Summary of Environmental Action

Environmental Objectives and Performance in FY2019

RIKEN TECHNOS CORPORATION promotes improvement activities by setting yearly environmental objectives consistent with the business environment, based on the company's Environmental Policy. We also make companywide cross-sectional efforts, under the main themes of promoting reduction of carbon dioxide (CO_2) emissions, reducing the amount of our industrial waste output, and reinforcing chemical substance management.
In FY2019, a total of 162 objectives were set across various divisions in the entire company, and 110 (68%) of them were achieved.

(1) Reduction of Energy Use

Number of Objectives Set	Achieved Objectives	Objectives	Results
66	47 (71%)	(1) Reduction of electricity usage per gross production by 7% compared to FY2012 (2) Reduction of heavy oil usage per gross production by 7% compared to FY2012 (3) Reduction of CO_2 emissions per gross production by 7% compared to FY2012 (4) Reduction of total CO_2 emissions by 7% compared to FY2012	(1) 0.9% reduction (objective not achieved) (2) 37% reduction (objective achieved) (3) 4.3% reduction (objective not achieved) (4) 15.9% increase (objective not achieved)

(2) Reduction in Industrial Waste

Number of Objectives Set	Achieved Objectives	Objectives	Results
27	12 (44%)	Simple (landfill and incineration) waste volume per gross production: 0.1% or below Total industrial waste volume per gross production: 3.5% or below	Not achieved with 0.18% for landfill and incineration waste volume per gross production. Not achieved with 3.57% for total industrial waste volume per gross production.

(3) ① Reinforcement of Chemical Substances Management and ②Development of Environmentally-friendly Products

	Number of Objectives Set	Achieved Objectives	Objectives	Results
① Reinforcement of Chemical Substances Management	11	8 (73%)	Reduction of use of independently specified chemical substances, and development of environmentally-friendly products.	① FY2019 usage of chemical substances designated as Class I under the Act on Confirmation, etc. of Amounts of Release of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Law) decreased by 35% compared to FY2018. ② In FY2019, the sales volume of recycling-friendly materials increased by 1% compared to FY2018.
② Development of Environmentally-friendly Product	16	8 (50%)		

Status of RIKEN TECHNOS Environmental Load

The main types of environmental burdens caused by RIKEN TECHNOS CORPORATION's business activities are due to industrial waste output, greenhouse gas (CO_2) emissions, and the transport and discharge of chemical substances. We are working on the reduction of emissions and proper management of various substances. The following data shows the status of the environmental load of RIKEN TECHNOS itself (by substance). (Data for Nagoya Factory transferred from RIKEN FABRO has been added starting from FY2019.)

CO_2 Load Per Ton of Products Produced (FY2019)

Input	
Raw materials (including paints)	96,000t
Packaging materials	4,000t
Electricity	79,000MWh
Heavy oil	2,500kl
Tap water	129,000m^3
Groundwater	176,000m^3
Water for industrial use	35,000m^3

Output	
Compound products	69,000t
Film products	15,000t
Wrapping products for packaging	16,150t
Total waste	3,720t
Amount of sewage	322,000m^3

Amount of CO_2 emissions (t-CO_2/t)	
Compound	0.23
Film	0.99
Food packaging wrap	0.52

Preventing Stock Pollution and Environmental Pollution

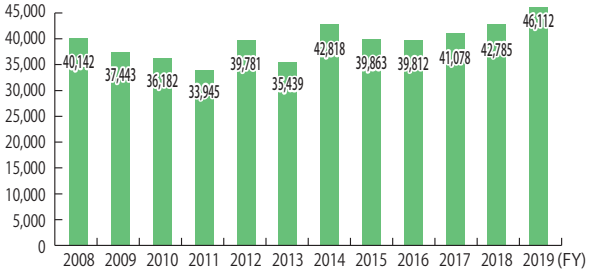
We implement routine measurements of environmental items at each site in accordance with laws and regulations as well as our own regulations monitoring. The items include exhaust gas, groundwater, noise, vibration, bad odors, radiation, and dust, with particular concern for noise pollution. We conduct regular meetings with residents around our sites, in which we disclose results from our environmental measurements and internal examinations in order to promote understanding of RIKEN TECHNOS's business activities.

