards for preparation of the Environmental &amp; Social Report changed to conform with the GRI guidelines</li> </ul>   | <ul style="list-style-type: none"> <li>● The 17th Conference of Parties (COP17) to the United Nations Framework Convention on Climate Change</li> <li>● The Great East Japan Earthquake</li> </ul>  |
| 2012 | <ul style="list-style-type: none"> <li>● The biotope project starts at the Shizuoka Plant</li> <li>● Work to excavate and remove contaminated soil and to purify contaminated groundwater in the premises of the Totsuka Office after its closure</li> <li>● Zero emissions achieved at all domestic plants</li> <li>● Start of chemical materials risk assessment</li> </ul>  | <ul style="list-style-type: none"> <li>● The 18th Conference of Parties (COP18) to the United Nations Framework Convention on Climate Change and the 8th Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP8)</li> <li>● Following the accident at the Fukushima Daiichi Nuclear Power Plant of Tokyo Electric Power Company caused by the Great East Japan Earthquake, operation of all 54 commercial nuclear reactors in Japan suspended. Of the 54, only two at the Oi Nuclear Power Plant of Kansai Electric Power Company resumed operation</li> </ul> |
| 2013 | <ul style="list-style-type: none"> <li>● Completion of decontamination at the former Totsuka Plant reported to Yokohama City</li> </ul>  | <ul style="list-style-type: none"> <li>● The 19th Conference of Parties (COP19) to the United Nations Framework Convention on Climate Change and the 9th Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP9)</li> </ul>  |
| 2014 | <ul style="list-style-type: none"> <li>● The Company signs the revised Responsible Care Global Charter</li> <li>● Environmental rating by the Development Bank of Japan (DBJ environmental rating): Gained A</li> <li>● Compilation of certain Scope 3 data starts at business sites in Japan</li> <li>● Start of risk assessment for fire by explosion</li> </ul>   | <ul style="list-style-type: none"> <li>● Revision to the Responsible Care Global Charter (6th element)</li> <li>● Revision to the Industrial Safety and Health Act starts requiring businesses to perform risk assessments of chemical substances</li> </ul>  |
| 2015 | <ul style="list-style-type: none"> <li>● Revised the Company's Environment and Safety management guidelines, and established a new Responsible Care Activity Guideline in accordance to the Responsible Care Global Charter revised in 2014.</li> </ul>  | <ul style="list-style-type: none"> <li>● ISO 14001 Revised</li> <li>● Implementation of the amended Law Concerning the Discharge and Control of Fluorocarbons</li> <li>● Revision to the Water Pollution Control Act (revised wastewater standards)</li> <li>● Revision to the Soil Contamination Countermeasures Act (amended specified toxic substances)</li> </ul>   |
| 2016 | <ul style="list-style-type: none"> <li>● Changed the name of the Environment and Social Report to the CSR Report and prepared it in compliance with the GRI Guidelines (Ver. 4)</li> </ul>   | <ul style="list-style-type: none"> <li>● Revisions to Japan's Industrial Safety and Health Law (concerning chemical substance risk assessment) take effect</li> <li>● Revisions made to Japan's Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes (requiring systematic disposal prior to treatment expiration)</li> </ul>   |
| 2017 | <ul style="list-style-type: none"> <li>● Opened the biotope at Shizuoka Plant to the general public</li> </ul>   |   |

## Glossary for the CSR Report 2018

### ■ 47/M-DAG/PER/9 (page 47)

Rules on Indonesia's chemical substance regulation.

### ■ CLASS regulations (page 47)

The Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013. Malaysia's GHS regulation.

### ■ CLP (page 47)

Regulation on the classification, labelling and packaging of chemical products based on GHS with the purpose of mainly communicating hazards in the EU.

### ■ CNS15030 Z1051 (page 47)

Chinese national standard for classification and labelling of chemicals in Taiwan.

### ■ COD (pages 37 and 41)

Chemical oxygen demand (COD) is a measure used in water quality analysis, indicating the amount of oxygen consumed by potassium permanganate to oxidize organic compounds in water. Overseas, potassium dichromate is often used as an oxidizing agent, and results are different, so we compiled separately in Japan and overseas.

