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Environment

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Environmental Management

Basic Approach

Based on its Basic Environmental Principles, the Shin-Etsu Polymer Group promotes Green Activities, addressing challenges such as combating global warming, measures for conserving and effectively using resources, the reduction of substances with environmental burdens, and other measures, for the protection of the environment by reducing environmental burdens.

Basic Environmental Principles

● Basic Policy

The Shin-Etsu Polymer Group recognizes that work towards environmental conservation is one of the highest priority issues for our operation. Therefore, we are working hard to become a part of building a recycling-oriented economic society through responsibilities we are expected to uphold.

Action Policy

- 1 We are rebuilding the organization and systems to work for efficient and continuous environmental activities.
- 2 We observe laws and regulations for resource conservation, energy saving, waste reduction, recycling, and the proper handling of environmentally harmful substances. In addition, we set challenging goals and try to achieve them in our own manner with technical and economic resources.
- 3 We evaluate the environmental impacts of all phases from purchase and production through to usage and disposal during the new product development stage and thus reduce any environmental impacts.
- 4 We strive for the conservation and sustainable use of biological diversity by understanding, evaluating, and reducing the impact on ecosystems caused by business activities.
- 5 We provide internal education programs to achieve understanding and awareness of Basic Environmental Principles for all employees.
- 6 We disclose the information of our environmental activities and make efforts to coexist with local communities.

WEB Basic Environmental Principles
<https://www.shinpoly.co.jp/en/sustainability/environment/policy.html>

Company-Wide Green Activities

To promote environmentally friendly management, the Shin-Etsu Polymer Group initiated Green Activities in April 2000. Our goal is to balance company growth with environmental conservation while strengthening our corporate climate. We began by implementing idle reduction measures and paperless operations, obtaining ISO14001 environmental management certifications for our domestic and overseas production sites, and enhancing our environmental performance, particularly in terms of energy and resource savings. Currently, we have set interim targets for energy savings, waste reduction, recycling, and more over a three-year period and promote related initiatives. Fiscal 2023 marks the final year of our seventh mid-term plan.

Please see page 24 for our results of fiscal 2022.

Each production site reports its activity results to management and receives advice during the Green Activities Presentation event held every year.

WEB Green Activities Presentation events (In Japanese only)
<https://www.shinpoly.co.jp/ja/sustainability/environment/movement.html>

Organization of the Bureau



List of Plants & Subsidiaries Approved by the Sony Green Partner Environmental Quality Approval Program

Of the substances contained in the parts and materials of Sony's products, those judged as having a significant impact on the global environment and human body have been identified as "Substances Subject to Environmental Control" and specified in the "Control Regulations on the Substances Contained in Parts and Materials Subject to Environmental Control." Suppliers that comply with these standards and regulations are certified as a "Sony Green Partner." In 2003, three of our domestic plants received the certification, and now seven plants are certified.

Shin-Etsu Polymer Co., Ltd.: 410A

Factory Code	MC Name	FC Name	Expiry Date
FC002584	Shin-Etsu Polymer Co.,Ltd.	Shiojiri Plant	20240831
FC002586	Shin-Etsu Polymer Co.,Ltd.	Kodama Plant	20240831
FC007726	Shin-Etsu Polymer Co.,Ltd.	Itoigawa Plant	20240831
FC007742	Shin-Etsu Polymer Co.,Ltd.	Tokyo Plant Production Department I	20240831
FC013450	Suzhou Shin-Etsu Polymer Co.,Ltd.		20240831
FC014180	Shin-Etsu Polymer Co.,Ltd.	Tokyo Plant Production Department II	20240831
FC014187	Dongguan Midas Electronic Co., Ltd.	Dongguan Midas Electronic Co., Ltd.	20240831

*Date of certification: May 20, 2021

Certifications of Environmental Management System

We have been awarded with ISO14001 certifications at all domestic and overseas production sites. By effectively implementing the management system, we are working on the reduction of environmental burdens and continuous environmental improvement activities based on compliance with the environment-related laws and regulations.

WEB Environmental Management: List of ISO14001 Certifications
<https://www.shinpoly.co.jp/en/sustainability/environment/management.html>

Environmental Accounting

Our Group calculates the costs borne for and effects of environmental conservation, aiming to effectively promote initiatives for environmental conservation.

Costs Borne for Environmental Conservation

(Unit: Million yen)

Item		Main Initiatives	Investment Amount	Cost**
1. Costs within business	1-1. Pollution prevention costs	Regular inspection of equipment, noise and vibration measurements, management of septic tanks, water quality measurements, etc.	3.5	10.1
	1-2. Global environmental conservation costs	Introduction of highly efficient air conditioners, shifting to LED lighting, application of inverters to equipment, thermal insulation, replacement with energy-saving equipment, motorization, etc.	66.0	54.9
	1-3. Recycling costs	Collection and recycling of resources, conversion into raw materials or fuel, etc.	0.1	30.8
Sub-total			69.5	95.8
2. Upstream and downstream costs		Costs related to control of chemical substances contained in products, etc.	0	2.2
3. Control activity costs		EMS maintenance, education, management of green space of plants, cleaning of inside/outside of plants, inspection of water quality, etc.	0	43.2
4. R&D costs ²		Development of environmentally friendly/contributory products	0	40.2
5. Social activity costs		Support, fund-raising activity, donations, etc.	0	0.5
6. Environmental damage prevention costs		N/A	0	0
Total			69.5	182.0

*1 Costs = Actual costs—costs if an activity is not conducted. When the total difference is ≤ 0 , 0 is the assumed value.

*2 R&D costs are calculated based on our own standards.

Note: Registration costs for recycling outsourcing agreements are not included.

Note: Due to rounding, sub-total and total figures may not correspond with the sum of separate figures.

Investments of 69.5 million yen were made in fiscal 2022, an increase of 35 million yen from the previous year. The total cost was 182 million yen, a year-on-year decrease of 54.6 million yen.

The economic effects associated with environmental conservation measures reached almost the same level as the 51 million yen of the previous year, with an increase in the profit from the sales of valuables accounting for about 58% of the total, on par with the previous year.

