Environmental Protection / Climate Change Action

★: Assured by an independent assurance provider

Environmental Performance

Sumitomo Chemical collates and totals environmental data for the Company and Group companies in Japan, including data on energy and resource consumption, production quantities, and environmental impact (e.g., release of pollutants into the air and water).

Primary Environmental Performance (Fiscal 2017)

Figures in black: Sumitomo Chemical and Group companies in Japan
Figures in green: Sumitomo Chemical

INPUT Energy and Resources

Water ★

	(Millions of tonnes)	
Industrial water	68.8	63.3
Drinking water, etc.	0.9	0.4
Seawater	926.9	171.8
Groundwater	17.6	15.0
Other water	2.5	2.5

Energy ★
Calculated as kl of crude oil

	(Thousands of kl)	
Fuel, heat, and electricity*1	1,837	979

Exhaustible Resources

	(Thousands of tonnes)	
Hydrocarbon compounds	1,835	1,593
Metals (excluding minor metals)*2	120	115
Minor metals*3	10.17	0.02

OUTPUT Product Manufacturing and Environmental Impact

Products ★

	(Thousands of tonnes)	
(Calculated on the basis of ethylene production)*5	2,602	1,371

Water Pollutant Emissions ★

		(Tonnes)	
COD	Coastal waters/waterways	998	918
	Sewer systems	234	115
Phosphorus	Coastal waters/waterways	32	29
	Sewer systems	6	6
Nitrogen	Coastal waters/waterways	1,442	1,347
	Sewer systems	72	42
Substances subject to the PRTR Act*6		45	44

Waste Materials ★

	(Thousands of tonnes)	
Waste emissions*7	261	50
Landfill*7	21	1.4
(Breakdown)		
On-site landfill	0	0
External landfill	21*7	1.4

Atmospheric Emissions ★

	(Thousands of tonnes of CO_2)	
Greenhouse gases (seven gases)*1	6,432	3,279
Emissions from energy use (CO_2)	5,611	2,621
CO_2 emissions from other than energy use	711	623
N_2O	110	35
HFC, PFC, CH_4, SF_6, NF_3 *8	—	—

	(Tonnes)	
Others		
NOx	4,703	1,778
SOx	5,023	1,189
Soot and dust	247	88
Substances subject to the PRTR Act*6	438	225

PCB/CFCs under Secure Storage

No. of electrical devices containing high concentrations of PCBs*4	58 units	18 units
PCB volume*4	1.0 kl	0.1 kl
No. of refrigeration units using specified CFCs as a coolant	48 units	12 units
No. of refrigeration units using HCFCs as a coolant	262 units	102 units

*1 From fiscal 2017, the energy (calculated as kl of crude oil) and greenhouse gases (all seven gases) indices were calculated in accordance with the GHG Protocol.
• Having adopted the GHG Protocol standards for our GHG emmission disclosures, we now include the following data that was not included in previous calculations: amount of energy used to produce electricity and steam sold to external parties by the Group and the resultant CO_2 emissions; amount of energy used by Sumitomo Chemical's non-production sites and the resultant CO_2 emissions; CO_2 emissions from non-energy sources not included in the scope of the Act on Promotion of Global Warming Countermeasures.

*2 Calculations include the following 12 metals: iron, gold, silver, copper, zinc, aluminum, lead, platinum, titanium, palladium, gallium, and lithium.

*3 Calculations include the following seven rare metals: nickel, chromium, tungsten, cobalt, molybdenum, manganese, and vanadium. The supply structure for each of these rare metals is extremely fragile. These rare metals are subject to national stockpiling.

*4 Fluorescent lamps and mercury lamp ballast as well as contaminated substances (wastepaper, etc.), including PCB waste, are not included in unit and volume data.

*5 Certain assumptions were made in calculations due to the difficulty of obtaining weight-based figures for some products.

*6 Calculated based on the amount released into water/the air of each substance subject to the Order for Enforcement of the PRTR Act (promulgated on November 21, 2008).

*7 The amount of coal ash generated at Sumitomo Joint Electric Power, which is included in "Waste emissions" and "Landfill" (Sumitomo Chemical and Group companies in Japan) is calculated on a dry-weight basis.
In addition, although the amount of waste generated at Group companies in Japan and reduced at Sumitomo Chemical's facilities is included in "Waste emissions" (Sumitomo Chemical and Group companies in Japan), the amount is insignificant.

*8 In reference to the Act on Promotion of Global Warming Countermeasures, companies that emit less than 3,000 tonnes of CO_2-equivalent per year for each type of greenhouse gas are outside the scope of calculation.