

Detailed Data related to Sustainability

Trends in Environmental Performance

Business sites in Japan

Item	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024 (Plan)	Fiscal 2030 (Targets)		
CO ₂ emissions	t-CO ₂	101,299	96,768	88,524	86,509	82,986	75,035	78,625	84,261	41,145	40,114	40,400	38,200		
Scope1	t-CO ₂	46,545	43,956	40,906	41,903	39,279	38,034	36,602	46,219	40,668	39,676	39,970	—		
Scope2	t-CO ₂	54,754	52,812	47,618	44,606	43,707	37,001	42,023	38,042	477	438	430	—		
Energy consumption	(TJ)	1,270	1,215	1,146	1,150	1,094	1,065	1,031	1,264	1,145	1,105	1,113	—		
Material loss	Waste generated	Landfill	ton	16	53	62	56	55	103	102	116	371	460	—	
		External intermediate processing	ton	7	45	56	2	6	12	12	21	18	16	—	
		Internal intermediate processing	ton	0	0	0	0	0	0	0	0	0	0	—	
		External recycling	ton	7,987	7,665	6,090	6,402	6,706	7,605	7,287	8,192	6,791	6,663	—	
		Total waste generated	ton	8,010	7,762	6,207	6,459	6,767	7,720	7,402	8,329	7,180	7,140	6,669	5,101
		Valuable materials	ton	8,326	8,008	7,762	7,508	7,186	6,764	6,344	7,098	6,839	6,304	6,281	5,554
Total material loss	ton	16,337	15,770	13,970	13,967	13,953	14,483	13,746	15,427	14,020	13,443	12,950	10,655		
Chemical substance emissions*	ton	191	159	128	162	150	112	116	125	118	105	104	78		
Emissions of substances subject to the PRTR Act	ton	15	13	8	13	11	6	5	9	7	18	—	—		

* The calculation method for chemical substance emissions has been reviewed and retroactively revised from fiscal 2014

* We have revised chemical substance emissions figures for fiscal 2022 since there were calculation errors made at some business

Overseas business sites

Item	Unit	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023	Fiscal 2024 (Plan)	Fiscal 2030 (Targets)		
CO ₂ emissions	t-CO ₂	142,830	151,698	151,272	152,526	149,618	137,123	126,604	158,499	138,077	114,636	110,470	89,800		
Scope1	t-CO ₂	43,228	45,871	44,367	48,740	45,015	43,140	39,592	48,974	43,479	39,878	40,110	—		
Scope2	t-CO ₂	99,602	105,827	106,904	103,786	104,603	93,983	87,012	109,525	94,598	74,757	70,360	—		
Energy consumption	(TJ)	1,593	1,587	1,570	1,596	1,597	1,531	1,403	1,749	1,602	1,523	1,510	—		
Material loss	Waste generated	Landfill	ton	2,873	3,066	3,455	3,471	3,107	2,989	3,222	3,493	3,472	3,065	—	
		External intermediate processing	ton	3,580	3,637	3,737	3,848	3,459	3,268	3,015	4,892	3,584	2,752	—	
		Internal intermediate processing	ton	3,105	2,833	2,671	3,701	152	109	85	117	88	55	—	
		External recycling	ton	4,387	3,712	2,919	3,018	3,798	3,160	2,554	2,702	2,362	2,428	—	
		Total waste generated	ton	13,945	13,247	12,782	14,038	10,515	9,525	8,875	11,204	9,507	8,299	8,360	8,112
		Valuable materials	ton	2,800	4,522	3,065	3,309	2,588	2,720	2,690	3,946	4,211	3,363	3,263	3,166
Total material loss	ton	16,746	17,770	15,847	17,347	13,104	12,244	11,565	15,150	13,718	11,663	11,623	11,279		
Chemical substance emissions	ton	164	147	126	148	137	132	127	177	185	165	159	121		

Definitions/Calculation Method

CO₂ emissions and energy consumption (GJ)

CO₂ emissions are calculated based on the Manual for Calculating and Reporting Greenhouse Gas Emissions, Ver. 5.0 (Ministry of the Environment and Ministry of Economy, Trade and Industry; January 2024).

