Responsible Care Data Book 2025

Target organizations: Sakai Chemical Industry Co., Ltd.
Reporting period: April 1, 2023 to March 31, 2025

1. FY2024 Responsible Care Implementation Report and FY2025 Plan

FY2024 targets	FY2024 Results (○:target achieved, ×:Target not achieved)		FY2025 target
	Results	Assessment	
[Environmental Protection]			
●CO_2 emissions reduction ・Scope 1 and 2 reduction rate (vs. FY2013): 30% by FY2030	36% reduction	○	Continuing to strive for the same target
・Scope 3 assessment – scope defined and calculation conducted	Defined scope and conducted calculation	○	Continuing calculation
●Reducing energy intensity by 1% year on year	2.2% reduction	○	Continuing to strive for the same target
●Industrial waste emissions improved from previous year	2% reduction	○	[Change]]Reducing industrial waste by 50% (versus the FY2021 level) by FY2030 [Addition] Recycling and recovering heat from waste plastics Ratio increased year-on-year
●Compliance with legal and ordinance standards	Minor and temporary exceedance of standard values (in two indicators)	x	Continuing to strive for the same target
●Water usage improved from previous year	4.5% reduction	○	[Change]Reducing rate of water usage by 25% (versus the FY2021 level) by FY2030
●Zero serious environmental accidents	Zero serious environmental accidents	○	Continuing to strive for the same target [Addition] Achieving zero legal violations in the year
[Safety and Disaster Prevention]			
● Implementation of stockpile management and usage training	Recalculated stockpile quantities and carried out training and instruction on the use of stockpiled items	○	Continuing to strive for the same target
● Implementation of tsunami evacuation and firefighting drills	Conducted evacuation and comprehensive disaster drills at manufacturing sites and factories Conducted firefighting equipment inspections and workplace-level fire drills	○	Continuing to strive for the same target
● Implementation of Disaster Response Headquarters training		○	Continuing to strive for the same target
● Implementation of safety confirmation drills	Implemented monthly safety confirmation drills from September 2024	○	Continuing to strive for the same target
● Response to the explosion and fire accident at the Yumoto Factory on May 11, 2021 ・Removal of accumulated dust	Performed regular removal of accumulated dust at production plants handling products with dust explosion risk	○	Continuing to strive for the same target

・Preventing fading of explosion and fire accident awareness	Held a group-wide lecture “Accident Scenarios and Safety Measures for Electrostatic Discharge” on May 14, 2024	○	Continuing to strive for the same target
・Strengthening of occupational health and safety activities	Continued revision of operation manuals and use of anti-static clothing and shoes at production plants handling products with dust explosion risk	○	Continuing to strive for the same target
[Occupational Safety and Health]			
●No. of injuries/deaths requiring 4 or more days off work : 0 people/year	4 people/year	x	Continuing to strive for the same target
●No. of days of lost work : 0 days/year	61 days/year	x	Continuing to strive for the same target
[Distribution Safety]			
● Continuation of Yellow Card System operation	Continued operation	x	Continuing to strive for the same target
● Regular meetings with primary logistics contractors	Held monthly logistics safety and quality meetings in the Sakai and Onahama Areas	x	Continuing to strive for the same target
[Safety and Quality of Chemicals/product]			
● Collection and internal sharing of information for legal compliance	Obtained information on revised laws and regulations and disseminated it to related departments and sections via the Supervising Divisions	○	Continuing to strive for the same target
● Communication and provision of product information	Provided information through SDS and chemSHERPA	○	Continuing to strive for the same target
● Implementation of chemical-related training	Conducted employee training on environmental management systems and chemical regulations via e-learning	○	Continuing to strive for the same target
[Communication with Society]			
● Dialogue and information exchange with local communities around each manufacturing site on understanding of operations and environmental improvement	Attended meetings at industrial waste disposal sites in the Onahama Area and in areas around manufacturing sites to explain and discuss initiatives for safe operations and environmental improvement	○	Continuing to strive for the same target
● Participation in local events and regular cleanup activities around each manufacturing site	Participated in community cleanup activities Participated in and sponsored local events	○	Continuing to strive for the same target
● Contribution to next-generation development through participation in local events and activities around each manufacturing site	・Sponsored “Career Notebook for Elementary Students” and “Career Book for Junior High Students” distributed to public schools in Sakai City ・Participated in “Sakai Science Education Festival” hosted by the Sakai City Board of Education ・Dispatched lecturers to a continuing education program at Taira Technical High School	○	Continuing to strive for the same target

	・Sponsored the Iwaki Carbon Neutral Society Collaborative Program		

2. Details of Responsible Care Initiatives by Item

2-1 Environmental Protection

● Environmental protection targets

The Sakai Chemical Group reviewed its materiality-related KPIs in FY2024. In line with this, we also revised our environmental protection targets.

