Environmental Data

301-1,302-1,302-2,302-3,302-4,302-5,303-3,303-4,303-5,305-1,305-2,305-3,305-4,305-5,305-6,305-7,306-1,306-3,306-4

Environmental Management

▶ Sites for which data has been compiled (100% of net sales)
All business locations inside Japan (however, data of sales offices and Unicharm Mölnlycke K.K. has been collected only for fuel, electricity, and CO_2)
Unicharm Corporation (headquarters, sales offices, and R&D), Unicharm Products Co., Ltd. (Fukushima Factory, Shizuoka Factory, Shikoku Factory, Kyushu Factory, Itami Factory, Mie Factory, and Saitama Factory*), Unicharm Kokko Nonwoven Co., Ltd. (Toyohama Manufacturing Team, Kawanoe Manufacturing Team, Kokko Manufacturing Team), Cosmotec Corporation, Unicharm Mölnlycke K.K., Peparlet Co., Ltd., and Kinsei Products Co., Ltd.

Overseas (manufacturing locations only)
China: Unicharm Consumer Products (China) Co., Ltd., (Shanghai Factory, Tianjin Factory, Jiangsu Factory), Unicharm Nonwoven (Tianjin) Co., Ltd., and Unicharm Packaging Material (Tianjin) Co., Ltd.
Indonesia: PT UNI-CHARM INDONESIA TBK (Karawang Factory and East Java Factory), PT UNICHARM NONWOVEN INDONESIA
Thailand: Uni.Charm (Thailand) Co., Ltd. (Wellgrow Factory) and DSG International (Thailand) Public Company Limited
India: Unicharm India Private Limited (Sri City Factory and Neemrana Factory)
Taiwan–Greater China: UNITED CHARM COMPANY LTD. (Junan Factory)
Vietnam: Diana Unicharm Joint Stock Company (Bắc Ninh Factory)
United States: The Hartz Mountain Corporation (Hartz Pleasant Plain Factory)
South Korea: LG Unicharm Co., Ltd. (Gumi Factory)
Saudi Arabia: Unicharm Gulf Hygienic Industries Ltd. (Riyadh Factory)
Egypt: Unicharm Middle East & North Africa Hygienic Industries S.A.E. (Ramadan Factory)
Brazil: UNICHARM DO BRASIL INDÚSTRIA E COMÉRCIO DE PRODUTOS DE HIGIENE LTDA. (São Paolo Factory)
Myanmar: Unicharm Myanmar Company Limited
Malaysia: DSG (MALAYSIA) SDN. BHD.
* The operations of the Itami Factory, Mie Factory, and Saitama Factory were transferred from Unicharm Corporation to Unicharm Products Co., Ltd. in May 2024.

Policies and standards
Aggregation is based on internal rules concerning the management of environmental information with reference to GHG Protocol.

Numerical data
As a general rule, figures are rounded off to the nearest unit and therefore the total amounts may not necessarily equal the sum of their components.

Notes
1. Scope 1 is calculated based on GHG Protocol's Emission Factors for Cross-Sector Tools (lower heating value is used when converting energy).
2. Regarding Scope 2, CO_2 emissions from electricity in Japan are calculated based on emission factors of electric utility providers under the Greenhouse Gas Emissions Calculation, Reporting, and Publication System established by the Ministry of the Environment, while overseas emissions are calculated based on emission factors of the International Energy Agency (IEA). Brazil now uses 100% renewable electricity and Myanmar uses 100% private power generation. Steam is calculated using a list of formulas and emission factors for calculating greenhouse gas emissions.
3. Scope 3 was calculated using values from LCI database AIST-IDEA Ver. 3.4 Research Laboratory for IDEA, RISS, AIST, IPCC2021 with LULUCF AR6. Figures for fiscal 2023 and prior were also recalculated based on this database, in addition to revising the calculation method for activity volume. The overseas portion of 3-1, 3-2, 3-3, 3-5, 3-6, 3-7, 3-12, and 3-15 are calculated based on activity level, while other categories are estimated based on sales weight.
4. In terms of transportation, we have statistics only for within Japan. The overseas portion of Scope 3 on P.139 is estimated based on the ratio of sales with Japan.
5. Quantification of greenhouse gas emissions is subject to uncertainty regarding the measurement of activity data and the determination of emission factors as well as scientific uncertainty regarding the determination of Global Warming Potential.
6. Energy conversion for Scope 2 is calculated based on the Act on Rationalization of Energy Use and Shift to Non-fossil Energy. Calculations for fiscal 2022 and fiscal 2023 are also based on the latest laws. Electricity is converted at 3.6 GJ/thousand kWh.
7. For sites where wastewater volume is not measured, wastewater volume is considered to be equal to water withdrawal.
8. Waste includes industrial waste, general waste from offices, and valuable resource.
9. Figures for certified materials (pulp and palm oil) have been retroactively adjusted for fiscal 2022 and fiscal 2023 due to the addition of business sites and materials subject to calculation.
10. To increase the reliability of our non-financial data, we have received independent assurance report from KPMG AZSA Sustainability Co., Ltd. in accordance with ISAE 3000 and ISAE 3410. Items with a check (✓) have been independently assured by a third party.