Saving Energy and Reducing Greenhouse Gas Emissions

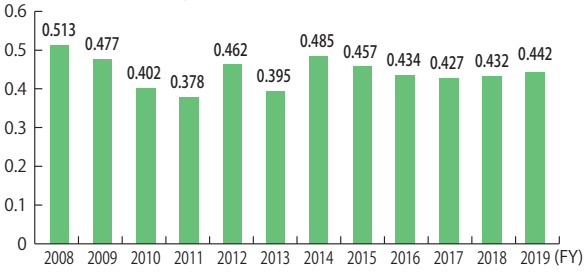
Two RIKEN TECHNOS factories, Saitama and Mie, are designated as Type 1 energy control factories, while the Gunma Factory is designated as a Type 2 energy control factory.
The primary greenhouse gas*1 emitted by our business activities is CO_2.
We promote energy-saving tactics, such as improving the efficiency of operating facilities, using heat storage-type deodorizing furnaces, using demand control*2 for air conditioning, preventing leakage of compressed air and steam for industrial use, and switching to energy-saving lighting.
Over many years, CO_2 emissions reduction has been our principal objective. Due to a recent major change in the size of the electricity to CO_2 conversion factor, from FY2014, we have made it our objective to achieve 1% reduction each year, with FY2012 as the base year, in energy use per gross production. For FY2019, we set a goal of 7% reduction compared to FY2012, and did not achieve the goal with a 0.9% reduction in electricity usage per gross production while achieving a 37% reduction in heavy oil usage per gross production.
A switch from heavy oil boilers to city gas boilers at the Gunma Factory in December 2015 led to reductions in heavy oil usage, CO_2 emissions, and air pollution.
In March 2013, our photovoltaic power plant supplying renewable energy began operation at a site adjacent to the Gunma Factory.
In FY2019, approximately 70,000 kWh of power was supplied to the Gunma Factory, with approximately 720,000 kWh sold externally.

Photovoltaic power plant of RIKEN TECHNOS CORPORATION (within the Gunma Factory site)

CO_2 Emissions (t-CO_2)



CO_2 Emissions per Gross Production (t-CO_2/t)



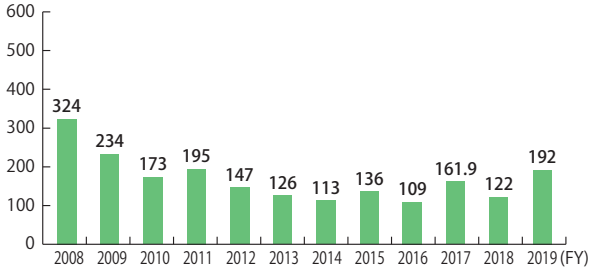
Note: The value is based on emission factors after adjustments from FY2010.

*1 Greenhouse gas is indicated in the quantity of CO_2 calculated to be emitted by consumption of electricity and heavy oils consumed at the Saitama Factory, Mie Factory, Gunma Factory, R&D Center, and Head Office, as well as each sales site. CO_2 emissions from Head Office have been added since 2005, and emissions from each sales site have been added since FY2008. CO_2 emissions from petroleum fuel consumed by logistics are omitted.
*2 Air conditioning demand control is a method of reducing electricity consumption by automatically stopping compressors when a maximum value of agreed with the supplier is approached.

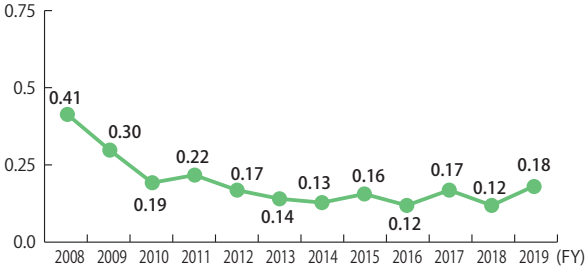
Reducing Industrial Waste

Our company considers the reduction of simple (landfill and incineration) waste generated in the manufacturing stage to be one of the main goals of environmental management activities. In FY2014, we established the new goals of "reducing simple waste volume per gross production from 0.3% to 0.15% to under 0.1%, and reducing total waste per gross production from 5% to 4% to under 3.5%." We are promoting restraint in generating waste by improving yields in our production processes, as well as strictly separating generated waste into material recycling, thermal recycling, Refuse Plastic Fuel (RPF), raw cement material, etc. for conversion to effective use.
The simple waste volume per gross production was 0.18% and we did not achieve the goal. The total waste per gross production was 3.57% and we did not achieve the goal.