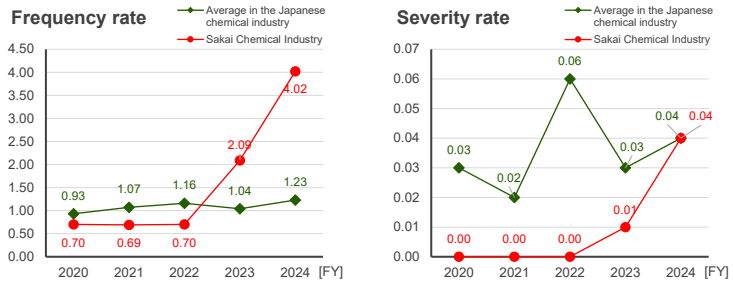
● Information on industrial waste final disposal site management

We regularly disclose maintenance and management information for the Uchigo and Watanabe Final Disposal Sites, where industrial waste is disposed of, on our website.

2-2Occupational Safety and Health

● Status of labor accidents

In FY2024, four accidents resulted in four or more days of lost work, indicating a high frequency of occupational accidents. Approximately 90% of these incidents were caused by “unsafe acts,” which we analyzed as stemming from behavioral factors such as reduced hazard sensitivity and increased risk-taking tendencies. In addition to ongoing occupational safety and health activities, in FY2025, we will introduce disaster response training utilizing virtual reality (VR) technology to enhance employee awareness and behavior, thereby fostering a strong safety culture.



Frequency rate: Number of occupational fatalities and injuries involving leave of one day or more, per one million actual working hours. A higher value means greater frequency.
Severity rate: Number of working days lost due to accidents per 1,000 actual working hours. A higher value means greater severity
Average in the Japanese chemical industry:Statistics for business sites with 100 or more employees by industry, Survey on Trends in Occupational Accidents by Ministry of Health, Labour and Welfare

● Promotion of Group-wide health and safety

The Sakai Chemical Group holds group safety conferences and safety and health education sessions twice a year to enhance safety awareness across the Group and promote safe work practices and environments. In education, we provide safety and health training tailored to each employee’s role, from management to general staff, through e-learning and seminars. In FY2024, we also conducted training programs to support both mental and physical well-being, including harassment-prevention seminars and mental health education.

2-3Safety and Disaster Prevention

As part of regular disaster prevention drills, the Sakai Manufacturing Site conducted an evacuation drill and a comprehensive disaster prevention drill on September 3, 2024, in conjunction with the “Osaka 8.8 Million Person Drill.” In the Onahama Area, the Yumoto Factory conducted a joint comprehensive disaster prevention drill with the Joban Fire Station of the Iwaki City Fire Department on November 28, 2024. The Otsurugi Factory held its drill on December 3, 2024, and the Onahama Manufacturing Site on January 16, 2025, in cooperation with the Onahama Fire Station. We continue to review our disaster drills and enhance disaster prevention equipment to prepare for actual emergencies.

At Sakai Chemical Industry, we had introduced an emergency safety confirmation system to secure communication channels and promptly confirm employee safety in the event of a disaster, and conducted regular drills as needed. Since October 2024, we perform monthly drills, ensuring smoother safety confirmation during emergencies.

In addition, the Tadaoka Factory received a Certificate of Appreciation from the Governor of Osaka Prefecture as an “Excellent Hazardous Materials Handling Business Site,” upon recommendation by the Tadaoka Fire Department, at the Osaka Prefecture Hazardous Materials Safety Convention. We will continue to exercise utmost caution in handling hazardous materials, striving to maintain a zero-accident record and ensure safety and security.