### ■ CS (pages 48 and 51)

Acronym for customer satisfaction.

### ■ CSR

Acronym for Corporate Social Responsibility. CSR collectively refers to activities carried out within the scope of a company's operations not only geared toward generating profits, but also for fulfilling a company's responsibilities to society and growing together with society while emphasizing the correlation with all stakeholders.

### ■ DIW notification (page 47)

Notification of the Department of Industrial Works of Thailand.

### ■ European REACH (page 47)

European Union regulation to protect the health of people and environment during the handling of chemical substances.

### ■ GB/T 16483 (page 47)

China's state standard for SDS (Safety Data Sheet for chemicals).

### ■ GHS (page 25 and 47)

Acronym for the Globally Harmonized System of Classification and Labelling of Chemicals.

### ■ GRI (pages 3 and 79 to 80)

Acronym for Global Reporting Initiative, an international NGO. The organization publishes the GRI Sustainability Reporting Guideline.

### ■ HCS (page 47)

Acronym for Hazard Communication Standard. Regulation on workplaces handling dangerous and hazardous chemical substances in the United States.

### ■ ISO 26000 (page 12)

International standard developed in October 2010 to help organizations address social responsibility issues. This is the first international standard created through a multi-stakeholder process, which involved experts representing a multitude of sectors in the deliberation.

### ■ JIS Z 7253 (page 47)

Integrated version of JIS Z7250 and Z7251 for consistency with GHS.

### ■ Materiality (page 4)

In the context of CSR, "materiality" refers to significant items that need to be worked on. Materiality items are selected in terms of how they reflect significant effects that an organization has on the economy, environment, and society, and how they have actual impact on evaluations and decisions made by stakeholders.

### ■ MFCA (page 38, 39 and 41)

Acronym for Material Flow Cost Accounting, an environmental management and accounting tool for companies to improve cost efficiency and reduce environmental impact at the same time. Our Group utilizes this method as an analysis tool.

### ■ MSDgen (page 47)

A multilingual SDS publishing system introduced in 2008.

### ■ NOM (page 47)

Official Mexican Standards prepared by the General Directorate of Standards. They contain the absolute minimum requirements that must be met for preventing workplace dangers.

### ■ NO<sub>x</sub> (pages 37 and 41)

Nitrogen Oxide

### ■ Occupational Safety and Health Act (page 47)

The Occupational Safety and Health Act of South Korea.

### ■ Pollutant Release and Transfer Register (PRTR) system (page 76)

Japan's PRTR Act requires companies using harmful chemical substances to gather data on the amount of harmful chemical substances released into the environment and other data as a means of promoting autonomous efforts by those companies to improve their management of such substances and preventing the pollution of the environment by such substances.

### ■ Prop 65 (page 47)

An abbreviation for Proposition 65, a California law, officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986.

### ■ QOL (page 48)

Acronym for quality of life. A concept of satisfaction in all aspects of life, which includes not only material wealth possession but also emotional fulfillment, and self actualization.

### ■ RBA Code of Conduct (pages 35)

The Electronic Industry Citizenship Coalition (EICC) Code of Conduct establishes standards to ensure that working conditions in the electronics industry supply chain are safe, that workers are treated with respect and dignity, and that business operations are environmentally responsible and conducted ethically.

### ■ Responsible Care (page 28)

Activity that assures environmental safety and health in all stages of a chemical material's existence from development to manufacturing, distribution, utilization, final consumption, disposal, and recycling; publishes process results; and promotes dialogue and communication with the public. (Japan Chemical Industry Association)

### ■ Scope 3 (page 40)

Whereas Scope 1 concerns direct emissions due to combustion of fuel etc. and Scope 2 concerns indirect emissions from consumption of purchased electricity or heat, Scope 3 concerns other indirect emissions, both upstream and downstream, of the supply chain of the reporting entity. The international guidelines of the Greenhouse Gas (GHG) Protocol break down Scope 3 into 15 categories.