Simple Industrial Waste Generated (t)



Total Production Ratio for Simple Industrial Waste (%)



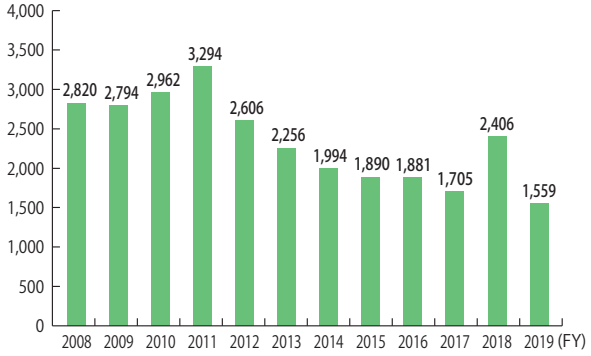
* Sites: Four factories (Saitama, Mie, Gunma and Nagoya), and R&D Center (Tokyo)

Summary of Environmental Action

Appropriate Management of Chemical Substances

In the past, RIKEN TECHNOS CORPORATION has been managing chemical substances in accordance with laws such as the Chemical Substances Control Law, the Industrial Safety and Health Act, and the Fire Services Act.
In FY1999, a totalization system was established to enable thorough management. In addition, a system was created for responding to the Act on Confirmation, etc. of Release Amounts of Release of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Law), which came into force in April 2001.
In October 2009, the PRTR Law was amended with changes made to the types of chemicals subject to PRTR, and we acted to respond to the changes.
Consequently, the usage and emission volumes of newly subject chemical substances were totaled beginning in FY2010, and in FY2011, the usage volume of methylnaphthalene contained in A heavy oil was added. In FY2011, RIKEN (THAILAND) CO., LTD., a RIKEN TECHNOS GROUP company, was affected by flood disasters and production assistance was implemented in Japan. As a result, the usage volume of chemical substances designated as Class I under the PRTR Law increased dramatically. For FY2019, usage was reduced by 35% compared to FY2018. This was mainly due to the reduction in products using DEHP, toluene, and 1,3-dioxolane. In FY2019, we used 26 types of chemicals subject to the PRTR Law, which was two less than FY2018. Among them, nine types with usage of more than one ton were reported to the Japanese government.

Consumption of Class I Designated Chemicals (t)



Storing PCB Waste

In July 2001, the Act on Special Measures concerning Promotion of Proper Treatment of Polychlorinated Biphenyl (PCB) Wastes (Special Measures Act on PCB) came into force. We plan to treat the 845.5 kg of waste oil containing PCB from Saitama Factory in FY2020. Treatment of PCB waste stored at the Mie Factory and R&D Center (Tokyo) was completed.
In addition, because there is a high probability that heavy electrical equipment from before 1989 used insulating oil containing small amounts of PCB, we are examining and analyzing all condensers and transformers currently in use.

Site	PCB Wastes	Status of Storage and Treatment
Saitama Factory	Waste oil containing PCB: 845.5 kg (high concentration)	Treatment planned for FY2020
	High voltage condensers: 15 (high concentration)	Treatment completed in FY2017
	High voltage transformers: 2 (low concentration)	Treatment completed in FY2015
	Waste water and oil containing PCB: 1,446 L (low concentration)	
Mie Factory	High voltage transformers: 4 (low concentration)	Treatment completed in FY2014
	Waste oil containing PCB: 350 L (low concentration)	
	PCB component wastes: 300 g (low concentration)	
R&D Center (Tokyo)	High voltage condensers: 12 (high concentration)	Treatment completed in FY2013
	High voltage transformers: 1 (low concentration)	
	Waste oil containing PCB: 330 L (low concentration)	
	PCB component wastes: 15 kg (low concentration)	

Status of Employees' Environmental Education and Awareness-Raising

Since FY2008, we have made a practice of distributing the "Ecolife Day" questionnaire to our employees and their families about their daily lives in order to raise awareness regarding energy conservation and global warming (reduction of CO_2 emissions). In FY2019, we received many responses from employees and their families (1,138 in winter). The results of the questionnaires showed average CO_2 reductions per person of 1,000 g-CO_2/ day in winter. In addition, we distributed the Sustainability Report to every employee to increase understanding of how results of each individual's activities have an impact on RIKEN TECHNOS CORPORATION as a whole.
In addition, in 2019, the proactive activities toward the prevention of global warming undertaken by RIKEN TECHNOS CORPORATION and the RIKEN TECHNOS GROUP were recognized by the organizing committee of the 1st SDGs Eco Forum in Saitama with an award.