● Health and safety & disaster prevention based on lessons from past incidents

On May 11, 2021, an explosion and fire occurred at the zinc dust plant of the Yumoto Factory, causing significant inconvenience to those affected by the accident, including local residents and customers.

The Company has designated the date of the factory’s accident as the “Day of Safety Commitment,” and each May, the President sends a message to all Group companies. We also conduct lectures on fire and explosion safety, in order to preserve the memory of

this accident and to enhance safety awareness and knowledge. In FY2024, a message was sent on May 13, 2024, followed by a lecture titled “Accident Scenarios and Safety Measures for Electrostatic Discharge” on May 14 for all Group companies.

Additionally, production plants handling products with dust explosion risks continue to conduct regular dust removal and use anti-static clothing and shoes as part of ongoing preventive measures.

2-4 Distribution Safety

We continue to provide emergency contact cards (Yellow Cards), which describe procedures to be followed by drivers, firefighters, and police officers in the event of a transportation accident, to logistics companies.

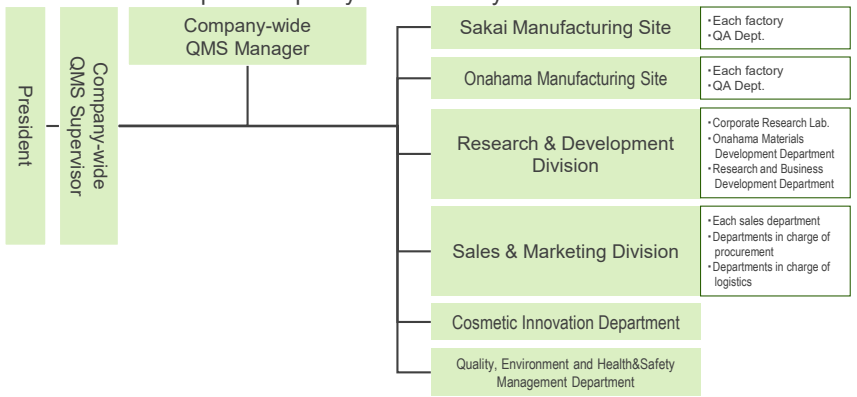
To ensure that hazard information is communicated appropriately during customer product use as well as in transport accidents, we monitor amendments to occupational health and safety laws and actively promote labeling of products containing designated substances.

2-5Safety and Quality of Chemicals/product

● Quality commitment

Sakai Chemical Industry has obtained certification for ISO 9001 (JIS Q 9001:2015), an international standard for quality management system (QMS), and continues to operate under the system.

The Quality Assurance Divisions at the Sakai and Onahama Manufacturing Sites lead efforts to enhance product quality and reliability.



● Chemical and product safety

Sakai Chemical Industry continues to provide Safety Data Sheets (SDS) in accordance with Japanese Industrial Standards (JIS) and Globally Harmonized System (GHS) standards, ensuring that customers can use our products safely. The SDS is a document that communicates information on hazards, toxicity, and handling of chemical substances. We also provide information on chemical substances contained in products through chemSHERPA, a standardized scheme for communicating such information.

2-6Communication with Society

● Initiatives in the Osaka Area (Sakai Manufacturing Site & Senboku, Ishizu and Tadaoka Factories)

On July 13, 2024, we participated in the “Sakai Science Education Festa,” organized by the Sakai City Board of Education, where we shared the fascination of chemistry through a hands-on sunscreen-making experience.

We sponsor the “Career Notebook for Elementary Students” distributed to all third- and fourth-grade students in 93 public elementary schools in Sakai City, and the “Career Book for Junior High Students” distributed to all first-year students in 43 public junior high schools in the city, both published by Niwadani Network System Co., Ltd.

We also sponsored the “Sakai Festival” held in October 2024, with seven employee volunteers participating in the event. In addition, we contribute to community beautification through sidewalk cleanup activities around the Sakai Manufacturing Site. With gratitude toward the people of Sakai, where our Company was founded, we will continue contributing to the revitalization of the local community.

● Initiatives in the Onahama Area (Onahama Manufacturing Site & Otsurugi Yumoto Factories)

On August 2, 2024, the “Iwaki-Odori Dance Onahama Tournament,” a pre-event to the “The 69th Iwaki Fireworks Festival,” took place. A volunteer group with members mainly from the Onahama Branch of the company labor union participated in and won third place out of 54 groups. We also sponsored the fireworks show held the following day.