Economic Effects of Environmental Conservation

(Unit: Million yen)

Items	Economic effect
1. Reduction of energy costs	14.4
2.Reduction of waste disposal costs	8.4
3.Reduction of costs through resource conservation	0.6
4.Profit from the sales of valuables	32.3
Total	55.8

Note: Due to rounding, totals may not correspond with the sum of the separate figures.

The 7th Mid-Term Targets (2021 to 2023) for the Shin-Etsu Polymer Group's Green Activities and FY2022 Results

Theme	Item	Indicator	Subject scope	7th Mid-Term Targets (2021 to 2023)		Activities and Achievements in 2022		Reference
				Target year	Target value	Activities	Achieved Value	
Countermeasures Against Global Warming	Reduction of basic unit of CO ₂ emissions	Basic unit of production weight (t-CO ₂ /t)	Total (domestic + overseas)	2030 (long-term target)	Reduction of 13% (compared with 2017)	<ul style="list-style-type: none"> Improving yield Introducing energy-saving equipment Shifting to LED lighting Replacing air conditioners 	1.301 t-CO ₂ /t an 11.9% decrease (interim result)	P27
	Reduction of basic unit of energy converted to crude oil	Basic unit of production weight (kl/t)	Domestic Overseas	2022	Reduction of 1% or more on a five-year average Note: The evaluation criterion in the Act on the Rational Use of Energy		0.3555kl/t 1.1456kl/t	
Effective Use of Resources	Reduction of basic unit of waste emissions	Basic unit of production weight (kg/t)	Domestic	2023	Reduction of 3% (compared with 2020)	<ul style="list-style-type: none"> Improving production yields Reducing material loss when starting/stopping and when facing issues 	66.2 kg/t a 12.0% increase (interim result)	P29
			Overseas				128.9 kg/t a 59.8% reduction (interim result)	
			Total (domestic + overseas)				84.9kg/t an 12.3% decrease (interim result)	
	Emissions rate	Amount of landfill + simple incineration / total waste emissions × 100 (%)	Domestic Overseas	2022	Less than 1% —	<ul style="list-style-type: none"> Promoting recycling of landfill waste 	0.11% (Achieved) 21.8%	
Reduction of Environmental Burden	Creation of environmentally friendly/contributory products	—	Shin-Etsu Polymer Group	2023	4 product groups	<ul style="list-style-type: none"> Promoting proposals of products for applications, working with relevant departments 	2 product groups	P14

The 25th Green Activities Presentation

The Company-wide Green Activities Presentation was held with President Deto as chairperson of the Green Activities Promotion Bureau and other directors present. In his opening speech, Vice Chairperson Mr. Sato said, "The significance of Green Activities will continue to grow as a key element in achieving carbon neutrality, one of the initiatives outlined in our Mid-term Management Plan. We will aim to promote future activities company-wide, extending beyond production departments." Mr. Saito, Head of the Environmental Control & Safety Group, served as the Secretariat. He reported the achievements in Japan and overseas in fiscal 2022. Subsequently, there were presentations and Q&A sessions by six domestic plants concerning their activities and achievements.



Back row: Presenters from domestic plants

Real Examples of Environmental Protection Activities



Reducing energy usage by renewing air conditioners

Masanori Tomita

Engineering Section, Tokyo Plant

In fiscal 2022, we renewed our air conditioners (external and internal units) at the Tokyo Plant's R&D Center. A unique characteristic of the system is that it features an ice thermal storage tank. This allows us to use electricity at night to produce ice and reduce the electricity load for cooling during the daytime.

As a result, we have significantly contributed to power leveling (peak shifting) as the Act on the Rational Use of Energy requires. Through centralized management and introducing high-efficiency specifications, we have reduced power consumption by 86,486 kWh/year and CO₂ emissions by approximately 25 tons annually. We aim to continue our efforts in finding and implementing energy-saving measures through our Green Activities.



Air conditioning system equipped with an ice thermal storage tank



Certified as an Eco-Rail Mark committed company

Yoji Tamura

Logistics Group, Office of Sales & Marketing Unit

In November 2022, Shin-Etsu Polymer was certified by the Ministry of Land, Infrastructure, Transport, and Tourism as an Eco Rail Mark committed company. Additionally, Polyma-Wrap® became a certified Eco-Rail Mark product. The Eco-Rail Mark system awards certification to products or companies that use eco-friendly rail transport to a certain extent. It aims to raise awareness of environmental issues and promote a modal shift to railway freight transport for companies.

At Shin-Etsu Polymer, we have been promoting a modal shift for the transportation of our products since 2006, and we will continue to promote activities to reduce our environmental impact.

*Certified products: Products using railways for more than 30% of land freight transport over 500 km. Polyma-Wrap® railway-use share: 56.5%

*Certified companies: Companies using railways for more than 15% of land freight transport over 500 km. Shin-Etsu Polymer Co., Ltd. railway-use share: 28.8%



President Deto and Mr. Seyama (left), the then-chairman of the Railway Freight Association

Environmental Burdens Related to Our Business Activities

We believe the basis of environmental conservation activity is to accurately understand the environmental burdens that arise from business activities. In order to effectively and continuously promote environmental conservation activities, we act while confirming the trend of those burdens and by formulating plans to reduce environmental burdens.