	Participants (persons)	Amount of Reduction (g-CO_2/person per day)
Summer of FY2015	1,497	920
Winter of FY2015	1,365	960
Summer of FY2016	1,267	950
Winter of FY2016	1,360	1,010
Summer of FY2017	1,371	1,020
Winter of FY2017	1,229	1,090
Summer of FY2018	1,261	850
Summer of FY2019	999	1720
Winter of FY2019	1138	1000

Environmental Laws and Agreements related to Our Business Activities

We have clarified the environmental laws and agreements to be complied with by each production site and office and summarized them in the Environmental Laws Application Standards, and we stringently comply with environmental laws.
Additionally, we took measures to comply with Saitama Prefecture's Global Warming Countermeasures Planning System and Target-Setting Emissions Trading System Program, achieving the CO_2 emissions reduction goal in the Phase 1 Plan (6% reduction from the base year). We are also making smooth progress toward the CO_2 emissions reduction goal in the Phase 2 Plan (13% reduction from the base year).

Responding to Specified Chemical Substance Restrictions

For raw materials management, to improve measures in response to Europe's REACH*1 as well as regulatory changes regarding chemical substances in Japan, chemical substance ingredient information sheets were revised. From October 2015, information on measurement data for the ten RoHS2*2 substances (four substances of phthalic esters slated for regulation from July 2019, in addition to the existing six substances in RoHS) and content information for chemical substances under regulation, including trace residual chemicals, have also been collected. Also, the application of these measures to affiliates was clarified as part of the RIKEN TECHNOS GROUP Green Procurement Standards.
It is the mission of manufacturers to provide safe and reliable products to customers, and ensuring the safety of chemical substances used is considered to be one of the main concerns of RIKEN TECHNOS CORPORATION. In FY2006, a Chemical Substances Management Committee was newly established as a companywide organization. Also, a Chemical Substances Management Standard was established and, in addition to chemical substances prohibited by law from being manufactured and used, we decided to prohibit the use of chemical substances marked for monitoring under the Chemical Substances Control Law. We also clearly declared our intention to reduce the use of chemical substances such as lead and toluene that are not prohibited from usage but are considered safer to avoid from the perspective of industrial safety and health. Also, chemical substances newly under consideration for usage are subject to reviews, and a framework for providing products where safety comes first has been established companywide.

*1 REACH: European regulation related to the registration, evaluation, authorization and restriction of chemicals
*2 RoHS2: See the note on page 32.

Biodiversity

We are working to eliminate the usage of Class I and II Specified Chemical Substances and Monitoring Substances under the Chemical Substances Control Law, and reduce the usage of chemical substances designated as Class I under the PRTR Law. Additionally, we comply with the Air Pollution Control Act, Water Pollution Control Act, Industrial Safety and Health Act, and other laws, and take into consideration the effects on people and ecosystems in developing, manufacturing, and marketing our products. We participate in activities to maintain the green areas around our factories, as well as volunteer activities for forest environmental maintenance.

Environmental Accounting

RIKEN TECHNOS CORPORATION has been disclosing accounting data from environmental preservation activities since FY2006.

Criteria for Environmental Accounting in FY2019

(1) Accounting Coverage: RIKEN TECHNOS CORPORATION (non-consolidated)
(2) Period Covered: April 1, 2019, to March 31, 2020
(3) Referenced Guidelines: "Environmental Accounting Guideline (2005 Edition)" (Issued by the Japanese Ministry of the Environment in February 2005)