In addition, on October 20, 2024, we sponsored and exhibited at the “32nd Izumi Furusato Festival,” and employees participated in the “16th Iwaki Sunshine Marathon” held on February 23, 2025. Through these activities, we aim to promote interaction with local residents and energize the community.

As part of the “Iwaki Citywide Clean Movement,” we also conduct cleanup activities around the Onahama Manufacturing Site.

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堺化学教育フェスタ：Sakai Science Education Festa
堺まつり：The Sakai Festival,
第 69 回いわき花火大会：The 69th Iwaki Fireworks Festival
いわきおどり小名浜大会：Iwaki-Odori Dance Onahama Tournament
いわきサンシャインマラソン：The Iwaki Sunshine Marathon

3 Environmental and safety data (scope of data collection: Sakai Chemical Industry Co., Ltd.)

Energy and CO_2※1

(FY)

		Unit	2020	2021	2022	2023	2024
Energy	Energy consumption amount※2	Crude oil equivalent kL	59,900	70,800	64,600	54,800	55,100
	Of which, off-site PPA electricity purchase amount*3	Thousand kWh	—	—	—	939	1259
	Of which, credit energy*4	Thousand Nm^3	1,024	1,024	1,024	3,375	3,677
	Energy intensity compared to previous fiscal year	%	103.2	98.5	103.8	100.4	97.8
CO_2	CO_2 emissions amount (Scope1+Scope2)	Thousand t-CO_2eq	121	134	124	104	99.5
	CO_2 emissions amount (Scope1)	Thousand t-CO_2eq	77	91	83	65	64
	CO_2 emissions amount (Scope2)	Thousand t-CO_2eq	44	43	41	39	36
	CO_2 offset amount*4	Thousand t-CO_2eq	2.9	2.9	2.9	10.2	10.8

*1 Targets facilities subject to reporting obligations under the Energy Conservation Act; figures are calculated based on the Energy Conservation Act and the Act on Promotion of Global Warming Countermeasures. The figures for the Ishizu Factory are included from FY2022.

*2 Regarding the amended Energy Conservation Act enforced on April 1, 2023, pre-revision calculations are shown up to FY2022, and post-revision calculations from FY2023.

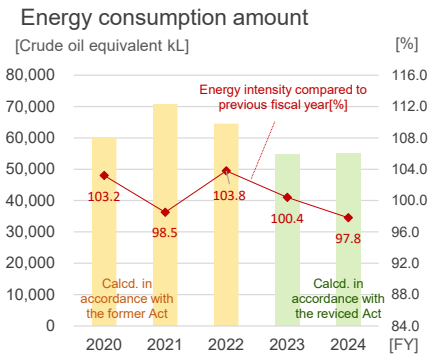
*3 PPA stands for Power Purchase Agreement. It is a business model in which the PPA operator installs solar power generation equipment on the Company's premises free of charge and Sakai Chemical Industry Co., Ltd. purchases the generated electricity. In June 2022, we signed a memorandum of understanding for energy services with Tokyo Gas Co., Ltd. and introduced solar power generation equipment under a PPA model at the Otsurugi Factory of Onahama Manufacturing Site

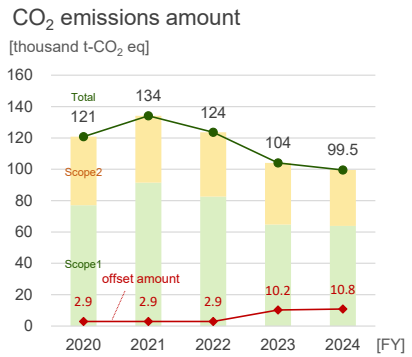
*4 We procure carbon offset city gas from Tokyo Gas Co., Ltd. for the Matsubara Factory and Otsurugi Factory , both of which are located at the Onahama Manufacturing Site. Please refer to "https://carbon-neutral-lng.jp/" for an explanation of carbon offset city gas