- For city gas, the coefficient for each business released by each company is used.
- For electricity, adjusted emission coefficients for each electric utility published by the Ministry of the Environment and the Ministry of Economy, Trade and Industry were used.

All energy consumptions were calculated as joules (J).

- Amount of energy consumption (J) for fuel and heat (steam, hot water, and cold water other than for industrial use) used were calculated based on the unit calorific value per fuel and heat stipulated in the Act on Rationalization of Energy Use and Shift to Non-fossil Energy and its ordinance.
- Electricity consumption calculated including all electricity purchased from electricity providers through the electricity grid and electricity from renewable energy sources generated in-house. The heat conversion coefficient for electricity consumption, including that in the past, has been changed to 3.6 GJ/thousand kWh from the disclosures for the current fiscal year.

Overseas business locations use the applicable domestic laws of each country.

- In the calculation of CO₂ emissions for electricity, the latest CO₂ coefficient at the start of the fiscal year of each provider supplying each business site is used.
- 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.
- For natural gas, the crude oil conversion coefficient and CO₂ emission factor are determined based on the data published by the gas supplier, but if the necessary data are not publicly available, the IEA KEY WORLD ENERGY STATISTICS and CO₂ Emissions from Fuel Combustion standard values (unit calorific value 39.1 [GJ/10³m³N], carbon emissions factor per unit calorific value 0.0138 [t-C/GJ] obtained by referring to data published in 2018 are used.

In addition, our Company does not emit any greenhouse gases (CH₄, N₂O, HFC, Se, NF₃) other than CO₂ that meet the reporting requirements of Act on Promotion of Global Warning Countermeasures.

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).

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 (including energy recovery).

Chemical substance emissions

Total emissions of PRTR survey substances targeted by the Japan Chemical Industry Association (JCIA) into the air, bodies of water, and the ground (aggregate volume).

* Includes substances subject to the Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement (PRTR System)

The calculation method 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 April 2023 based on the revision of the Law for Promotion of Chemical Management and the Group reflected the overall results from fiscal 2023 onward. In the same way, emissions from substances subject to the JCIA PRTR survey are also included at overseas business sites.

Response to Act on the Rational Use of Energy/Promotion of Global Warming

Subsidiary	Item	Unit	Fiscal 2016 Results	Fiscal 2017 Results	Fiscal 2018 Results	Fiscal 2019 Results	Fiscal 2020 Results	Fiscal 2021 Results	Fiscal 2022 Results	Fiscal 2023 Results*
Sumitomo Bakelite Co., Ltd.	CO ₂ emissions	t-CO ₂	69,803	68,964	65,974	60,126	62,162	57,064	31,172	27,482
	Energy consumption	Crude oil equivalent (kL)	36,567	35,974	34,609	33,717	32,754	34,453	31,795	(30,823) 29,326
	Year-on-year intensity of energy usage	%	100.2	91.0	94.8	93.1	96.6	97.3	103.3	96.6
	Average change in intensity over 5 years	%	98.4	96.9	96.5	84.8	97.4	89.4	93.1	94.1
Kyushu Sumitomo Bakelite Co., Ltd.	CO ₂ emissions	t-CO ₂	6,540	6,083	6,217	4,459	5,144	6,031	1,200	1,175
	Energy consumption	Crude oil equivalent (kL)	3,008	3,012	2,944	2,833	2,962	3,278	3,055	(3,064) 2,821
	Year-on-year intensity of energy usage	%	98.4	90.9	96.1	100.5	104.6	92.5	97.5	104.8
	Average change in intensity over 5 years	%	96.0	95.1	95.8	96.4	97.9	98.3	98.7	99.7
Akita Sumitomo Bakelite Co., Ltd.	CO ₂ emissions	t-CO ₂	4,980	4,705	4,929	5,024	5,126	5,161	3,412	3,333
	Energy consumption	Crude oil equivalent (kL)	2,095	2,018	2,055	2,081	2,118	2,507	2,134	(2,067) 2,006
	Year-on-year intensity of energy usage	%	95.4	93.3	94.1	101.1	100.0	94.3	93.4	103.7
	Average change in intensity over 5 years	%	91.8	93.6	95.2	96.0	97.1	97.3	97.2	97.8
S.B. Sheet Waterproof Systems	CO ₂ emissions	t-CO ₂	3,226	3,313	2,865	2,506	2,743	2,221	No report as it is not applicable	
	Energy consumption	Crude oil equivalent (kL)	1,683	1,683	1,567	1,506	1,397	1,428	No report as it is not applicable	
	Year-on-year intensity of energy usage	%	95.4	93.8	96.9	93.4	100.1	102.2	No report as it is not applicable	
	Average change in intensity over 5 years	%	96.1	95.4	95.2	94.9	96.0	98.1	No report as it is not applicable	
SB Kawasumi Co., Ltd.	CO ₂ emissions	t-CO ₂	16,720	16,890	15,143	11,635	11,688	10,940	4,480	4,095
	Energy consumption	Crude oil equivalent (kL)	7,643	8,132	7,493	6,645	6,450	6,135	5,397	(4,926) 4,602
	Year-on-year intensity of energy usage	%	101.9	98.5	106.1	93.2	99.5	94.4	92.2	92.4
	Average change in intensity over 5 years	%	101.9	99.1	101.4	99.9	99.2	98.2	95.0	95.0