Summary of Environmental Accounting in FY2019

In FY2019, the amount invested in environmental preservation costs was approximately JPY 20 million, and expenses were approximately JPY 1.18 billion, making a total of approximately JPY 1.2 billion. Investment amounts are the costs for pollution prevention, global environmental preservation, and resources recycling. Expenses included the cost of analysis to comply with the RoHS Directive, and ISO maintenance activities. A very large proportion of the costs, amounting to approximately JPY 1 billion, was for R&D expenses for environmentally-friendly products.
In terms of the environmental preservation effects resulting from our activities, simple (landfill and incineration) waste volume per gross production was 0.18%, not achieving our goal of 0.1% or below. Total industrial waste amount per gross production was 3.57%, not achieving our goal of 3.5% or below. With regard to CO_2 emissions, although we conducted continuous energy-saving activities, the result was a 15.9% increase, not achieving our goal of a 7% reduction from the FY2012 level. The main reason was due to the increase in production volume. On the other hand, our electric power consumption rate (Electricity use (MWh)/Production (t)) was reduced by 0.9%, which did not achieve our goal of a 7% reduction from the FY2012 level. Our heavy oil consumption rate (Heavy oil use (kl)/Production (t)) was reduced by 37%, achieving our goal of a 7% reduction from the FY2012 level. This is due to the results of our energy-saving activities (introduction of energy-saving equipment and measures for efficient production, etc.)
An economic effect of approximately JPY 100 million was achieved from cost reductions through sales of valuable materials from waste plastics, energy savings, and other factors.

Summary of Environmental Action

Environmental Preservation Costs

JPY 1,000

Category	Content of Activities on Examined	Total Amount Invested*1	Expenses*2
1. Business area costs		13,178	143,009
* Pollution prevention costs	Construction for noise prevention measures, maintenance of scatter prevention equipment	159	54,596
*Global environmental preservation costs	Installation and improvement of energy-saving equipment	13,019	0
* Resources recycling costs	Disposal of industrial waste, recycling, etc.	0	88,414
2. Upstream/Downstream costs	Analysis of products containing chemical substances	5,530	14,880
3. Administration costs	Issuing of CSR Report, maintenance of ISO (including external audit), analysis of drainage and VOC, maintenance of green areas at each site	0	17,616
4. R&D costs	Research and development of environmentally friendly products	0	1,003,330
5. Social activity costs	Beautification of areas around our sites, donations	0	970
6. Environmental damage countermeasures costs	Soil investigation and improvement	0	644
Total		18,708	1,180,449

***1** Total amount invested: The invested amount intended to be used for environmental preservation during a set period. Its effect continues for a number of set periods and is then calculated as the cost for that timeframe.
***2** Expenses: The cost or loss that occurs from the consumption of commodities and services intended for environmental preservation.

Environmental Preservation Effects

Classification of environmental preservation effects	Environmental Performance Indicators		FY2018	FY2019
Environmental preservation effect related to resources input into business activities	Total energy input volume (GJ)		845,852	927,403
	Energy input by type	Electricity (MWh)	70,773	78,993
		Heavy oils (kl)	2,547	2,472
		City gas 13A (km^3)	1,173	1,137
		Gasoline (kl)	42	40
		Light oils (kl)	3	3
	Input of PRTR-controlled substances (t)		2,406	1,560
	Water resources input	Tap water (m^3)	132,000	129,000
		Groundwater (m^3)	211,000	176,000
		Water for industrial use (m^3)	11,000	35,000
Environmental preservation effect related to waste or environmental burdens originating from business activities	Greenhouse gas emissions (t-CO_2)		43,000	46,000
	Volume of PRTR-controlled substances discharged (t)		546.7	546.8
	Volume of PRTR-controlled substances transported (t)		16.8	16.8
	Total waste discharge volume (t)		3,730	3,700
	Final waste disposal volume (t)		122	192
	Amount of sewage (m^3)		349,000	322,000
Environmental preservation effect related to commodities and services produced by business activities	Volume of valuable materials recycled (t)		1,738	1,894
Other environmental preservation effects	Volume from transportation of products (t-km)		28,485,895	24,682,013
	Volume of CO_2 emissions associated with transportation (t)		4,944	4,284
	Transportation energy (GJ)/Production (t)		4.36	3.88

Economic Effect Associated with Environmental Preservation Activity

JPY 1,000

Economic Effect	Amount	
	FY2018	FY2019
Benefit from recycling plastic, paper waste, etc.	7,011	9,282
Expenses reduced by energy-saving activities	4,921	1,648
Total	11,932	10,930

Asset Retirement Obligations

Asset Retirement Obligations accounting began on April 1, 2010. Asset Retirement Obligations in accordance with environment-related laws are currently as follows.

