



Material Balance

Identifying the environmental impact of business operations

The Brother Group's manufacturing facilities are engaged in processing and assembly to manufacture products. The environmental impacts (including resource consumption, CO₂ emissions, and waste generated) associated with all business operations are quantitatively monitored and summarized to reduce environmental impacts.

Resource Utilization and Material Production/Emissions in FY2024 (April 1, 2024–March 31, 2025)

Resource and energy inputs in FY2024

Resource consumption		Total energy consumption		Water consumption	
Product raw materials (t)	207,760	Crude petroleum equivalent (kL)	46,164	Total amount of water consumption (m ³)	598,134

Material production/emissions in FY2024

Greenhouse gas emissions		Wastewater volume		Amount of waste	
Greenhouse gas emissions (t-CO ₂ e)	72,298	Wastewater volume (m ³)	501,530	Waste volume (t)	12,339
		Volume recycled (m ³)	16,354	Volume recycled (t)	11,122
		Recycling rate (%)	3.2	Rate of landfill waste (%)	2.6

The scope of aggregation was directly related to the product range.

For the locations of applicable sites and their main lines of business, see page 8.

Calculation method

Resource and energy inputs in FY2024		
Resource consumption	The resource consumption is calculated by multiplying the shipments to main products shipped in FY2024 per weight.	
Total energy consumption	Total amount of electricity, steam, LPG/LNG, city gas, petroleum, etc. consumed at applicable business sites in FY2024	
	Crude petroleum equivalent	Calculated by converting electricity, gasoline, light oil, LPG, city gas, etc., into crude petroleum, respectively *: The conversion rate for crude oil equivalent is based on the Appended Table 1 of the Ordinance for Enforcement of the Act on the Rational Use of Energy enacted by the Japanese Ministry of Economy, Trade and Industry.
Water consumption	Total amount of water consumed at applicable business sites in FY2024	
	Clean water, industrial water, and underground water	Measurement using a water meter

Material production/emissions in FY2024	
Greenhouse gas emissions	Market-based method: GHG emissions are calculated based on the emission factors of the electricity that is actually purchased.
Amount of wastewater	The amount is equivalent to the amount of water intake. However, the amount is calculated based on the measured wastewater amount or in accordance with the formula set in respective regions (based on the amount of water intake), if such measured amount or formula is available
Amount of waste	Total amount of waste (including metals, waste plastics, circuit boards, sludge, waste oil/solvents, waste acids/alkalis, glass/ ceramics, and batteries) generated in the production process at applicable business sites in FY2024

Environmental impact data of main business sites before FY2021 can be viewed by downloading the PDF file from the sustainability web site.

Environmental impact data of main business sites in FY2024

Resource consumption, Energy consumption

Name of site	Resource consumption (t)	Energy consumption					
		Electricity (MWh)	LPG (t)	City gas (1,000m ³)	Gasoline (kL)	Light oil (kL)	Kerosene (kL)
Eight business sites in Japan (head office of Brother Industries, Ltd., Mizuho Factory, Hoshizaki Factory, Minato Factory, Momozono Factory, Kariya Factory, Research & Development Center, and Logistics Center)	16,785	40,769	0	550	67	0.6	0
Nissei Corporation and Nissei Gear Motor Mfg. (Changzhou) Co., Ltd.	6,860	26,173	7	1,244	21	4	0
Mie Brother Precision Industries, Ltd.	622	559	0	0	0.5	0	0
Brother Industries (U.K.) Ltd.	479	1,109	0	52	1	0	0
Brother Industries (Slovakia) s.r.o.	1,307	899	0	17	3	3	0
Taiwan Brother Industries, Ltd.	982	1,230	6	0	0	0	0
Zhuhai Brother Industries, Co., Ltd.	4,311	2,041	0	0	4	0.9	0
Brother Machinery Xian Co., Ltd.	9,065	7,329	0	227	0	0	0
Brother Technology (Shenzhen) Ltd.	18,879	10,433	0	147	13	0	0
Brother Industries (Philippines), Inc.	44,011	34,938	73	0	0.3	224	0
Brother Industries (Vietnam) Ltd.	91,913	38,114	110	0	0	35	0
Brother Industries Saigon, Ltd.	12,544	3,385	0	0	0	0.6	0