* Figures in () are based on the standards before the revisions to the Act on the Rational Use of Energy in April 2023.

Distribution-Related Energy Conservation Measures

Item	Unit	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023*
Transportation ton-kilometer	thousand t-km	40,467	40,449	37,467	34,486	38,302	33,945	31,618
CO ₂ emissions	t-CO ₂	5,863	5,839	5,400	4,926	5,412	4,739	4,064
Energy consumption	Crude oil equivalent (kL)	2,214	2,205	2,041	1,862	2,045	1,792	(1,519) 1,530
Year-on-year intensity of energy usage	%	102.1	99.6	99.9	99.1	98.9	98.9	91.0
Average change in intensity over 5 years	%	—	100.2	100.3	100.2	99.4	99.2	96.9

* Figures in () are based on the standards before the revisions to the Act on the Rational Use of Energy in April 2023.

Fiscal Year and Accumulated Investments for Environmental Protection

Item	Unit	Fiscal 2000	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023
Fiscal year	millions of yen	235	441	423	514	281	243	303	315	340
Cumulative total	millions of yen	235	4,826	5,249	5,763	6,043	6,286	6,589	6,904	7,243

Accumulated Investments for Environmental Protection



Transfer and Release of Substances Subject to the PRTR Act (Fiscal 2023 Performance)

The amounts of the 37 substances subject to the PRTR Act (PRTR system) 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 (manufactured)	Release			Transfer	
			Into air	Emissions into the Hydrosphere	Into soil	As waste material	As sewage
1	Zinc compounds (water-soluble)	14.0					
20	Aniline	180.2				0.1	
42	Alkylphenol (Limited to Alkyl group with a carbon number of nine.)	3.4				0.1	
48	Antimony and its compounds	47.4				1.1	
55	4,4'-Isopropylidenediphenol	192.1					
73	Ethyl benzene	22.9	0.2			4.1	
75	Ethylene oxide	7.4	1.3				
76	Ethylene glycol monoethyl ether	6.6					
77	Ethylene glycol monoethyl ether	1.4					
101	2,4-xyleneol	12.5					
102	2,6-xyleneol	12.5					
103	Xylene	30.2	0.2			8.5	
105	Silver and its water-soluble compounds	8.4					
110	Cresol	1884.3				1.1	
232	2,6-Di-tert-butyl-4-cresol	1.7					
245	Dimethylamine	1.4					
264	N- dimethyl formamide	199.6	1.1			6.9	
274	Organotin compound (Excluding Bis (tributyltin) oxide.)	19.7					
296	1,3,5,7-Tetraazatricyclo [3.3.1.1 (3.7)] decane	881.9				9.8	
302	Tetrahydrofuran	22.6	12.7			4.3	
303	Tetrahydromethylphthalic anhydride	182.5					
319	Melamine	908.4					
321	Triethylamine	1.4					
347	Toluene	73.5	1.2			4.1	
352	Naphthalene	1.7					
355	Nickel compounds	0.8		0.2			
364	Paraformaldehyde	401.5				3.7	
391	Phenol	19546.4	0.2	0.1		28.6	
396	Bis (2-ethylhexyl) phthalate	198.5				3.3	
415	2-Butenal	1.1					
418	Furfural	25.8					
453	1,2,4-benzene tricarboxylic acid 1,2-anhydride	5.1				0.4	
458	Boron compounds	132.2		0.2		0.8	
464	Formaldehyde	9301.1 (7696.5)	0.4 0.2	0.2		4.0	
486	Methylnaphthalene	17.7	0.1				
489	N-methyl-2-pyrrolidone	214.5				71.6	
498	Methylene bis (4, 1-phenylene) = diisocyanate	5.0					