As of March 31, 2020 (JPY 1,000)

Costs	Expense
Cost of restoring buildings	75,016
Cost of asbestos disposal from usage sites	32,140
Cost of renewing equipment using PCB	0
Cost of contaminated soil treatment	62,364
Total	169,521

RIKEN TECHNOS GROUP Environmental Data

RIKEN TECHNOS Environmental Data by Factory

Saitama Factory
- Site area: 58,739m^2
- Description of business: Manufacturing of compounds, film, and food wrapping film made from various thermoplastic resin, including PVC
- Employees: 249

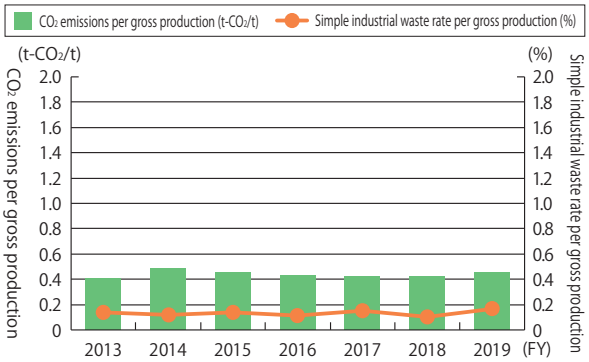
Mie Factory
- Site Area: 55,247m^2
- Description of business: Manufacturing of compounds, film, and food wrapping film made from various thermoplastic resin, including PVC
- Employees: 242

* Figures for Saitama Plant and Mie Plant include activities from RIKEN FABRO CORPORATION.

Gunma Factory
- Site area: 55,904m^2
- Description of business: Manufacturing of high functional film in a clean environment
- Employees: 42

Nagoya Factory
- Site Area: 16,700m^2
- Description of business: Manufacturing of food wrapping film
- Employees: 35

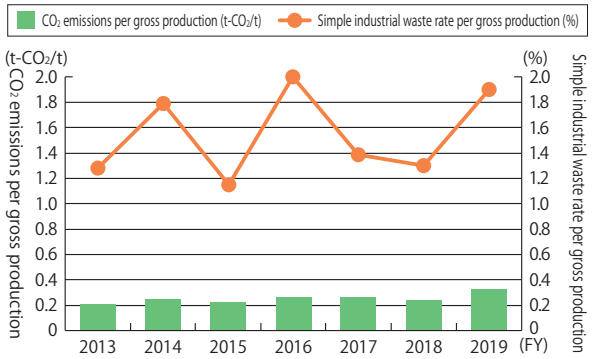
CO_2 emissions per gross production and simple industrial waste rate per gross production (total for the Saitama, Mie, and Gunma Factories)



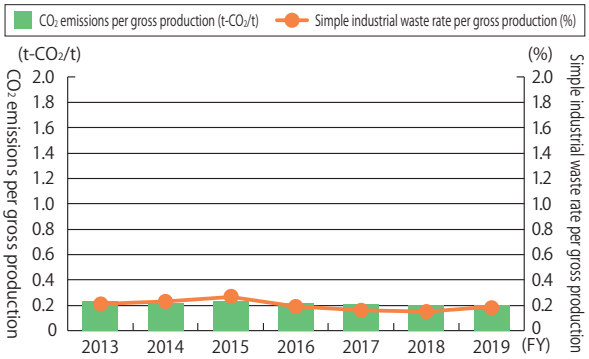
Environmental Impact Data for Affiliates of RIKEN TECHNOS GROUP

①Compound Production Companies

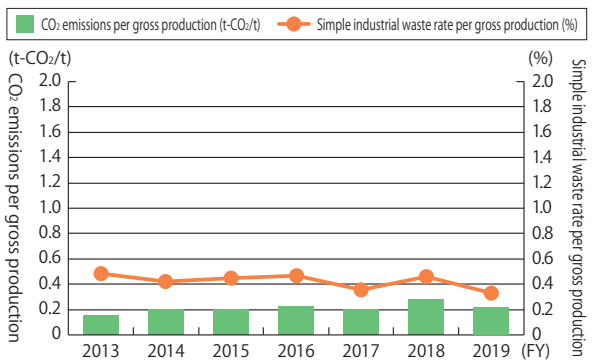
RIKEN CHEMICAL PRODUCTS CO., LTD. Employees: 50