### ■ SDS (pages 25 and 47)

Acronym for Safety Data Sheet. This sheet contains the safety information regarding chemical substances, and is attached with products on their delivery to other businesses.

### ■ Soot and dust (pages 37 and 41)

Solid particulate matter found in smoke including dust and cinders.

### ■ SO<sub>x</sub> (pages 37 and 41)

Sulfur Oxide

### ■ Stakeholders (pages 4, 13 and 29)

Persons and organizations concerned. People who have an interest in any decisions made or activities conducted by an organization.

### ■ TT-BCT (page 47)

Circular notice on regulation for classification and labelling of chemical substances of Vietnam.

### ■ WSSD (page 47)

Acronym for World Summit on Sustainable Development.

## GRI Standards Comparison Table

This report is compliant with the Core of the Global Reporting Initiative’s (GRI) Sustainability Reporting Standards 2016.

### General Disclosures

| GRI Standard – General Disclosures |  | Page number (title)   |
|------------------------------------|--|---|
| <b>1. Organizational profile</b>   |  |   |
| 102-1                              | Name of the organization                                     | P29: Corporate Data<br>Website: Overview<br><a href="https://www.sumibe.co.jp/english/company/outline/index.html">https://www.sumibe.co.jp/english/company/outline/index.html</a>   |
| 102-2                              | Activities, brands, products, and services                   | P14-17: Familiar Sumitomo Bakelite Products Around You<br>P29: Corporate Data / Major Products by Division<br>Securities Report P6-7/141: Business Description<br>Website: Products<br><a href="https://www.sumibe.co.jp/english/product/index.html">https://www.sumibe.co.jp/english/product/index.html</a>  |
| 102-3                              | Location of headquarters                                     | P29: Corporate Data<br>Website: Overview<br><a href="https://www.sumibe.co.jp/english/company/outline/index.html">https://www.sumibe.co.jp/english/company/outline/index.html</a>   |
| 102-4                              | Location of operations                                       | P30: Group Companies<br>P66-73: Business Sites, Subsidiaries and Affiliates in Japan and Overseas<br>P81: Sumitomo Bakelite Group<br>Website: Group Companies (Overseas)<br><a href="https://www.sumibe.co.jp/english/company/overseas/index.html">https://www.sumibe.co.jp/english/company/overseas/index.html</a>   |
| 102-5                              | Ownership and legal form                                     | P29: Corporate Data<br>P31: Corporate Governance  |
| 102-6                              | Markets served   | P30: Group Companies<br>Securities Report P6-7/141: Business Description  |
| 102-7                              | Scale of the organization                                    | P29: Corporate Data<br>P30: Group Companies<br>Securities Report P2-3/141: Overview of Company<br>P11/141: Employees<br>P34-35/141: Major Shareholders<br>Website: Overview<br><a href="https://www.sumibe.co.jp/english/company/outline/index.html">https://www.sumibe.co.jp/english/company/outline/index.html</a>  |
| 102-8                              | Information on employees and other workers                   | P52: Breakdown of Employees by Region and by Gender<br>Securities Report P29-30/141: Main Facilities (Number of Employees at Each Plant and Company at Right)   |
| 102-9                              | Supply chain   | P35: CSR Procurement>Basic Approach   |
| 102-10                             | Significant changes to the organization and its supply chain | None  |
| 102-11                             | Precautionary Principle or approach                          | P34: Risk Management<br>P36: Environmental Management<br>p49: Reducing Risk Relating to New Business  |
| 102-12                             | External initiatives   | P77: Environmental Protection Activities  |
| 102-13                             | Membership of associations                                   | P76: Memberships in Leading Organizations   |
| <b>2. Strategy</b>                 |  |   |
| 102-14                             | Statement from senior decision-maker                         | P4-5: Top Commitment  |
| <b>3. Ethics and integrity</b>     |  |   |
| 102-16                             | Values, principles, standards, and norms of behavior         | P27-28: Business Policy and CSR<br>P32: Code of Conduct for Employees<br>P35: Basic Approach (Procurement Policy at right)<br>P48: Basic Quality Management Policy for Fiscal 2018<br>P60: Basic Policy on Profit Distribution<br>Website: Guiding Principles<br><a href="https://www.sumibe.co.jp/english/company/philosophy/index.html">https://www.sumibe.co.jp/english/company/philosophy/index.html</a><br>Website: Material Procurement>Procurement Policy<br><a href="https://www.sumibe.co.jp/english/company/purchasing/index.html">https://www.sumibe.co.jp/english/company/purchasing/index.html</a> |
| <b>4. Governance</b>               |  |   |
| 102-18                             | Governance structure   | P28: CSR Promotion Structure<br>P31-32: Corporate Governance<br>P36: Environmental Management<br>Securities Report P42/141: Corporate Governance  |