▶ Energy/Material Flow from a Life Cycle Perspective

Input (Fiscal 2024 Results)

Product Manufacturing Input

Raw materials and auxiliary materials		
Resources	Japan	612 thousand tons

Resources		
Heavy oil, light oil, gasoline Total 156 TJ	Japan Overseas	78TJ 78TJ
Liquefied petroleum gas (LPG), natural gas, utility gas Total 322 TJ	Japan Overseas	250TJ 72TJ
Steam Total 1 TJ	Japan Overseas	0TJ 1TJ
Electricity Total 825 GWh	Japan Overseas	262GWh 563GWh
Water ✓ Total 4,846 thousand m³	Japan Overseas	3,802 thousand m³ 1,044 thousand m³

Transportation Input

Resources		
Light oil	Japan	15.4 thousand kl

Resources → Materials manufacturer → Transportation → Production → Products

Products Japan 512 thousand tons

Transportation → Wholesale and retail stores → Consumption

Output (Fiscal 2024 Results)

Wastewater ✓ Total 3,835 thousand m³	Japan Overseas	2,875 thousand m³ 960 thousand m³	Fluvial discharge and atmospheric release
CO_2 (Scope 1 and Scope 2) ✓ Total 385 thousand tons	Japan Overseas	99 thousand tons 286 thousand tons	
Emissions ✓ Total 77 thousand tons	Japan Overseas	25 thousand tons 53 thousand tons	
Emissions for off-site disposal Total 77 thousand tons			Recycled 69 thousand tons Outsourced disposal 8 thousand tons
Recycled	Japan	23 thousand tons	
Outsourced disposal	Japan	1 thousand tons	
Recycled	Overseas	46 thousand tons	
Outsourced disposal	Overseas	7 thousand tons	

CO_2	Japan	82.0 thousand tons	Atmospheric release
NOx	Japan	1.9 thousand tons	

Waste	Japan	1,444 thousand tons	Waste, incineration, recycling
Containers and packaging	Japan	12.2 thousand tons	

Aggregation period: January 1 to December 31, 2024
Scope of aggregation: Please refer to information on the left
Assured items by third party: ✓
P.154 Independent Assurance Report

▶ Resources Used in Product Manufacturing

Raw Materials and Auxiliary Materials

		Unit	2022	2023	2024
Resources	Japan	Thousand tons	658	648	612

Resources

		Unit	2022	2023	2024
Heavy oil, light oil, gasoline	Japan	TJ	76	96	78
	Overseas		12	76	78
	Total	TJ	**88**	**172**	**156**
Liquefied petroleum gas (LPG), natural gas, utility gas	Japan	TJ	190	220	250
	Overseas		75	67	72
	Total	TJ	**265**	**287**	**322**
Steam	Japan	TJ	90	7	0
	Overseas		1	1	1
	Total	TJ	**91**	**8**	**1**
Electricity	Japan	GWh	272	254	262
	Overseas		587	563	563
	Total	GWh	**859**	**817**	**825**
Water	Japan	Thousand m³	3,670	3,718	3,802
	Overseas		1,082	1,103	1,044
	Total	Thousand m³	**4,752**	**4,821**	✓ **4,846**
Light oil used for transportation	Japan	Thousand kL	18.3	18.1	15.4