Greenhouse gas emissions

Name of site	Greenhouse gas emissions (t-CO ₂ e)	
	Scope 1	Scope 2
		Market-based
Eight business sites in Japan (head office of Brother Industries, Ltd., Mizuho Factory, Hoshizaki Factory, Minato Factory, Momozono Factory, Kariya Factory, Research & Development Center, and Logistics Center)	1,194	9,932
Nissei Corporation and Nissei Gear Motor Mfg. (Changzhou) Co., Ltd.	2,433	11,667
Mie Brother Precision Industries, Ltd.	1	256
Brother Industries (U.K.) Ltd.	101	0
Brother Industries (Slovakia) s.r.o.	47	0
Taiwan Brother Industries, Ltd.	18	537
Zhuhai Brother Industries, Co., Ltd.	12	868
Zhuhai Brother Industries, Co., Ltd.	430	4,465
Brother Technology (Shenzhen) Ltd.	308	5,335
Brother Industries (Philippines), Inc.	823	13,859
Brother Industries (Vietnam) Ltd.	422	17,865
Brother Industries Saigon, Ltd.	2	1,724

Water intake, wastewater volume, volume of water recycled

Name of site	Water intake (m ³)			Wastewater volume (m ³)			Volume of water recycled (m ³)	Percent of water recycled (%)
	Clean water	Industrial water	Under-ground water	Public waters	Sewer system	Others		
Eight business sites in Japan (head office of Brother Industries, Ltd., Mizuho Factory, Hoshizaki Factory, Minato Factory, Momozono Factory, Kariya Factory, Research & Development Center, and Logistics Center)	89,797	0	5,118	16,774	75,405	0	0	0.0
Nissei Corporation and Nissei Gear Motor Mfg. (Changzhou) Co., Ltd.	60,281	0	0	0	26,615	0	139	0.5
Mie Brother Precision Industries, Ltd.	90	0	1,025	1,115	0	0	0	0.0
Brother Industries (U.K.) Ltd.	1,096	0	0	0	1,096	0	0	0.0
Brother Industries (Slovakia) s.r.o.	0	0	3,400	3,400	0	0	0	0.0
Taiwan Brother Industries, Ltd.	8,688	0	0	0	8,459	0	0	0.0
Zhuhai Brother Industries, Co., Ltd.	40,374	0	0	0	36,337	0	0	0.0
Brother Machinery Xian Co., Ltd.	20,520	0	0	0	16,055	0	1,479	8.4
Brother Technology (Shenzhen) Ltd. Baolong Factory	74,947	0	0	0	74,947	0	2,027	2.6
Brother Industries (Philippines), Inc.	0	0	141,773	0	120,507	0	7,684	6.0
Brother Industries (Vietnam) Ltd.	131,198	0	0	104,958	0	0	4,651	4.2
Brother Industries Saigon, Ltd.	19,827	0	0	0	15,862	0	374	2.3

Water pollution load

Name of site	Water pollution load (mg/L)			
	BOD	COD	N- hexane extracts	SS
Eight business sites in Japan (Hoshizaki Factory)	50.0	–	3.2	–
Eight business sites in Japan (Kariya Factory)	2.7	7.0	<1	2.4
Nissei Corporation	54.0	13.4	1.0	26.0
Mie Brother Precision Industries, Ltd.	5.0	10.0	ND	11.0
Brother Industries (Slovakia) s.r.o.	5.9	23.0	–	<5
Taiwan Brother Industries, Ltd.	18.5	31.6	–	10.6
Zhuhai Brother Industries, Co., Ltd.	9.7	31.5	–	15.5
Brother Machinery Xian Co., Ltd.	10.6	49.5	0.1	19.6
Brother Technology (Shenzhen) Ltd. Baolong Factory	8.2	25.0	0.1	0.0
Brother Industries (Philippines), Inc.	150.6	359.2	4.3	54.9
Brother Industries (Vietnam) Ltd.	<3	<9	–	<0.04
Brother Industries Saigon, Ltd.	80.4	90.9	–	–

Waste amount

Target: Reduction in waste volume at design and development sites, and manufacturing facilities from the previous FY (per unit of sales)