| GRI Standard – General Disclosures |  | Page number (title)  |
|------------------------------------|--|--|
| <b>5. Stakeholder engagement</b>   |  |  |
| 102-40                             | List of stakeholder groups                                       | P29-30: Relationship with Stakeholders   |
| 102-41                             | Collective bargaining agreements                                 | P59: Labor-Management Relations<br>Securities Report P11/141: Labor Unions<br><br>(Reason for omission)<br>The way in which labor unions are formed varies between companies; therefore, it is difficult to obtain information for the overall Group on the percentage of employees covered by collective bargaining agreements. We will research this information sometime over the next one to two years and consider disclosing it. |
| 102-42                             | Identifying and selecting stakeholders                           | P12-13 Sumitomo Bakelite’s Materiality<br>P29-30: Stakeholder Engagement   |
| 102-43                             | Approach to stakeholder engagement                               | P29-30: Relationship with Stakeholders   |
| 102-44                             | Key topics and concerns raised                                   | P29: Relationship with Stakeholders  |
| <b>6. Reporting practice</b>       |  |  |
| 102-45                             | Entities included in the consolidated financial statements       | P3: Boundary<br>P81: Consolidated subsidiaries (38 companies)<br>Securities Report P9-10/141: Affiliated Companies   |
| 102-46                             | Defining report content and topic Boundaries                     | P3: Boundary<br>P12-13: Sumitomo Bakelite’s Materiality<br>P79: Basis to disclose topics identified as material  |
| 102-47                             | List of material topics  | P79: Basis to disclose topics identified as material   |
| 102-48                             | Restatements of information                                      | None   |
| 102-49                             | Changes in reporting   | None   |
| 102-50                             | Reporting period   | P3: Period   |
| 102-51                             | Date of most recent report                                       | P3: Published  |
| 102-52                             | Reporting cycle  | P3: Published  |
| 102-53                             | Contact points for questions regarding the report                | Back cover: Inquiries  |
| 102-54                             | 102-54 Claims of presorting in accordance with the GRI Standards | P3: Editorial Policy<br>P79: GRI Standards Comparison Table  |
| 102-55                             | GRI content index  | P3: Editorial Policy<br>P79-81: GRI Standards Comparison Table<br>P82: Independent Assurance Report  |
| 102-56                             | External assurance   | P82: Independent Assurance Report  |

### Basis of to disclose topics identified as material

| Identified materiality items         | Related GRI Standard Aspects                       |
|--------------------------------------|--|
| ● Mitigate environmental impacts     | Materials/Emissions/Effluents and Waste            |
| ● Resource and energy conservation   | Energy   |
| ● Safety and security                | Environment-Overall/Occupational Health and Safety |
| ● Chemical substances                | Occupational Health and Safety                     |
| ● Product liability                  | Customer Health and Safety                         |
| ● Biodiversity                       | Biodiversity                                       |
| ● Improving stakeholder satisfaction | Customer Health and Safety                         |
| ● Human resources development        | Training and Education/Employment                  |
| ● Diversity and work-life balance    | Diversity and Equal Opportunity                    |
| ● CSR procurement                    | Supplier social assessment                         |
| ● Compliance                         | Socioeconomic compliance/Environmental Compliance  |