□: Specific Class 1 designated chemical substances

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. Participates in Committee on Population Issues, Committee on Innovation, Committee on Intellectual Property, Committee on National Resilience, Committee on Trade and Investment and Committee on Environment and Safety/Subcommittee on Environmental Risk Management.
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. resin extrusion materials subcommittee, laminated panel subcommittee, phenol resin subcommittee, adhesives subcommittee, melamine resin decorative laminates subcommittee, electronics materials subcommittee, and environment/recycling research subcommittee.
Japan Chemical Industry Association	Serves in the General Affairs Department, Technical Affairs Committee, Environmental Safety Committee, Responsible Care Committee, Chemicals Management Committee, Council of Human Resource Fostering Program in Chemistry and SDG Subcommittee.
The Japan Plastics Industry Federation	Participation in the General Affairs and Environment Subcommittee and the Management of Chemical Substances.
Japan Plastic Sheet Association	Participates in Hard vinyl chloride plate Committee, Polycarbonate plate Committee and Environmental Regulation committee.
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 Industrial Safety & Health Association	Requested dispatch of instructors to in-house training seminars on occupational health and safety, and participated in seminars organized by the association.
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.
Japan Clean Ocean Material Alliance (CLOMA)	Participation in Technology WG

Our Environmental Protection Activity Journey

Year	Sumitomo Bakelite Group's Initiatives
1969	● Pollution countermeasures secretariat established
1973	● Environmental Management Division established ● Environmental auditing of domestic business sites commenced
1974	● Environmental management departments established for all business sites
1978	● Environmental auditing of domestic subsidiaries commenced
1987	
1990	● Environmental Issue Action Committee established. Appointment of director in charge
1991	● Recycling Technology Action Office established
1992	● S.B. Recycle established
1993	● Environment and Safety Voluntary Plan drafted ● Environment and safety management regulations established ● Environmental audits of overseas subsidiaries commenced
1994	● Use of certain CFCs and 1,1,1-trichloroethane ceases
1995	● Responsible Care Committee established ● The Company joins the Japan Responsible Care Council as a founding member
1997	● Revised Corporate Policies for Safety, Health, and the Environment ● Utsunomiya Plant and Sumitomo Bakelite Singapore obtain ISO 14001 certification
1998	● First Environmental Activities Report issued
1999	● All Sumitomo Bakelite plants obtain ISO14001 certification
2000	● Environmental accounting implemented
2001	● Environmental Report issued (independent reviews conducted)
2002	● Scope of Environmental Report expanded to include subsidiaries in Japan ● Tokyo Kakohin receives an award for promoting a "3R" policy of reduce, reuse, and recycle ● Risk Management Committee established
2003	● Yamaroku Kasei Industry certified as the Company's first zero emissions plant ● Compliance Committee established
2004	● Shizuoka Plant commences operations of a cogeneration system
2005	● Title of annual Environmental Report changed to Environmental & Social Report to reflect broader coverage of social initiatives ● Sumitomo Bakelite (Taiwan) recognized as the Sumitomo Bakelite Group's first overseas zero emissions production business site
2007	
2008	● Thirty of the business sites of the Sumitomo Bakelite Group in Japan and overseas obtained ISO14001 certification ● Start of soil and groundwater pollution remediation measures at a site owned by Sano Plastic following the dismantling of a factory building there (February) ● The company signs Responsible Care Global Charter (November) ● Start of mechanical equipment risk assessment