INPUT

Resources and Energy

Year	Item	Domestic	Overseas	Total
2022	Energy converted to crude oil (kl)	14,839	20,261	35,100
2021		12,696	20,212	32,908
Year-on-year comparison (%)		116.9	100.2	106.7
2022	Water consumption (thousand m ³)	503	236	740
2021		476	220	696
Year-on-year comparison (%)		105.7	107.2	106.3
2022	PRTR chemical target substance (t)	74.58	—	74.58
2021		95.10	—	95.10
Year-on-year comparison (%)		76.0	—	76.0

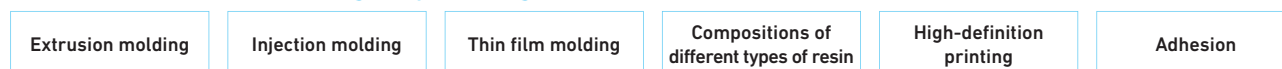
Raw materials

- PVC (Polyvinyl chloride)
- Silicone rubber
- Other synthetic resins
- Other materials



Shin-Etsu Polymer Group (Domestic and Overseas)

Business activities (Resin molding and processing)



OUTPUT

Environment

Year	Item	Domestic	Overseas	Total
2022	CO ₂ (t-CO ₂)	32,916	44,401	77,318
2021		28,122	43,606	71,728
Year-on-year comparison (%)		117.0	101.8	107.8
2022	Waste (t)	2,763	2,280	5,043
2021		2,469	2,321	4,790
Year-on-year comparison (%)		111.9	98.2	105.3
2022	Amount of waste recycled (t)	2,759	1,783	4,542
2021		2,466	1,820	4,286
Year-on-year comparison (%)		111.9	98.0	106.0
2022	Emission Rate (%)	0.11	21.82	9.86
2021		0.15	21.58	10.53
Year-on-year comparison (point)		-0.04	0.24	-0.19
2022	Waste water (thousand m ³)	459	208	667
2021		431	194	625
Year-on-year comparison (%)		106.5	107.2	106.7
2022	PRTR target substances: Registered amount (t)	0.107	—	0.107
2021		0.135	—	0.135
Year-on-year comparison (%)		79.3	—	79.3

Countermeasures Against Global Warming

Basic Approach

In order to contribute to the prevention of global warming, the Shin-Etsu Polymer Group promotes energy conservation at all business sites. We conduct Green Activities as part of our efforts to promote energy saving. In fiscal 2022, the second year of the seventh Mid-Term Plan for the Activities, we implemented various initiatives at both domestic and overseas plants. In logistics, we promoted energy saving through modal shifts and efficient site operations.

Energy-Saving Initiatives

In the seventh Mid-Term Plan of the Green Activities, we have set a target for the “reduction of the basic unit of energy converted to crude oil” and are working toward the “reduction of 1% or more on a five-year average in the basic unit of energy against production weight,” based on the evaluation criterion in the Act on the Rational Use of Energy. Starting from fiscal 2022, we have decided to aggregate the crude oil equivalent energy from domestic and overseas production facilities to track overall changes in energy intensity.

As part of domestic and overseas energy-saving measures, we have promoted improvements in yield and upgrades to energy-efficient equipment and machinery. As a result of our domestic efforts in fiscal 2021, we achieved the status of an S-Class, excellent energy-saving company.

We will continue to advance energy-saving measures and aim for a reduction in overall energy intensity.

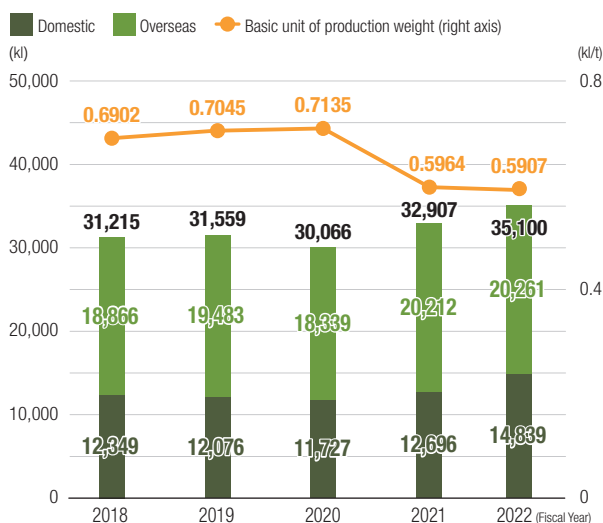
Initiatives to Reduce CO₂ Emissions

In an effort to reduce the basic unit of CO₂ emissions of domestic plants, we worked toward the long-term target of the Green Activities of “a 13% reduction by fiscal 2030 in the basic unit of CO₂ emissions against production weight compared with the base year fiscal 2017.” Starting this year, we have decided to track the overall trends in CO₂ emissions per unit, combining both domestic and overseas figures.

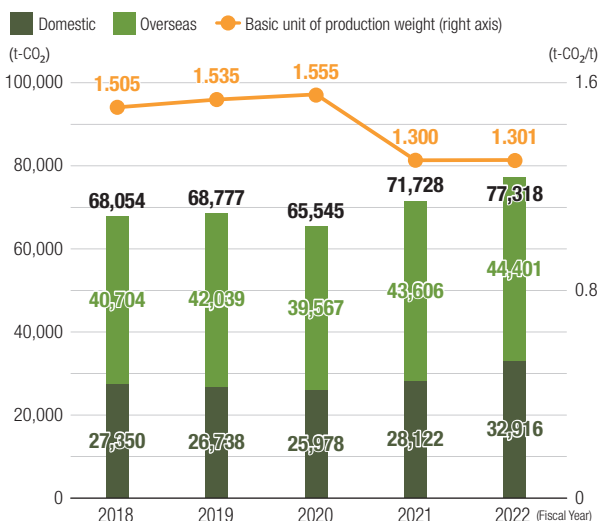
The results for fiscal 2022 show an 11.9% reduction compared to fiscal 2017. This shows a downward trend since fiscal 2021, which can be attributed to the effectiveness of our energy-saving measures.

Looking ahead, we will not solely focus on emissions per unit of production; instead, “reducing CO₂ emissions” will be a critical theme. We will implement a variety of initiatives to address this issue.