■ Topics determined to be material

| GRI Standard – General Disclosures       |   | Page number (title)  |
|--|---|--|
| GRI 300 Series (Environmental Standards) |   |  |
| GRI 301 Materials                        |   |  |
| 103-1                                    | Explanation of the material topic and its Boundary  | P39: New Medium- to Long-term Environmental Targets and Results<br>P41: Reducing Material Loss   |
| 103-2                                    | The management approach and its components  | P39: New Medium- to Long-term Environmental Targets and Results<br>P41: Reducing Material Loss   |
| 103-3                                    | Evaluation of the management approach   | P39: New Medium- to Long-term Environmental Targets and Results<br>P41: Reducing Material Loss   |
| 301-1                                    | Materials used by weight or volume  | P37: Material Flows and Investments in Environmental Protection  |
| GRI 302 Energy                           |   |  |
| 103-1                                    | Explanation of reporting the material topic and its Boundary  | P37: Material Flows and Investments in Environmental Protection  |
| 103-2                                    | The management approach and its components  | P25: Highlights of Fiscal 2017 Activities<br>P36: Environmental Management   |
| 103-3                                    | Evaluation of the management approach   | P36: Environmental Management  |
| 302-1                                    | Energy consumption within the organization  | P37: Material Flows and Investments in Environmental Protection<br>P74: Trends in Environmental Performance<br>P75: Response to Energy Saving/Global Warming Prevention Acts                 |
| 302-3                                    | Energy intensity  | P40: Environmental Performance   |
| 302-4                                    | Reduction of energy consumption   | P36: Activities of the Environmental Impact Reduction Committee  |
| GRI 304 Biodiversity                     |   |  |
| 103-1                                    | Explanation of reporting the material topic and its Boundary  | P61: Biodiversity Conservation Initiatives<br>P63: Environmental and Social Contribution Activities  |
| 103-2                                    | The management approach and its components  | P26: Highlights of Fiscal 2017 Activities<br>P61: Biodiversity Conservation Initiatives<br>P63: Environmental and Social Contribution Activities   |
| 103-3                                    | Evaluation of the management approach   | P63: Message from Earthwatch Japan   |
| 304-1                                    | Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | P61: Biotope Initiatives   |
| GRI 305 Emissions                        |   |  |
| 103-1                                    | Explanation of reporting the material topic and its Boundary  | P36: Environmental Management  |
| 103-2                                    | The management approach and its components  | P37: Material Flows and Investments in Environmental Protection  |
| 103-3                                    | Evaluation of the management approach   | P36: Activities of the Environmental Impact Reduction Committee  |
| 305-1                                    | Direct (Scope 1) GHG emissions  | P37: Material Flows and Investments in Environmental Protection<br>P38: Medium- to Long-term Environmental Targets and Review of Results<br>· Offsetting not used until fiscal 2017.         |
| 305-2                                    | Energy indirect (Scope 2) GHG emissions   | P37: Material Flows and Investments in Environmental Protection<br>P38: Medium- to Long-term Environmental Targets and Review of Results<br>P40: Environmental Performance                   |
| 305-3                                    | Other indirect (Scope 3) GHG emissions  | P40: Environmental Performance   |
| 305-3                                    | Other indirect (Scope 3) GHG emissions  | P40: Environmental Performance   |
| 305-4                                    | GHG emissions intensity   | P40: Environmental Performance   |
| 305-7                                    | Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions   | P37: Material Flows<br>P41: Air Emission   |
| GRI 306 Effluents and Waste              |   |  |
| 103-1                                    | Explanation of reporting the material topic and its Boundary  | P36: Environmental Management  |
| 103-2                                    | The management approach and its components  | P25: Highlights of Fiscal 2017 Activities<br>P37: Material Flows and Investments in Environmental Protection<br>P41: Water Emission<br>P43: Soil/Underground Water Pollution Countermeasures |
| 103-3                                    | Evaluation of the management approach   | P36: Activities of the Environmental Impact Reduction Committee  |
| 306-1                                    | Water discharge by quality and destination  | P37: Material Flows<br>P41: Water Emission   |
| 306-2                                    | Waste by type and disposal method   | P37: Material Flows<br>P74: Trends in Environmental Performance  |
| 306-3                                    | Significant spills  | P43: Soil/Underground Water Pollution Countermeasures  |