2009	● Inauguration of multilingual Material Safety Data Sheet (MSDS) system ● Begins participating as a partner in the Declaration of Biodiversity of the Japan Business Federation (Nippon Keidanren)
2010	● Establishment of the Environmental Impact Reduction Committee ● The Sumitomo Bakelite Group begins leakage risk assessments at its business sites in Japan and overseas
2011	● Presentation to Tochigi Prefectural Government of the report on the remediation construction work conducted at the Sano Plastic site (July) ● Standards for preparation of the Environmental & Social Report changed to conform with the GRI guidelines
2012	● The biotope project starts at the Shizuoka Plant ● Work to excavate and remove contaminated soil and to purify contaminated groundwater in the premises of the Totsuka Office after its closure ● Zero emissions achieved at all domestic plants ● Start of chemical materials risk assessment
2013	● Completion of decontamination at the former Totsuka Plant reported to Yokohama City
2014	● The Company signs the revised Responsible Care Global Charter ● Environmental rating by the Development Bank of Japan (DBJ environmental rating): Gained A ● Compilation of certain Scope 3 data starts at business sites in Japan ● Start of risk assessment for fire by explosion
2015	● 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. ● Began to understand regional watershed risk of all major plants in the Group
2016	● Changed the name of the Environment and Social Report to the CSR Report and prepared it in compliance with the GRI Guidelines (Ver. 4)
2017	● Opened the biotope at Shizuoka Plant to the general public
2018	● CSR Report 2018: Prepared report based on the report preparation standards compliance with the "Core" option of the GRI Guideline/Standard. ● Established the SDG Promotion and Preparation Project Team, presented in specific detail the areas of SDGs that the Company will focus on, and promoted the necessary measures on a company-wide scale.
2019	● CSustainability Promotion Committee launched, committee related to promoting sustainability activities organized, and the position and roles of each committee clarified ● Our company received a score of "B" in the "CDP Climate Change 2019"
2020	● Environmental Vision for 2050 (net zero) Declaration ● Our company received a score of "A-" in the "CDP Climate Change 2020" ● Our company received a score of "B0" in the "CDP Water Security 2020"
2021	● We expressed our agreement to the "Task Force on Climate-Related Financial Disclosures" ● "2030 target: Reduce CO ₂ emissions Group-wide by 46% or more (compared to fiscal 2013) ● EcoVadis Sustainability Survey Gold rating ● Our three European group companies switched all electricity purchased from external sources to electricity derived from renewable energy sources in fiscal 2021, and our domestic plants and research laboratories did so from January of fiscal 2022
2022	● Announced participation in the "GX League Basic Concept" announced by the Ministry of Economy, Trade and Industry in fiscal 2022 to achieve carbon neutrality by 2050 ● Joined "30by30 Alliance for Biodiversity" ● Endorsed the framework of the "Declaration of Partnership Building" promoted by the Cabinet Office and the Small and Medium Enterprise Agency, and released a Declaration of Partnership Building
2023	● Akita Sumitomo Bakelite Co., Ltd., a Group companies in Japan, received Excellent Energy Management Factory Award 2022 for Tohoku region ● Decided to participate in GX League that is to fully start in fiscal 2023 ● Acquired as certification as Nationally Certified Sustainably Managed Natural Sites in the first half of 2023 ● Received the Director-General's Award of the Kanto Bureau of Economy, Trade and Industry of the Fiscal 2023 Factory Greening Award Program (commonly called National Award for Greenery Factory)