Changes in CO₂ Emissions And Basic Unit of Production Weight (Overall)



Changes in CO₂ Emissions And Basic Unit of Production Weight (Overall)



GHG Emissions (Scope 1, 2, 3)

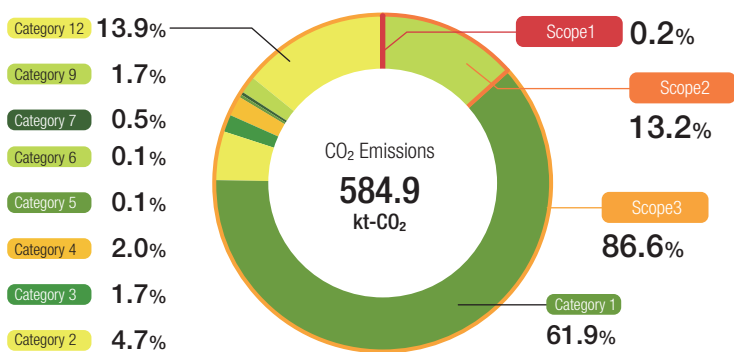
The following is the summary of our Group's GHG emissions in fiscal 2022.

Scope 1 : 1.3 kt-CO₂

Scope 2 : 77.1kt-CO₂

Scope 3 : 506.5 kt-CO₂

The Scope 3 emissions accounted for 87% of the total. We will work on reducing GHG emissions in our overall supply chain.



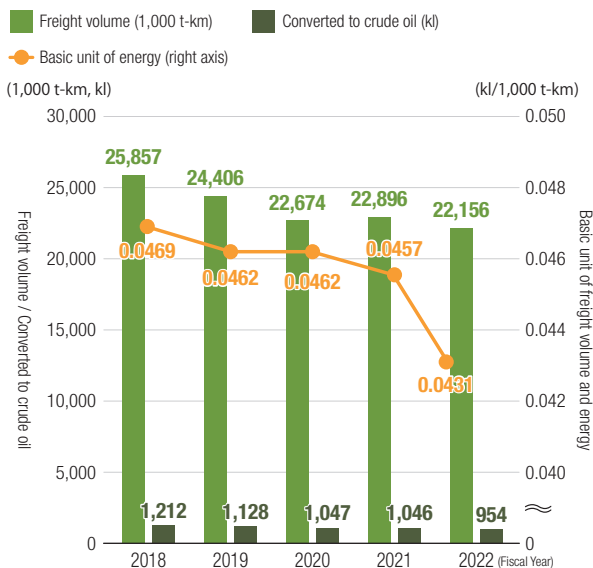
*We calculate data using the Database of Emissions Unit Values by the Ministry of the Environment (Ver. 3.3), IDEA v2, data on the basic unit of emissions obtained from suppliers, and the Act on the Rational Use of Energy (ton-kilometer method).
*Calculation methods for Categories 1 and 4 were revised this fiscal year.

Category		FY2022 (kt-CO ₂)
(Scope 1) Direct emissions		1.3
(Scope 2) Indirect emissions from energy sources		77.1
(Scope 3) Indirect emissions excluding Scope 1 and 2		506.5
1	Purchased goods / services	362.2
2	Capital goods	27.6
3	Fuel- and energy-related activities not included in Scope 1 or Scope 2	9.7
4	Upstream transportation and distribution	11.6
5	Waste generated in operations	0.6
6	Business travel	0.4
7	Employee commuting	3.0
8	Upstream leased assets	—
9	Downstream transportation and distribution	9.9
10	Processing of sold products	—
11	Use of sold products	—
12	End-of-life treatment of sold products	81.5
13	Downstream leased assets	—
14	Franchises	—
15	Investments	—
Total emissions (Scopes 1, 2, and 3)		584.9
Proportion of Scope 3 emissions		86.6%

Energy-saving Activities Related to Transportation

In fiscal 2022, the basic unit of freight volume and energy decreased by 5.7% compared to the previous fiscal year. Freight volume as the denominator of the basic unit decreased by 3.2% year on year. We decreased the basic unit of energy by promoting a modal shift for the transportation between warehouses for the information devices and the packaging materials. As a result, we achieved a 2.1% reduction, exceeding the target of a reduction of 1% or more on a five-year average for the regular reports required by the Act on the Rational Use of Energy. Also, we reduced CO₂ emissions by 22%, from 3,200 t-CO₂ in fiscal 2018 to 2,493 t-CO₂ in fiscal 2022. We will continue to promote modal shifts and a reduction in the basic unit of freight volume and energy and CO₂ emissions.

Changes in the Basic Units of Energy Converted To Crude Oil and Freight Volume and Energy



Changes in CO₂ Emissions And CO₂ Emissions per Basic Unit of Freight Volume



Waste Reduction and Recycling

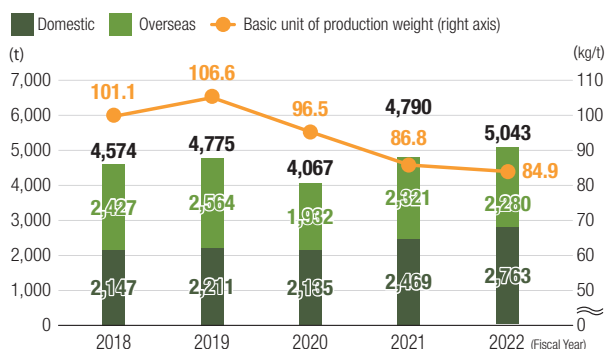
Basic Approach

Under the key phrase of “zero landfills and simple incineration by promoting waste recycling,” the Shin-Etsu Polymer Group is engaging in activities aimed at the reduction and recycling of waste. As metrics, we are using the basic unit of waste emissions and emissions rate.

Key Initiatives

At domestic and overseas plants, we have proactively improved production methods by installing cutting-edge technology, resulting in yield and productivity improvements. Furthermore, we conduct periodic on-site inspections and audits of waste disposal contractors to ensure that proper disposal is being carried out for any waste that is generated.