Actual: **Increase of approx. 4.5% from the previous FY (per unit of sales)**

Name of site	Waste amount						
	Waste volume (t)	Material recycling (t)	Thermal recycling (t)	Incineration amount (t)	Other disposal amount (t)	Amount of landfill waste (t)	Rate of landfill waste (%)
Eight business sites in Japan (head office of Brother Industries, Ltd., Mizuho Factory, Hoshizaki Factory, Minato Factory, Momozono Factory, Kariya Factory, Research & Development Center, and Logistics Center)	2,405	2,134	271	0	0	0	0.0
Nissei Corporation and Nissei Gear Motor Mfg. (Changzhou) Co., Ltd.	2,315	1,819	495	0	0	0	0.0
Mie Brother Precision Industries, Ltd.	105	71	34	0	0	0	0.0
Brother Industries (U.K.) Ltd.	251	225	25	0	0	0	0.0
Brother Industries (Slovakia) s.r.o.	679	564	114	0	0	0	0.0
Taiwan Brother Industries, Ltd.	327	13	0	49	265	0	0.0
Zhuhai Brother Industries, Co., Ltd.	151	127	0	20	4	0	0.0
Brother Machinery Xian Co., Ltd.	237	168	0	27	42	0	0.0
Brother Technology (Shenzhen) Ltd.	156	101	55	0	0	0	0.0
Brother Industries (Philippines), Inc.	2,130	1,807	0	0	0	322	15.1
Brother Industries (Vietnam) Ltd.	3,204	2,751	0	442	11	0	0.0
Brother Industries Saigon, Ltd.	380	345	0	35	0	0	0.0

To help use resources effectively and prevent resource depletion, the Brother Group ensures activities are carried out to curb waste generation, reduce emissions, and achieve "zero landfill waste" (meaning that less than 1% of waste generated at manufacturing facilities is sent to landfill).

Location and main line of business of applicable sites

Name of site	Location	Main line of business (as of March 31, 2025)
Eight business sites in Japan (head office of Brother Industries, Ltd., Mizuho Factory, Hoshizaki Factory, Minato Factory*, Momozono Factory, Kariya Factory, Research & Development Center, and Logistics Center)	Nagoya, Aichi Prefecture (various locations)	[Mizuho Factory] Research and development of telecommunication/printing equipment, label printers, labeling system, and home sewing machines, [Hoshizaki Factory] Prototype production of printer heads, [Momozono Factory and Research & Development Center] Research and development, [Kariya Factory] Production of machine tools and garment printers
Nissei Corporation	Anjo, Aichi Prefecture	Manufacture and sales of speed reducers, small gears, and die-cast products; and lease of real estate properties (including condominiums)
Nissei Gear Motor Mfg. (Changzhou) Co., Ltd.	Changzhou, Jiangsu, China	Production of gear motor
Mie Brother Precision Industries, Ltd.	Taki-gun, Mie Prefecture	Production of consumables for online karaoke equipment, mobile printers, label printers, labeling system, etc.; recycling of toner cartridges; product repair services
Brother Industries (U.K.) Ltd.	Wales, U.K.	Production of consumables for printers, All-in-Ones, etc.
Brother Industries (Slovakia) s.r.o.	Krupina, Slovakia	Production of consumables for printers, All-in-Ones, etc.
Taiwan Brother Industries, Ltd.	Kaohsiung, Taiwan	Production of home sewing machines
Zhuhai Brother Industries, Co., Ltd.	Zhuhai, Guangdong, China	Production of label printers, labeling system, industrial printing equipment, etc.
Brother Machinery Xian Co., Ltd.	Xian, Shanxi, China	Production of machine tools and industrial sewing machines
Brother Technology (Shenzhen) Ltd.	Shenzhen, Guangdong, China	Production of printers and All-in-Ones
Brother Industries (Philippines), Inc.	Batangas, the Philippines	Production of printers, All-in-Ones, and labeling system
Brother Industries (Vietnam) Ltd.	Hai Phong City, Vietnam	Production of printers and All-in-Ones
Brother Industries Saigon, Ltd.	Dong Nai Province, Vietnam	Production of home sewing machines