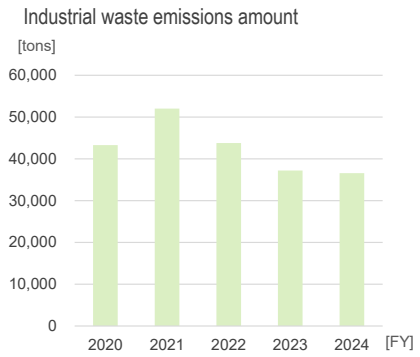
Waste

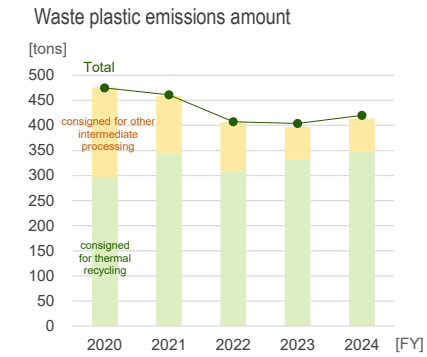
(FY)

		Unit	2020	2021	2022	2023	2024
Industrial waste	Industrial waste emissions amount	Tons	43,300	52,000	43,800	37,200	36,600
	Of which, amount consigned for recycling	Tons	309	274	306	315	660
	Of which, amount consigned for thermal recycling	Tons	611	697	570	594	562
	Of which, amount consigned for other intermediate processing	Tons	408	312	265	290	212
	Of which, amount in in-house landfill	Tons	39,700	48,400	40,400	34,200	33,400
	Of which, amount consigned for external landfill	Tons	2,250	2,310	2,270	1,840	1,720
Waste plastic	Waste plastic emissions amount	Tons	475	461	407	404	420
	Of which, amount consigned for recycling (processing ratio)	Tons	0	2 (0.5%)	0	7 (2%)	6 (1%)
	Of which, amount consigned for thermal recycling (processing ratio)	Tons	298 (62%)	344 (75%)	308 (76%)	333 (82%)	347 (83%)
	Of which, amount consigned for other intermediate processing (processing ratio)	Tons	178 (38%)	115 (25%)	98 (24%)	64 (16%)	66 (16%)
	Of which, amount consigned for landfills (processing ratio)	Tons	0	0	0	0	0









Water

(FY)

		Unit	2020	2021	2022	2023	2024
Water	Water intake amount	Million m^3	31.4	33.8	33.9	33.9	32.4
	Of which, seawater	Million m^3	20.3	21.2	21.1	20.9	19.3
	Of which, industrial water	Million m^3	11.1	12.6	12.8	12.9	13.0
	Of which, tap water	Thousand m^3	42.5	36.9	33.9	38.2	39.4
	Of which, groundwater	Thousand m^3	2.9	5.2	1.6	1.2	0
	Wastewater amount	Million m^3	31.5	33.8	33.9	34.9	33.3

Environmentally hazardous substances

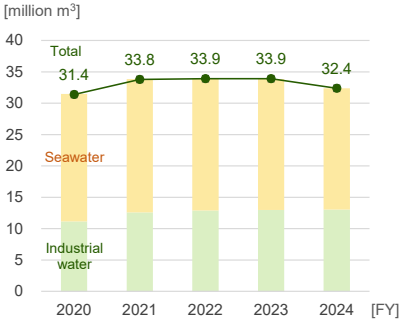
(FY)

		Unit	2020	2021	2022	2023	2024
Atmosphere	NOx emissions amount	Tons	65	62	38	42	22
	SOx emissions amount	Tons	47	53	31	28	21
	Fluorocarbon emissions amount*4	t-CO_2	53	68	52	70	184
Water pollution	BOD/COD*5	Tons	210	170	240	190	170
	Total nitrogen emissions amount	Tons	880	1,100	700	1,100	680
	Total phosphorus emissions amount	Tons	0.07	0.05	0.05	0.06	0.02
PRTR-listed substances	Emissions to the atmosphere	Tons	3.2	3.6	3.3	2.4	5.8
	Discharge into water bodies	Tons	160	290	260	210	140
	Discharge into soil	Tons	0	0	0	0	0
	Amount transferred	Tons	330	390	340	300	270

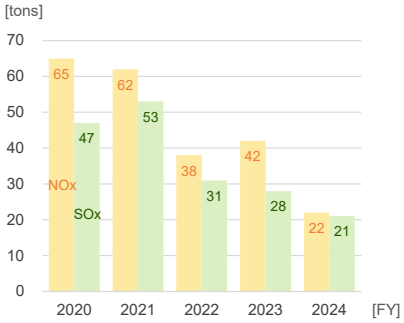
*4 The figure includes the fluorocarbon leakage volume calculated under the Act on Rational Use and Appropriate Management of Fluorocarbons, plus the difference between the refrigerant charged upon equipment installation and the amount recovered upon disposal.