Changes in Waste Emissions per Basic Unit of Production Weight (Overall)



Actual Results of FY2022

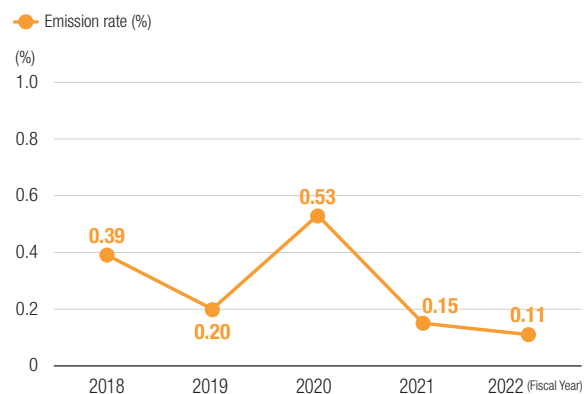
Total waste emissions

The total waste emissions of domestic plants rose by 11.9% year on year to 2,763 tons. The increase is partly due to the addition of KitcheNista Co., Ltd. as a production facility. The total waste emissions of overseas plants decreased by 1.8% year on year to 2,280 tons. As a result, total waste emissions rose by 5.3% year on year to 5,043 tons.

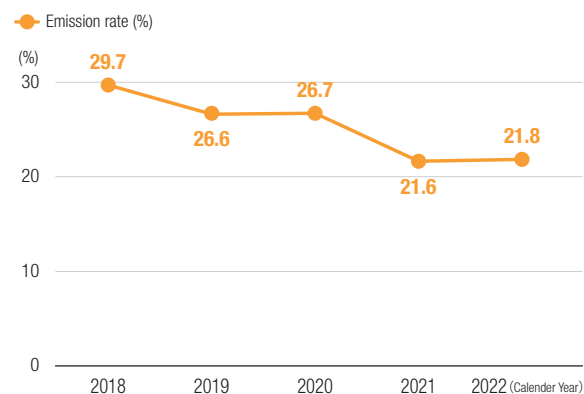
Basic unit of waste emissions against production weight

The basic unit of waste emissions of domestic plants against production weight was 66.2 kg/t, a 4.7% increase year on year. The worsening was partly caused by waste generated from production adjustments that arose due to factory expansions and renovations. On the other hand, the basic unit of waste emissions of overseas plants against production weight decreased by 10.7% to 128.9kg/t. The reduction was due to initiatives such as minimizing material loss during startup and shutdown through continuous operation and promoting waste plastic recycling. As a result, the overall basic unit of waste emissions against production weight was 84.9 kg/t, a 2.2% reduction year on year.

Emission Rate (Domestic)



Emission Rate (Overseas)



Control of Chemical Substances

Basic Approach

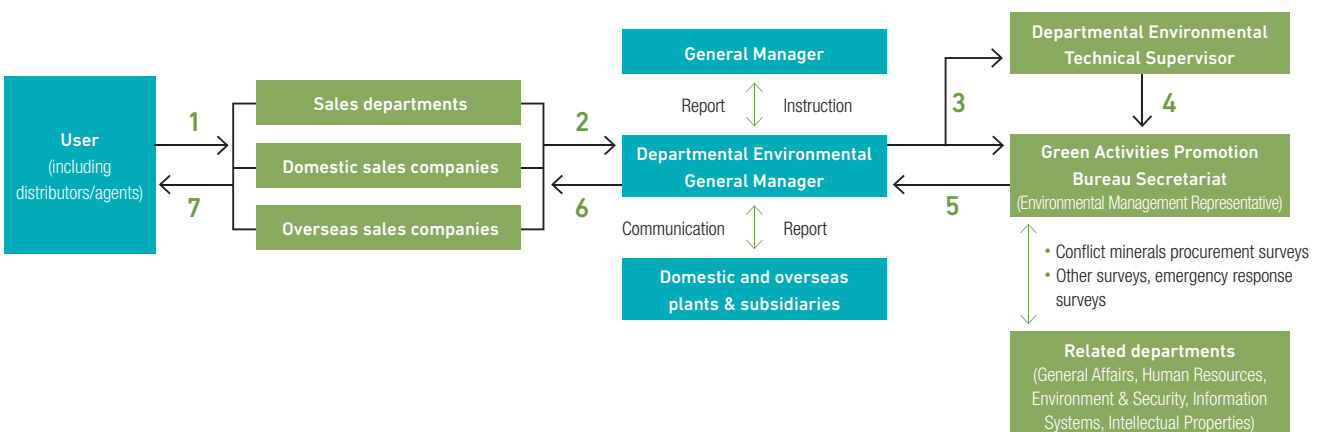
In accordance with Basic Environmental Principles, the Shin-Etsu Polymer Group is engaged in the control of chemical substances contained in products and the provision to customers of products with low environmental burdens through the proper handling of prohibited substances and controlled substances, and for the purpose of reducing environmental burdens in each process from procurement to production, use and disposal, and conserving.

Enhancement of Control Systems for Chemical Substances

• Global Environmental Communication System (G-Environmental System)

The Group has established a Global Environmental Communication System to implement the centralized control of all Group companies including overseas business locations in response to requirements from customers and under the Control Rules of Chemical Substances Contained in Products.

- 1 An “Environmental Management Representative” for our Group is appointed who represents the Group regarding customer’s requirements in relation to the environmental quality of our products.
- 2 An “Environmental General Manager” and the “Environmental Technical Supervisor” are appointed in each division. The Environmental General Manager manages issues associated with the environmental quality of products in the division and related domestic and overseas plants and subsidiaries (hereinafter, “Departments”). The Environmental Technical Supervisor is responsible for businesses associated with the environmental quality of the products of the Departments.
- 3 Submissions of documents such as Green Procurement Survey Responses, certificates of non-use of environment-related substances and analysis data are conducted in accordance with the rules set forth in the Global Environmental Communication System.
- 4 Materials with low environmental burdens are purchased from suppliers that promote environmental considerations in accordance with the “Control Rules of Chemical Substances Contained in Products” and “Control Standards of Chemical Substances Contained in Products.”
- 5 This system is also applied to environmental quality system surveys and conflict minerals procurement surveys required by customers.



● Control Standards of Chemical Substances Contained in Products

Based on the Control Rules of Chemical Substances Contained in Products, our Group stipulates our own Control Standards of Chemical Substances Contained in Products (Version 4.0). According to these standards, we aim to generate no serious incompatibility by thoroughly controlling chemical substances in all finished products and purchased materials.