| GRI Standard – General Disclosures        |   | Page number (title)   |
|---|---|---|
| GRI 307 Environmental Compliance          |   |   |
| 103-1                                     | Explanation of reporting the material topic and its Boundary                            | P32: Compliance<br>P36: Environmental Management  |
| 103-2                                     | The management approach and its components  | P5: Thoroughness of Compliance<br>P32: Compliance<br>P33: Whistleblower System<br>P36: Environmental Management   |
| 103-3                                     | Evaluation of the management approach   | P32: Compliance<br>P36: Environmental Management  |
| 307-1                                     | Non-compliance with environmental laws and regulations                                  | P33: Monitoring   |
| GRI 308 Supplier Environmental Assessment |   |   |
| 103-1                                     | Explanation of reporting the material topic and its Boundary                            | P35: CSR Procurement  |
| 103-2                                     | The management approach and its components  | P26: Highlights of Fiscal 2017 Activities<br>P35: CSR Procurement   |
| 103-3                                     | Evaluation of the management approach   | P35: CSR Procurement  |
| 308-2                                     | Negative environmental impacts in the supply chain and actions taken                    | P35: CSR Survey of Suppliers  |
| GRI 400 Series (Social Standards)         |   |   |
| GRI 401 Employment                        |   |   |
| 103-1                                     | Explanation of reporting the material topic and its Boundary                            | P52: Recruiting and Employment<br>P55: Human Resources Development  |
| 103-2                                     | The management approach and its components  | P52: Recruiting and Employment  |
| 103-3                                     | Evaluation of the management approach   | P59: Labor-Management Relations   |
| 401-1                                     | New employee hires and employee turnover  | P52: Number of Group Employees and Executive Officers (Reason for omission)<br>We do not have a database for the entire Group, making it difficult to identify and obtain information on recruitment, breakdown of employees by age, and turnover ratio. We will establish a database of this information sometime over the next one to two years and consider disclosing it. |
| GRI 403 Occupational Health and Safety    |   |   |
| 103-1                                     | Explanation of reporting the material topic and its Boundary                            | P44: Safety and Security  |
| 103-2                                     | The management approach and its components  | P25: Highlights of Fiscal 2017 Activities<br>P44: Safety and Security   |
| 103-3                                     | Evaluation of the management approach   | P25: Highlights of Fiscal 2017 Activities<br>P44: Machinery and Equipment Risk Reduction Activities, Risk Reduction Activities relating to Chemical Substances  |
| 403-2                                     | Hazard identification, risk assessment, and incident investigation                      | P45: Occupational Accident Figures  |
| 403-4                                     | Worker participation, consultation, and communication on occupational health and safety | P59: Labor-Management Relations (Reason for omission)<br>The way in which labor unions are formed varies between companies; therefore, it is difficult to obtain applicable information for the overall Group. We will research this information sometime over the next one to two years and consider disclosing it.  |
| GRI 404 Training and Education            |   |   |
| 103-1                                     | Explanation of reporting the material topic and its Boundary                            | P55: Human Resources Development  |
| 103-2                                     | The management approach and its components  | P26: Highlights of Fiscal 2017 Activities<br>P55: Human Resources Development<br>P56: The Group's in-house training institute, "SB School"  |
| 103-3                                     | Evaluation of the management approach   | P55: Human Resources Development  |
| 404-2                                     | Programs for upgrading employee skills and transition assistance programs               | P56: The Group's in-house training institute, "SB School"   |
| GRI 405 Diversity and Equal Opportunity   |   |   |
| 103-1                                     | Explanation of reporting the material topic and its Boundary                            | P53: Employment of People with Disabilities<br>P53: Initiatives to Promote the Advancement of Women<br>P54: Work-Life Balance   |
| 103-2                                     | The management approach and its components  | P53: Employment of People with Disabilities<br>P53: Initiatives to Promote the Advancement of Women<br>P54: Work-Life Balance   |