*5 COD (chemical oxygen demand) is converted to be equivalent to the BOD (biochemical oxygen demand) of river discharge.

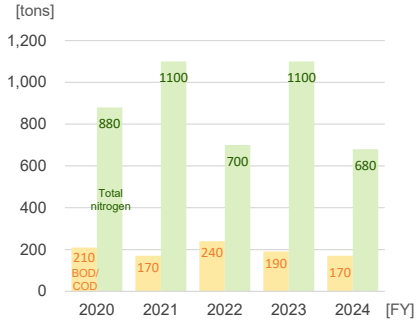
Water intake amount



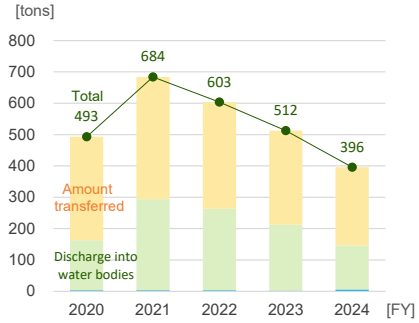
NOx, SOx emissions amount



BOD/COD,Total nitrogen emissions amount



PRTR-listed substances



PRTR-listed substances

(FY)

	Unit	Emissions amount						Amount of movement		
		Atmosphere			Water discharges to water bodies			Amount of movement (sewage, waste)		
		2022	2023	2024	2022	2023	2024	2022	2023	2024
Water-soluble zinc compounds	Tons	0	0	0	0.03	0.16	0.15	0	0	0
Aniline	Tons	0.06	0.06	0	0	0	0	0.40	0.38	0
Thiourea	Tons	0	0	0	220	170	120	31	31	22
Toluene	Tons	3.2	2.3	3.5	0	0	0	55	25	40
Nickel compounds	Tons	0	0	0	0.45	0.72	0.34	13	10	3.5
Vanadium compounds	Tons	0	0	0	0	0	0	0.17	0.19	0.24
Hexamethylenediamine	Tons	0.02	0.01	2.3	0	0	0	0.63	0.26	25
Manganese and its compounds	Tons	0	0	0	37	34	21	230	210	160
Molybdenum and its compounds	Tons	0	0	0	5.0	4.1	0.47	0.74	2.3	0.17
Lead and its compounds	Tons	0	0	0	0	0	0	3.1	11	0

Safety*

(FY)

		Unit	2020	2021	2022	2023	2024
Safety	Work-related accidents	Cases	1	1	1	3	6
	Frequency rate	People/1 million total working hours	0.70	0.69	0.70	2.09	4.02
	Severity rate	Days/1,000 total working hours	0.00	0.00	0.00	0.01	0.04

*Figures are based on labor accidents involving at least one day of lost work among Sakai Chemical Industry employees, excluding accidents involving on-site contractors (partner companies).

Input Output results (Sakai Chemical Industry Co., Ltd., FY2024)

Input

Raw materials

Purchase amount
234,000 tons

Energy

Consumption amount
55,100 kL
(Crude oil equivalent)

Water

Water intake amount
32.4 million m³

Output

Products

Production volume
60,000 Million m3

Emissions to the atmosphere

CO_2
99,500 tons

SOx
21 tons

NOx
22 tons

Fluorocarbons
184 t-CO_2eq

PRTR-listed substances
5.8 tons

Discharges to water bodies

Water discharge
33.3 million m³

COD/BOD
170 Tons

Total nitrogen
680 tons

PRTR-listed substances
210 tons

Waste

In-house disposal
33,400 tons

External disposal
3,200 tons

PRTR-listed substances
250 tons

4. Major Environmental Data by Region

4-1 Osaka Area

The Osaka Area includes the Sakai Manufacturing Site, Senboku Factory, Ishizu Factory, and Tadaoka Factory.