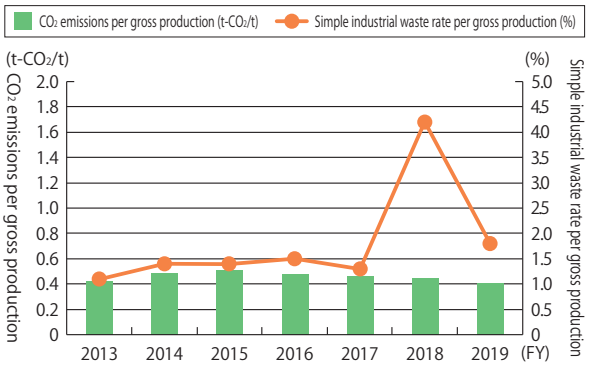
RIKEN (THAILAND) CO., LTD. Employees: 274



RIMTEC CORPORATION Employees: 93



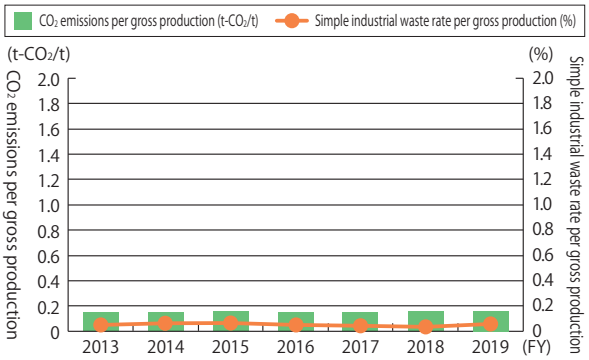
RIKEN ELASTOMERS CORPORATION Employees: 37



Summary of Environmental Action

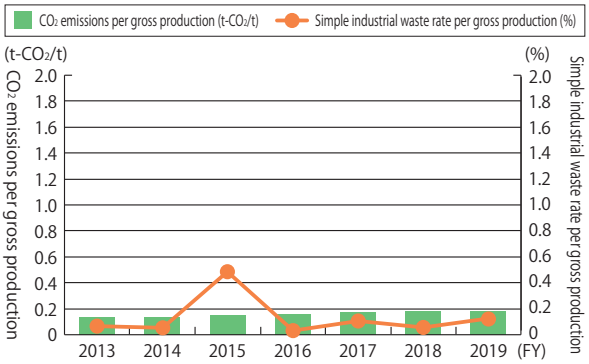
PT. RIKEN INDONESIA

Employees: 229



SHANGHAI RIKEN TECHNOS CORPORATION

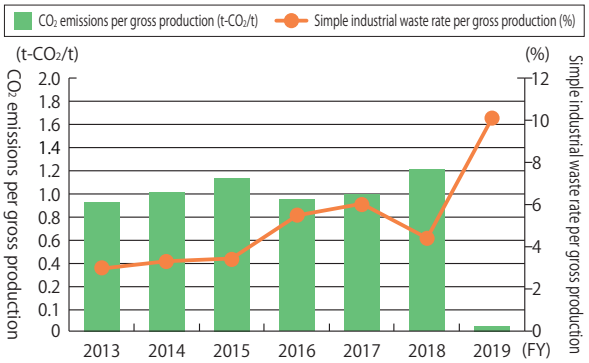
Employees: 123



②Molding Companies

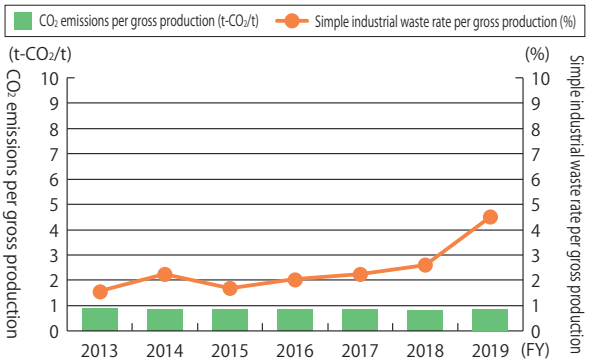
RIKEN CABLE TECHNOLOGY CO., LTD.

Employees: 78



KYOEI PLASTICS MFG CO., LTD.

Employees: 58



RIKEN TECHNOS (JIANGSU) CORPORATION

Employees: 60