▶ Output

		Unit	2022	2023	2024
Wastewater	Japan	Thousand m³	3,296	3,169	2,875
	Overseas		1,003	1,020	960
	Total	Thousand m³	**4,299**	**4,189**	✓ **3,835**
CO_2 (Scope 1 and Scope 2)	Japan	Thousand tons	136	102	99
	Overseas		350	304	286
	Total	Thousand tons	**486**	**406**	✓ **385**
Emissions	Japan	Thousand tons	26	24	25
	Overseas		61	56	53
	Total	Thousand tons	**88**	**80**	✓ **77**
Emissions for off-site disposal	Japan recycled	Thousand tons	23	23	23
	Japan outsourced disposal		1	1	1
	Overseas recycled		49	48	46
	Overseas outsourced disposal		12	8	7
	Total	Thousand tons	**86**	**80**	**77**
Emissions for on-site disposal	**Total**	Thousand tons	**2**	—	—
CO_2 emissions in transportation	Japan	Thousand tons	121.2	120.9	82.0
NOx emissions in transportation	Japan	Thousand tons	2.3	2.2	1.9
Waste in consumption	Japan	Thousand tons	1,566	1,542	1,444
Containers and packaging in consumption	Japan	Thousand tons	14.7	14.5	12.2

▶ Total Product Weight (Japan)

	Unit	2022	2023	2024
Total product weight	Thousand tons	481	474	512

Basic Environmental Policy

▶ CDP Rating

	2022	2023	2024
Climate Change	A–	A–	A
Forests	B	A	A
Water Security	B	A	A

Recycling-Based Society

Plastic Waste Reduction Measures

▶ Raising Awareness About Proper Disposal of Used Products

	2022	2023	2024
Rate of awareness of proper disposal of used products	50% (8 countries/regions)	56% (9 countries/regions)	63% (10 countries/regions)

▶ Plastic Use (Tons) in Sales Promotional Items

	2022	2023	2024
Japan	5.7	4.1	0.8
China	—	28.2	7.6
Vietnam	18.4	15.5	11.5
India	—	154.4	120.9

Zero-Carbon Society

Climate Change

▶ Energy Use

		Unit	2022	2023	2024
Japan		TJ	1,379	1,237	1,270
Overseas	Thailand	TJ	397	390	364
	China		372	382	393
	Indonesia		561	532	520
	India		230	256	271
	Vietnam		139	139	141
	Taiwan–Greater China		27	26	24
	United States		22	17	17
	South Korea		49	46	47
	Saudi Arabia		213	212	239
	Egypt		59	73	77
	Myanmar		7	7	7
	Brazil		48	53	51
	Malaysia		44	36	27
	Total	TJ	2,169	2,169	2,179
Total		TJ	**3,548**	**3,406**	✓**3,449**
Per unit*		TJ / million yen	0.004	0.004	0.003

Note: Calculations are based on GHG Protocol's Emission Factors for Cross-Sector Tools (lower heating value is used).
Electricity is converted at 3.6 GJ/thousand kWh.

* Unit denominators are consolidated net sales.

▶ CO_2 Emissions by Scope and Category

Scope	Category	Unit	2022	2023	2024	Remarks
Scope 1	Direct emissions	Thousand tons	31.6	29.2	✓ 30.1	
Scope 2	Indirect emissions from energy sources	Thousand tons	454.5	376.9	✓ 354.6	
Scope 3*1	1 Purchased goods and services	Thousand tons	3,830.6	3,756.1	✓ 3,877.7	
	2 Capital goods		85.2	99.0	121.2	
	3 Fuel- and energy-related activities not included in Scope 1 or Scope 2		59.3	51.1	49.5	
	4 Upstream transportation and distribution		320.7	225.5	206.7	*2
	5 Waste generated in operations		40.1	28.7	26.2	
	6 Business travel		2.1	2.0	2.1	
	7 Employee commuting		12.7	12.8	13.2	
	8 Upstream leased assets		0.0	0.0	0.0	*3
	9 Downstream transportation and distribution		79.9	81.0	63.2	*2
	10 Processing of sold products		0.0	0.0	0.0	*3
	11 Use of sold products		0.0	0.0	0.0	*3
	12 End-of-life treatment of sold products		2,151.8	1,875.7	✓ 1,903.4	
	13 Downstream leased assets		0.0	0.0	0.0	*3
	14 Franchises		0.0	0.0	0.0	*3
	15 Investments		39.6	34.7	21.3	
	Total for Scope 3	Thousand tons	6,622.0	6,166.5	6,284.5	
Total for Scopes 1, 2, and 3		Thousand tons	**7,108.1**	**6,572.6**	**6,669.2**	
Per unit*4		Tons / million yen	7.915	6.979	6.744	