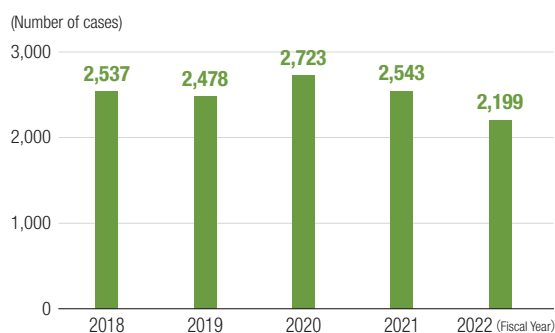
Prohibited substances	1) Chemical Substances Control Law 2) Industrial Safety and Health Law 3) Poisonous and Deleterious Substances Control Law 4) TSCA 5) POPs regulation 6) REACH regulation 7) GADSL	Class I Specified Chemical Substances Hazardous substances prohibited in production, etc. Specific poisons Prohibited or restricted substances for use (Section 6) AnnexI AnnexXVII (restricted substances) Reference List (Classifications: "P" and "D/P")	Intentional use prohibited Cannot be contained as impurities
Controlled substances	1) ELV Directive 2) RoHS Directive 3) REACH regulation 4) IEC62474	Designated substances Designated substances Candidate List of SVHC for Authorization and Annex XIV (substances subject to authorization) Declarable substance groups and declarable substances	Intentional use prohibited Cannot be contained as impurities
Reportable substances	GADSL	Reference List (Classifications: "D")	Report only

WEB Control Standards of Chemical Substances Contained in Products
<https://www.shinpoly.co.jp/en/sustainability/environment/chemical.html>

● Number of Investigations on Chemical Substances Contained in Products

At the Shin-Etsu Polymer Group, we have conducted investigations on chemical substances contained in products since 2000. In recent years, we have received over 2000 requests for investigations on chemical substances contained in products per year, and we report the results in accordance with our Global Environmental Communication System. Furthermore, no major nonconformities occurred in fiscal 2022.

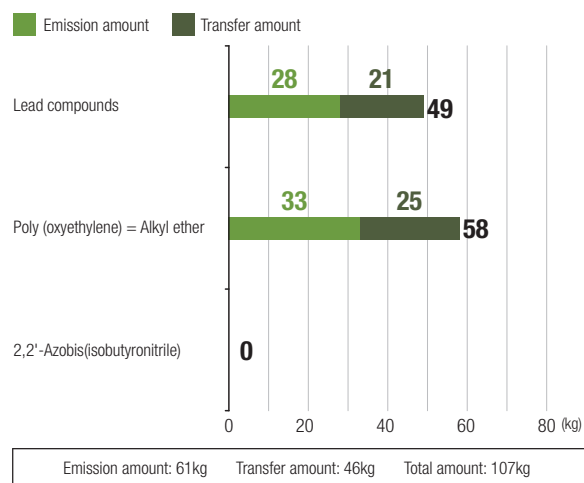
Number of Investigations on Chemical Substances Contained in Products



Management of the Emissions and Transfer of PRTR Target Substances

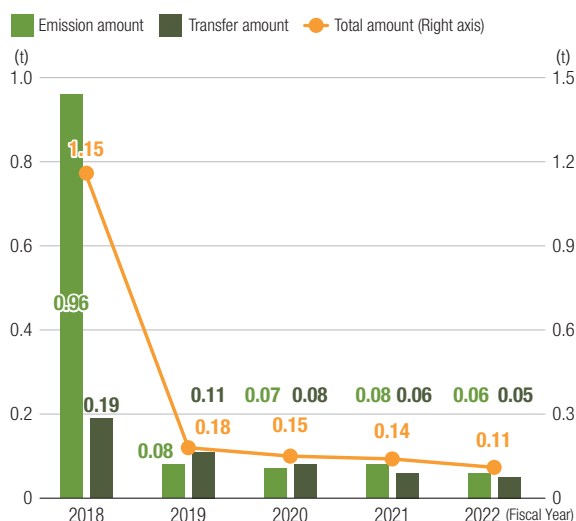
Tokyo, Nanyo, and Kodama Plants made PRTR registrations for 107 kg of two substances (61 kg for emissions and 46 kg for transfers), including 49 kg (28 kg for emissions and 21 kg for transfers) of lead compounds (lead-based stabilizer for PVC products), a Class I Specified Chemical Substance.

PRTR Registration Results



*Registered amount = Amount of emissions + amount of transfers

Total Results of PRTR Registrations



Management of the VOC Emissions into the Atmosphere

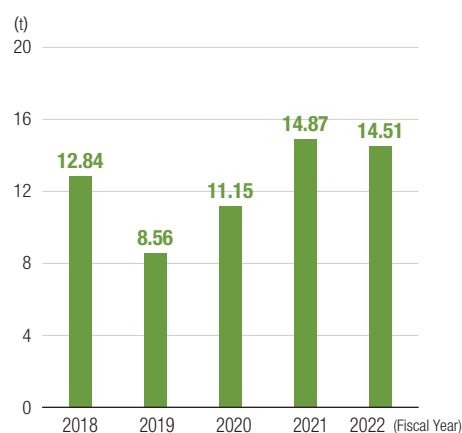
Total atmospheric emissions (t/year) in Japan for fiscal 2022 were 14.51 tons, a decrease of about 2.4% from the previous year's 14.87 tons.

The table below shows the nine substances included in the result.

Unit: t

VOC 9 substances	2018	2019	2020	2021	2022
Ethanol	8.87	6.71	9.02	10.40	11.37
Ethylbenzene	0.02	0.03	0.01	0.07	0.18
Xylene	0.02	0.05	0.03	0.20	0.13
Toluene	1.18	0.99	1.25	1.37	0.80
Acetone	0.00	0.00	0.00	0.24	0.22
Ethyl acetate	0.04	0.03	0.04	0.02	0.04
Butyl acetate	2.36	0.40	0.50	0.40	1.19
Propyl alcohol	0.35	0.35	0.30	0.47	0.58
Methyl ethyl ketone	0.00	0.00	0.00	1.71	0.00
Total	12.84	8.56	11.15	14.87	14.51

Change in Total VOC9 Emissions



Activities for Bio-diversity Protection

Basic Approach

The Shin-Etsu Polymer Group promotes global warming countermeasures that affect bio-diversity protection, the effective utilization of resources, thorough control of chemical substances, and the effective use of water resources and pollution prevention while striving to reduce environmental burdens.