(FY)

		Unit	2020	2021	2022	2023	2024
Energy, CO_2	Energy consumption amount	Crude oil equivalent kL	11,400 —	12,400 —	13,900 —	11,200 10,700	— 10,600
	CO_2 emissions amount (Scope1+Scope2)	Thousand t-CO_2eq	22	21	24	21	21
	CO_2 emissions amount (Scope1)	Thousand t-CO_2eq	13	14	16	12	11
	CO_2 emissions amount (Scope2)	Thousand t-CO_2eq	9	7	7	9	10
Waste	Industrial waste emissions amount	Tons	3,000	2,900	2,900	2,500	2,700
	Waste plastic emissions amount	Tons	192	195	186	162	172
Water	Water intake amount	Million m^3	1.3	1.5	1.3	1.2	1.2
	Of which, seawater	Million m^3	0	0	0	0	0
	Of which, industrial water	Million m^3	1.3	1.5	1.3	1.2	1.2
	Of which, tap water	Thousand m^3	12	12	9	12	11
	Of which, groundwater	Thousand m^3	3	5	2	1	0
	Wastewater amount	Million m^3	1.4	1.5	1.4	1.4	1.3
Atmo-sphere	Nox emissions amount	Tons	5	6	6	6	4
	SOx emissions amount	Tons	0	0	0	0	0
Water pollution	BOD/COD[*5]	Tons	18	14	27	18	15
	Total nitrogen emissions amount	Tons	23	17	17	15	10
	Total phosphorus emissions amount	Tons	0.07	0.05	0.05	0.06	0.02
PRTR-listed substances	Emissions to the atmosphere	Tons	3.1	3.5	3.3	2.4	5.8
	Discharge into water bodies	Tons	2.8	4.0	5.4	4.8	0.8
	Discharge into soil	Tons	0	0	0	0	0
	Amount transferred	Tons	32	57	75	50	69

Although notes are omitted, aggregation is based on the same standards as in section “3. Environmental and Safety Data.”

4-2 Onahama Area

The Onahama Area includes the Onahama Manufacturing Site, Otsurugi Factory, and Yumoto Factory.

(FY)

		Unit	2020	2021	2022	2023	2024
Energy, CO_2	Energy consumption amount	Crude oil equivalent kL	48,400 —	58,200 —	50,500 —	45,700 44,000	— 44,400
	CO_2 emissions amount (Scope1+Scope2)	Thousand t-CO_2eq	99	112	100	83	78
	CO_2 emissions amount (Scope1)	Thousand t-CO_2eq	64	77	66	52	53
	CO_2 emissions amount (Scope2)	Thousand t-CO_2eq	34	35	34	30	26
Waste	Industrial waste emissions amount	Tons	40,300	49,100	40,900	34,700	33,900
	Waste plastic emissions amount	Tons	282	266	222	242	249
Water	Water intake amount	Million m^3	30.2	32.4	32.6	32.7	31.2
	Of which, seawater	Million m^3	20.3	21.2	21.1	20.9	19.3
	Of which, industrial water	Million m^3	9.8	11.1	11.5	11.8	11.8
	Of which, tap water	Thousand m^3	30	25	25	26	28
	Of which, groundwater	Thousand m^3	0	0	0	0	0
	Wastewater amount	Million m^3	30.1	32.3	32.6	33.5	32.0
Atmo-sphere	Nox emissions amount	Tons	60	56	32	35	18
	SOx emissions amount	Tons	47	53	31	28	21
Water pollution	BOD/COD[*5]	Tons	190	160	210	170	160
	Total nitrogen emissions amount	Tons	860	1,100	680	1,100	670
	Total phosphorus emissions amount	Tons	0	0	0	0	0
PRTR-listed substances	Emissions to the atmosphere	Tons	0	0	0	0	0
	Discharge into water bodies	Tons	160	290	260	200	140
	Discharge into soil	Tons	0	0	0	0	0
	Amount transferred	Tons	300	330	260	240	180

Although notes are omitted, aggregation is based on the same standards as in section “3. Environmental and Safety Data.”

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作成　Sakai Chemical Industry Co., Ltd.
Contact　Quality, Environment and Health&Safety Management Department, Administration Division
Mail: hinsyo-kankyo@sakai-chem.co.jp
Website　https://www.sakai-chem.co.jp/en/