*1 Scope 3 was calculated using values from LCI database AIST-IDEA Ver. 3.4 Research Laboratory for IDEA, RISS, AIST, IPCC2021 with LULUCF AR6. Figures for fiscal 2023 and prior were also recalculated based on this database, in addition to revising the calculation method for activity volume.
*2 The overseas portion of 3-1, 3-2, 3-3, 3-5, 3-6, 3-7, 3-12, and 3-15 are calculated based on activity level, while other categories are estimated based on sales weight.
*3 Does not apply to any work process
*4 Unit denominators are consolidated net sales.

▶ Scope 1 and Scope 2 CO_2 Emissions

		Unit	2022	2023	2024
Japan		Thousand tons	136.3	102.1	99.0
Overseas	Thailand	Thousand tons	40.5	37.2	40.4
	China		47.5	25.7	31.0
	Indonesia		119.9	106.6	91.4
	India		46.4	44.2	44.5
	Vietnam		22.3	21.3	16.7
	Taiwan–Greater China		3.8	3.3	3.3
	United States		0.1	0.1	0.1
	South Korea		12.1	11.2	5.2
	Saudi Arabia		39.2	37.6	40.2
	Egypt		9.7	11.5	8.5
	Myanmar		0.6	0.5	0.5
	Brazil		0.1	0.1	0.1
	Malaysia		7.7	4.8	3.6
	Total	Thousand tons	349.8	304.0	285.7
Total		Thousand tons	**486.1**	**406.2**	✓ **384.7**
Per unit*5		Tons / million yen	0.541	0.431	0.389

*5 Unit denominators are consolidated net sales.

▶ Scope 3 CO_2 Emissions

		Unit	2022	2023	2024
Japan		Thousand tons	2,662.9	2,375.4	2,505.5
Overseas	Thailand	Thousand tons	582.6	717.2	642.5
	China		693.0	677.5	622.6
	Indonesia		939.2	799.4	743.7
	India		533.7	500.1	567.1
	Vietnam		174.9	217.6	211.9
	Taiwan–Greater China		69.7	67.2	65.4
	United States		154.1	75.2	92.4
	South Korea		68.1	62.8	62.6
	Saudi Arabia		428.6	427.2	523.5
	Egypt		83.6	89.8	103.6
	Myanmar		9.6	6.1	5.8
	Brazil		133.6	91.0	77.8
	Malaysia		88.3	60.0	60.1
	Total	Thousand tons	3,959.1	3,791.1	3,779.0
Total		Thousand tons	**6,622.0**	**6,166.5**	**6,284.5**
Per unit*		Tons / million yen	7.374	6.548	6.355

* Unit denominators are consolidated net sales.

▶ Procurement of Renewable Electricity

		Unit	2022	2023	2024
Japan		Thousand kWh	34,274	77,006	91,954
Overseas	Thailand	Thousand kWh	10,678	14,707	15,848
	China		23,143	53,831	48,851
	Indonesia		927	8,229	18,858
	India		0	5,880	10,626
	Vietnam		5,146	5,231	5,364
	Taiwan–Greater China		0	390	472
	United States		6,188	4,361	4,501
	South Korea		0	0	665
	Saudi Arabia		0	0	53
	Egypt		0	0	0
	Myanmar		0	0	0
	Brazil		13,230	14,199	13,758
	Malaysia		0	2,087	1,704
	Total	Thousand kWh	59,312	108,915	120,700
Total		Thousand kWh	**93,586**	**185,921**	**212,654**
Percentage of renewable electricity use		%	11.0	22.8	25.8

Biodiversity

Biodiversity Conservation

▶ Forest-Derived Raw Materials

		Unit	2022	2023	2024
Amount of third-party certified forest-derived raw materials procured	Japan	Tons	155,378	163,317	135,647
	Overseas		299,731	257,829	294,136
	Total	Tons	**455,109**	**421,146**	**429,783**
Percentage of pulp traceable to place of origin*1	Japan	%	100.0	100.0	99.8
	Overseas		95.7	97.5	99.1
	Total	%	**97.1**	**99.2**	**99.3**