| GRI Standard – General Disclosures |   | Page number (title)  |
|------------------------------------|---|--|
| 103-3                              | Evaluation of the management approach                         | P53: Employment of People with Disabilities<br>P53: Initiatives to Promote the Advancement of Women<br>P54: Work-Life Balance  |
| 405-1                              | Diversity of governance bodies and employees                  | P31: Management System<br>P52: Number of Group Employees and Executive Officers<br>P53: Employment of People with Disabilities<br>P53: Initiatives to Promote the Advancement of Women |
| GRI 414 Supplier Social Assessment |   |  |
| 103-1                              | Explanation of reporting the material topic and its Boundary  | P35: CSR Procurement   |
| 103-2                              | The management approach and its components                    | P26: Highlights of Fiscal 2017 Activities<br>P35: CSR Procurement  |
| 103-3                              | Evaluation of the management approach                         | P35: CSR Procurement   |
| 414-2                              | Negative social impacts in the supply chain and actions taken | P35: CSR Survey of Suppliers   |

| GRI Standard – General Disclosures |   | Page number (title)  |
|------------------------------------|---|--|
| GRI 416 Customer Health and Safety |   |  |
| 103-1                              | Explanation of reporting the material topic and its Boundary                  | P48: The Group's Basic Policy and System for Quality Assurance |
| 103-2                              | The management approach and its components                                    | P48: The Group's Basic Policy and System for Quality Assurance |
| 103-3                              | Evaluation of the management approach   | P48: The Group's Basic Policy and System for Quality Assurance |
| 416-1                              | Assessment of the health and safety impacts of product and service categories | P48-50: Product Liability                                      |
| GRI 419 Socioeconomic Compliance   |   |  |
| 103-1                              | Explanation of reporting the material topic and its Boundary                  | P32: Compliance  |
| 103-2                              | The management approach and its components                                    | P26: Highlights of Fiscal 2017 Activities<br>P32: Compliance   |
| 103-3                              | Evaluation of the management approach   | P33: Whistleblower System<br>P33: Monitoring                   |
| 419-1                              | Non-compliance with laws and regulations in the social and economic area      | P33: Whistleblower System                                      |

### Sumitomo Bakelite Group (as of March 31, 2018)

#### Consolidated subsidiaries (38)

- Akita Sumitomo Bakelite Co., Ltd.
- Kyushu Sumitomo Bakelite Co., Ltd.
- S.B. Techno Plastics Co., Ltd.
- Hokkai Taiyo Plastic Co., Ltd.
- Yamaroku Kasei Industry Co., Ltd.
- S.B Research Co., Ltd.
- S.B. Sheet Waterproof Systems Co., Ltd.
- Softec Systems Inc.
- Sunbake Co., Ltd.
- Seibu Jushi Co., Ltd.
- Tsutsunaka Kosan Co., Ltd.
- Sumitomo Bakelite Singapore Pte. Ltd.
  - Sumitomo Bakelite (Suzhou) Co., Ltd.
  - Sumitomo Bakelite (Thailand) Co., Ltd.
- SumiDurez Singapore Pte. Ltd.
- SNC Industrial Laminates Sdn. Bhd.
- P.T. Indopherin Jaya
- P.T. SBP Indonesia
- Sumitomo Bakelite (Taiwan) Co., Ltd.
- Sumitomo Bakelite (Shanghai) Co., Ltd.
- Sumitomo Bakelite (Nantong) Co., Ltd.
- Sumitomo Bakelite Hong Kong Co., Ltd.
- Sumitomo Bakelite (Dongguaan) Co., Ltd.
- Sumitomo Bakelite Macau Co., Ltd.
- Sumitomo Bakelite North America Holding, Inc.
  - Sumitomo Plastics America, Inc.
  - Durez Corporation
    - Durez Canada Co., Ltd.
  - Promerus LLC
  - Sumitomo Bakelite North America, Inc.
  - H.I.G. Vaupell Holdings, LLC
    - Vaupell Holdings, Inc.
      - Vaupell Industrial Plastics, Inc.
      - Vaupell Molding & Tooling, Inc.
      - Russell Plastics Technology Company, Inc.
- Sumitomo Bakelite Europe NV
  - Vyncolit NV
  - Sumi Bakelite Europe (Barcelona), S.L.U.