Conservation of Water Resources

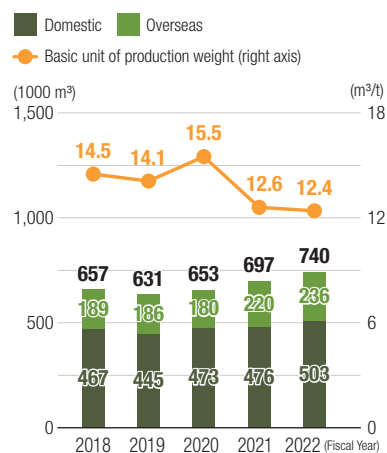
We need to address water risks as water shortages have become more serious on a global scale due to the impact of climate change. Our Group promotes proper management of water resources, wastewater treatment, and efficient water use.

• Efficient Use of Water

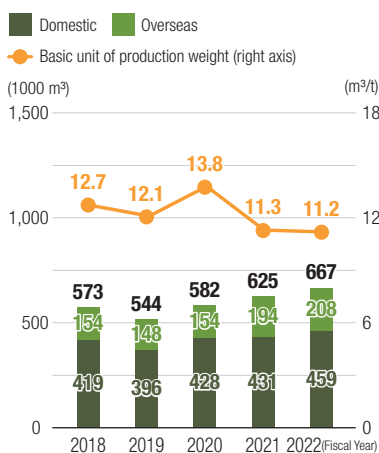
Total industrial water consumption in domestic and overseas plants was 106% of the result in the previous year due to an increase in the manufacture of semiconductor-related products. However, thanks to efficient water use, the basic unit was 98% of the result in the previous year. Total water discharge was 107% while the basic unit was 99%, compared to the result of the previous year.

Additionally, the amount of circulated water was 101% while the basic unit was 94%, compared to the result of the previous year.

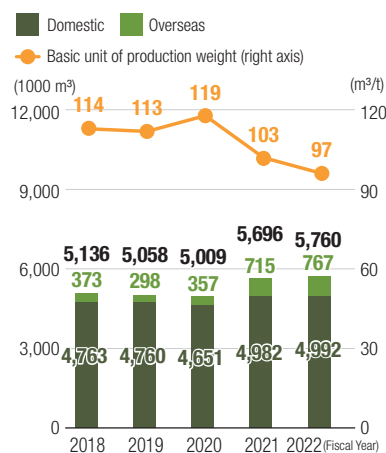
Industrial Water Use Status (Total)



Water Discharge Status (Total)



Circulated Water Status (Total)



• Air Pollution Prevention

We have no equipment that is subject to regulations, yet we do stipulate self-control standards when deemed necessary and work on reducing emission amounts. We periodically measure the emission concentration of VOCs in order to confirm that the value is below the limit.

• Water Pollution Prevention

We conduct regular analysis of discharged water to check that the quality of discharged water satisfies the standard specified in the Water Pollution Prevention Act. We are also working on reducing the basic units of water use and aiming for conversion to circulated water.

• Soil Contamination Prevention

We perform monitoring based on the Soil Contamination Countermeasures Act. We also conduct analysis and surveys on soil and underground water when we build new plants and expand existing plants in order to confirm that there is no contamination.

Information Disclosure Based on TCFD Recommendations

Endorsement of TCFD Recommendations and Our Initiatives

The Shin-Etsu Polymer Group develops business activities that embrace sustainable approaches and aim to reduce our businesses' environmental impacts and contribute to achieving a sustainable society with a focus on the transition to a low-carbon society. Toward the goal of achieving carbon neutrality by 2050, we are working to reduce CO₂ emissions related to all business activities of the Group.

As of January 2022, the Shin-Etsu Polymer Group has endorsed the TCFD* recommendations. The Group actively discloses information per the four recommended disclosure areas: Governance, Risk Management, Strategy, and Metrics and Targets.

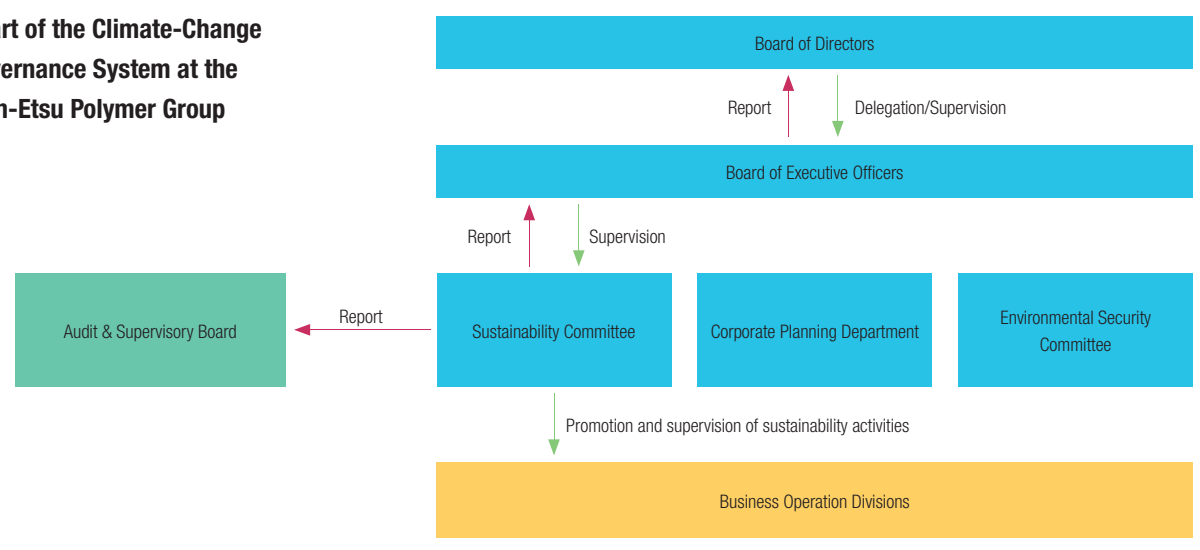


*Task Force on Climate-related Financial Disclosures (TCFD) is an international initiative established in 2015 by the Financial Stability Board (FSB) of the G20. It aims to improve the disclosure of financial impacts related to climate-related risks and opportunities.