*1 Percentage of forest-derived raw materials (pulp) derived from forest resources for which traceability has been established to their place of origin (country and region), in addition to third-party certified materials

▶ PEFC and CoC Certifications

	Unit	2022	2023	2024
Percentage of PEFC- and CoC-certified factories*2	%	48.4	58.6	60.0
Percentage of PEFC-certified pulp procured*3		72.3	65.3	✓70.3

*2 Figures for fiscal 2023 and prior have been retroactively recalculated due to a revision of the number of factories subject to certification.
*3 Figures for fiscal 2023 have been retroactively recalculated due to a revision of the number of factories subject to certification and the scope of data aggregation for overseas business sites.

▶ Percentage of Office Paper Made from Certified Materials

	Unit	2022	2023	2024
Ratio of environmentally friendly office paper	%	99.9	99.6	99.9
Office paper made from 100% recycled paper		97.7	83.5	37.6
Office paper made from certified materials		2.2	16.1	62.3

▶ Number of Products Using Organic Cotton (Japan)

	No. of products
2022	33
2023	53
2024	42

▶ Palm Oil (Japan)

	Unit	2022	2023	2024
Amount of palm oil procured	Tons	189.6	193.4	195.8
Amount of certified palm oil*5 procured		119.0	113.1	194.6
Percentage of raw materials traceable to place of origin	%	62.8	58.5	99.4
Percentage of certified palm oil*5 procured		62.8	58.5	✓99.4

*4 Figures for fiscal 2023 and prior have been retroactively recalculated due to the addition of materials subject to aggregation.
*5 Certified palm oil is RSPO-certified oil using the mass balance system.

Reducing Waste and Preventing Pollution

▶ Emissions Generated

		Unit	2022	2023	2024
Japan		Thousand tons	26.3	23.9	24.5
Overseas	Thailand	Thousand tons	7.6	7.3	6.5
	China		17.1	17.8	16.3
	Indonesia		8.1	7.2	6.5
	India		8.0	6.6	7.2
	Vietnam		5.8	5.7	5.3
	Taiwan–Greater China		0.8	0.7	0.6
	United States		4.0	1.0	0.9
	South Korea		1.5	1.3	1.2
	Saudi Arabia		4.1	4.2	4.5
	Egypt		1.7	1.9	2.1
	Myanmar		0.011	0.013	0.008
	Brazil		1.2	1.2	1.2
	Malaysia		1.3	1.0	0.7
	Total	Thousand tons	61.2	55.8	53.0
Total		Thousand tons	**87.5**	**79.8**	✓**77.5**
Per unit*6		Tons / million yen	0.097	0.085	0.078

*6 Unit denominators are consolidated net sales.

Recycling Rate

	Unit	2022	2023	2024
Japan*1	%	99.3	99.6	99.3

*1 Calculated based on total material recycling and thermal recycling (the Fukushima Factory incinerator was in operation until fiscal 2022) at the four main domestic plants (Unicharm Products Co., Ltd.'s Fukushima Factory, Shizuoka Factory, Shikoku Factory, and Kyushu Factory)

Polychlorinated Biphenyl (PCB) Storage Situation (Japan)

	Unit	2022	2023	2024
Units of PCB stored	Units	0	0	0

Pollutant Release and Transfer Register (PRTR) Substances (Japan)

Substance	Unit	2022	2023	2024
Toluene	Tons / year	43.2	180.1	208.2
Ethylene oxide	kg / year	95.8	31.9	4.9
Dioxin	mg-TEQ / year	0.290	—	—
Methylnaphthalene	Tons / year	0.10	0.04	0.04
Polycondensation of adipic acid, (N-(2-aminoethyl) ethane-1,2-diamine or N,N'-bis(2-aminoethyl) ethane-1,2-diamine) and 2-(chloromethyl)oxirane	Tons / year	—	—	0.61

NOx and SOx Emissions (Japan)

	Unit	2022	2023	2024
NOx	Tons	15.2	12.2	12.4
NOx per unit*2	kg / million yen	0.053	0.038	0.036
SOx	Tons	5.7	9.3	3.6
SOx per unit*2	kg / million yen	0.020	0.029	0.011

*2 Unit denominators are consolidated net sales.