#### Non-consolidated companies (10) \*1

- S.B Information System Co., Ltd.
- Sumibe Service Co., Ltd.
- S.B. Recycle Co., Ltd.
- SB Holland B.V.
- Sumibe Korea Co., Ltd.
- SBE India Pvt Ltd.
- Taiwan Sumitomo Bakelite Co., Ltd.
- Rong Feng (H.K.) Industries Limited
  - Rong Chang Sheng Plastics Mould (Shen Zhen) Co., Ltd.
  - Vaupell China (Dongguan) Co., Ltd.

#### Affiliated companies accounted for by the equity method (1)

- P.T. Pamolite Adhesive Industry

#### Affiliated companies not accounted for by the equity method (5)

- Otomo Chemical Co., Ltd.
- Green Phenol Development Co., Ltd.
- Akita EV Bus LLP
- Changchun SB (Changshu) Co., Ltd.
- Tsu-Kong Co., Ltd.

|              | Consolidated | Equity method | Non-consolidated | Other    | Total     |
|--------------|--------------|---------------|------------------|----------|-----------|
| Japan        | 11           | 0             | 3                | 3        | 17        |
| Overseas     | 27           | 1             | 7                | 2        | 37        |
| <b>Total</b> | <b>38</b>    | <b>1</b>      | <b>10</b>        | <b>5</b> | <b>54</b> |

\*1 Neopreg AG completed its liquidation on January 2, 2018.



## Independent Assurance Report

To the President and Representative Director of Sumitomo Bakelite Co., Ltd.

We were engaged by Sumitomo Bakelite Co., Ltd. (the “Company”) to undertake a limited assurance engagement of the environmental and social performance indicators and environmental accounting indicators marked with  (the “Indicators”) for the period from April 1, 2017 to March 31, 2018 included in its CSR Report 2018 (the “Report”) for the fiscal year ended March 31, 2018, and the Company’s self-declaration that the Report is prepared in accordance with the Global Sustainability Standards Board’s GRI Sustainability Reporting Standards 2016 (“GRI Standards”) at a core level.

### The Company’s Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the “Company’s reporting criteria”), as described in the Report, and for self-declaring that the Report is prepared in accordance with the criteria stipulated in the GRI Standards.

### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the ‘International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information’ and the ‘ISAE 3410, Assurance Engagements on Greenhouse Gas Statements’ issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company’s responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company’s reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company’s reporting criteria, and recalculating the Indicators.
- Visiting one domestic factory and one overseas factory of the Company selected on the basis of a risk analysis.
- Evaluating the Company’s self-declaration that the Report is prepared in accordance with the GRI Standards at a core level against the criteria stipulated in the GRI Standards.
- Evaluating the overall presentation of the Indicators.

### Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company’s reporting criteria as described in the Report, and the Company’s self-declaration that the Report is prepared in accordance with the GRI Standards at a core level does not conform to the criteria stipulated in the GRI Standards.

### Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

*KPMG AZSA Sustainability Co., Ltd.*

KPMG AZSA Sustainability Co., Ltd.

Tokyo, Japan

December 19, 2018

### Onsite plant audit carried out by KPMG AZSA Sustainability



Overseas business site (Sumitomo Bakelite Macau)



Business site in Japan (Kyushu Sumitomo Bakelite)

# SUMITOMO BAKELITE CO.,LTD.

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## About the Cover

Illustrator: **Satoko Mukumoto**

“You can see lots of different flowering plants and insects in Sumitomo Bakelite’s biotope as each season unfolds. This work, depicting children playing happily there while interacting with nature, emanates the wish that a beautiful natural world and the healthy growth of children will lead to a bright future.”

**UD  
FONT**

UD Font: The easy-to-read font is based on the Universal Design (UD) concept.