• Governance

At the Group, we have established the Sustainability Committee, which is chaired by the president. Here, necessary discussions for enhancing sustainability management are held. This includes deliberations regarding climate change actions, such as reduction targets for CO₂ emissions, and the receipt of periodic reports, including annual activity reports from business operation divisions. Important matters discussed at the Committee are reported to the Board of Directors and the Audit & Supervisory Board, where they are monitored and supervised. Also, as a part of our ongoing energy-saving initiatives in the Green Activities, we regularly report on the progress in achieving targets set for our domestic and overseas plants. We will align these efforts with our goals for achieving carbon neutrality by 2050.

Chart of the Climate-Change Governance System at the Shin-Etsu Polymer Group



● Strategy (Scenario Analysis)

The Shin-Etsu Polymer Group has qualitatively assessed the financial impact of climate-related risks and opportunities in our major businesses for a future with heightened climate change. We base these assessments on the two below scenarios, which reference multiple scenarios published by the IEA (International Energy Agency) and the IPCC (Intergovernmental Panel on Climate Change).

1.5°C Scenario

A scenario where strict measures against climate change would limit the average annual temperature rise to less than 1.5°C compared to pre-industrial levels

4°C Scenario

A scenario where the failure to take additional climate action is expected to lead to an average annual temperature rise of 3.2 to 5.4°C compared to pre-industrial levels

● Climate-Related Risks

Transition Risks (Policy & Regulatory Risks, Market Changes)

Changes in the external environment	Degree of impact	Anticipated time frame	Impacts on Shin-Etsu Polymer Group	Countermeasures
<ul style="list-style-type: none"> Strengthening of GHG emission regulations Introduction of carbon tax 	Major	Medium-term	<ul style="list-style-type: none"> Increase in development and procurement costs required to achieve carbon neutrality Increased taxes due to the introduction of a carbon tax 	<ul style="list-style-type: none"> Introduction of energy-saving equipment Purchase of renewable energy Introduction of solar power facilities Purchase of carbon credits
<ul style="list-style-type: none"> Increased demand for low-carbon products Need for new climate-change-related technologies 	Major	Medium-term	<ul style="list-style-type: none"> Increased R&D costs due to increased competition in the development of energy-related technologies Increased capital investment due to increased production 	<ul style="list-style-type: none"> Transition to low-carbon materials Expansion of eco-friendly products Promotion of technological innovation Improvement of facilities for production efficiency
<ul style="list-style-type: none"> Sharp rise in the cost of petroleum-derived raw materials Reduced use of petroleum-derived raw materials by customers 	Major	Medium-term	<ul style="list-style-type: none"> Increased procurement costs due to rising raw material costs Increased costs due to the introduction of equipment compatible with low-carbon raw materials Reduced revenue for existing products 	<ul style="list-style-type: none"> Transition to low-carbon materials Exploration of alternative raw materials Installation of equipment that is compatible with alternative raw materials

● Physical Risks (Acute)

Changes in the external environment	Degree of impact	Anticipated time frame	Impacts on Shin-Etsu Polymer Group	Countermeasures
<ul style="list-style-type: none"> Wind or flooding damage caused by irregular weather 	Major	Short- to long-term	<ul style="list-style-type: none"> Decreased revenue caused by a shutdown or reduction in business activities due to flooding and damage to factories Increased costs such as restoration costs, natural disaster countermeasure costs, and insurance premiums Increased procurement costs and loss of sales opportunities due to interruptions in supply chains caused by disasters Costs associated with cleanup of chemical spill caused by disasters 	<ul style="list-style-type: none"> Updating BCP manual Risk assessments and sustainable supply chain management Diversification and decentralization of raw material suppliers Strict management of hazardous materials

● Climate-related opportunities

Opportunities (products and services)

Changes in the external environment	Degree of impact	Anticipated time frame	Impacts on Shin-Etsu Polymer Group
<ul style="list-style-type: none"> Transition from gasoline vehicles to EVs Expansion of the digital network society Increased demand for a reduction in CO₂ emissions Increased demand for low-carbon products 	Major	Medium- to long-term	Electronic Devices: Development and launch of new products for EVs
			Precision Molding Products: Sales expansion of semiconductor-related containers due to increased demand
			Housing and Living Materials: Development and launch of material products for electronic components

Anticipated time frame Short term: within 10 years. Medium term: from 10 to 50 years. Long term: Over 50 years

● Risk Management

At the Shin-Etsu Polymer Group, the Sustainability Committee, chaired by the president, identifies and evaluates climate-related risks and opportunities. Risks assessed to have a high impact on the business are reported to the Board of Directors and the Audit & Supervisory Board. In addition, strategies and targets are set to minimize identified risks and maximize opportunities. The status of these initiatives is regularly reported to the Board of Directors and the Audit & Supervisory Board.

● Metrics & Targets

Towards the Shin-Etsu Chemical Group's 2050 Carbon Neutrality Declaration, Shin-Etsu Polymer has set a CO₂ reduction target to be met by FY2050 for its group companies as a whole. We will promote measures such as switching to renewable energy, transitioning to energy-saving equipment, and installing solar power generation.

CO₂ Emission Reduction Targets (Scope 1 and 2)

2030 Target	46% reduction (compared to FY2013)
2050 Target	Achievement of carbon neutrality

CO₂ Emission Reduction Targets for the Shin-Etsu Polymer Group