Ozone-Depleting Substances (Japan)

Substance	Business Site	Use	Unit	2024
Halon (Class 1)	Unicharm Products Shizuoka Factory	Fire retardant	Tons	1.6
	Unicharm Products Shikoku Factory (Kagawa)			0.07
	Unicharm (other development sites in Kagawa)			0.0001
HCFCs (Class 1)	Unicharm Products Fukushima Factory	Refrigerant	Tons	2.6
	Unicharm Products Shizuoka Factory			3.6
	Unicharm Products Kyushu Factory (Fukuoka)			2.3
	Unicharm Products Shikoku Factory (Kagawa)			3.7
	Unicharm Products Itami Factory (Hyogo)			0.34
	Unicharm Products Mie Factory			0.29
	Unicharm Products Saitama Factory			0.30
	Unicharm Kokko Nonwoven Co., Ltd. (Ehime/Kagawa)			0.65
	Peparlet Co., Ltd. (Shizuoka)			0.04
	Unicharm (other development sites in Kagawa)			0.86
CFCs	Unicharm (other development sites in Kagawa)	Refrigerant	Tons	0.001

Note: Reported for Company properties based on the Act on Rational Use and Proper Management of Fluorocarbons

Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) (Japan)

	Unit	2022	2023	2024
BOD	Tons	14.4	16.2	17.0
COD		9.8	18.6	19.4

Water Recycling-Oriented Society

Water Resources

▶ Water Usage (Water Withdrawal)

	Unit	2022	2023	2024
Japan	Thousand m³	3,670	3,718	3,802
Overseas		1,082	1,103	1,044
Total	Thousand m³	**4,752**	**4,821**	✓ **4,846**
Per unit of sales*1	Thousand m³ / million yen	0.005	0.005	0.005

*1 Unit denominators are consolidated net sales.

▶ Water Usage by Source (Water Withdrawal) (Japan)

	Unit	2022	2023	2024
Surface water (rivers, lakes, and ponds)	Thousand m³	157	152	150
Groundwater		697	660	692
Other water sources		2,816	2,906	2,960
Total	Thousand m³	**3,670**	**3,718**	**3,802**
Of these, locations that have specified facilities under the Water Pollution Control Law				
Surface water (rivers, lakes, and ponds)	Thousand m³	6	4	8
Groundwater		406	389	416
Other water sources		2,816	2,906	2,960

▶ Water Usage by Source (Water Withdrawal) (Overseas)*2

	Unit	2022	2023	2024
Surface water (rivers, lakes, and ponds)	Thousand m³	960	996	927
Groundwater		79	61	41
Other water sources		43	46	76
Total	Thousand m³	**1,082**	**1,103**	**1,044**
Of these, areas with high water stress				
Surface water (rivers, lakes, and ponds)	Thousand m³	640	678	614
Groundwater		71	54	34
Other water sources		0	13	46

*2 Some classifications have been revised since fiscal 2024. Accordingly, figures for fiscal 2023 and prior have been retroactively recalculated.

▶ Wastewater*3

	Unit	2022	2023	2024
Japan	Thousand m³	3,296	3,169	2,875
Overseas		1,003	1,020	960
Total	Thousand m³	**4,299**	**4,189**	✓ **3,835**
Per unit of sales*4	Thousand m³ / million yen	0.005	0.004	0.004

*3 For sites where wastewater volume is not measured, wastewater volume is considered to be equal to water withdrawal. Some estimates and calculation methods have been revised since fiscal 2024. Accordingly, figures for fiscal 2023 and prior have been retroactively recalculated.
*4 Unit denominators are consolidated net sales.

▶ Water Stress Score*5

	Unit	2024
Extremely high	No. of factories	11
High		3
Moderate		11
Low		15

*5 The World Resources Institute (WRI) tool Aqueduct (Aqueduct Overall Water Risk Map) is used to ascertain water stress.

▶ Percentage of Water Withdrawal from Areas with High Water Stress

	Unit	2022	2023	2024
Water withdrawal from areas with high water stress	Thousand m³	711	745	694
Percentage of water withdrawal from areas with high water stress	%	15.0	15.5	14.3