

Zero-Carbon Society

Climate Change

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Our Basic Approach and Strategy

Unicharm recognizes that climate change is an issue that must be addressed with a matter of urgency. Therefore, in order to contribute to achieving the 2°C target*¹ indicated in the Paris Agreement at the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21), we received certification in June 2018 under the Science Based Targets initiative (SBTi) for our CO₂ reduction plans up to 2045. Following the adoption of a more stringent 1.5°C target*² at COP26 in 2021, we have resubmitted our 1.5°C target to SBTi for certification. We also endorsed the Task Force on Climate-related Financial Disclosures (TCFD) in May 2019 and continue to report in accordance with its framework.

To realize the zero-carbon society set forth in our 2050 vision of Environmental Targets 2030, we work together with the Japan Climate Initiative (JCI), the Japan Climate Leaders' Partnership (JCLP), the GX League, and RE100, which we have been a member of since November 2023. At the same time, we will strive to reduce CO₂ emissions from our various business activities and continue to actively encourage all parties involved in our supply chains to reduce their emissions throughout the product life cycle.



*1 Aims to limit the increase in global average temperature to under 2°C above pre-industrial levels in accordance with the Paris Agreement reached at COP21 in 2015
*2 COP26 in 2021 incorporated the pursuit of efforts to limit the temperature to within 1.5°C instead of the 2°C stipulated in the Paris Agreement.

P.041 Disclosure Based on the TCFD Recommendations

Risks and Opportunities

P.044 Disclosure Based on the TCFD Recommendations > Risk Management

Management Structure

P.041 Disclosure Based on the TCFD Recommendations > Governance

Indicators and Targets

▶ Responding to Climate Change Under Environmental Targets 2030

Implementation Items		Base Year	Fiscal 2021 Results	Fiscal 2022 Results	Fiscal 2023 Targets	Fiscal 2023 Results	Fiscal 2024 Targets	2030 Targets	2050 Vision
Reducing CO ₂ emissions associated with raw materials procurement Scope 3, Category 1	Per unit of sales	2016	9.7% (Japan)	-12.6% (Japan)	-14.3% (Japan)	-4.1%	-5.9%	-17%	Realizing a society with net zero CO ₂ emissions
Reducing CO ₂ emissions in manufacturing Scope 1 and Scope 2			-26.9%	-35.2%	-38.6%	-55.4%	-57.8%	-34%	
Reducing CO ₂ emissions associated with disposal of used products Scope 3, Category 12			23.7% (Japan)	-11.6% (Japan)	-14.2% (Japan)	-35.1%	-37.0%	-26%	

▶ Kyo-sei Life Vision 2030: Safeguarding the Well-Being of Our Planet

Indicators	Fiscal 2021 Result	Fiscal 2022 Result	Fiscal 2023 Result	2030 Target
Percentage of renewable energy used for business operations in total	7.3%	11.0%	22.8%	100%

Initiatives and Results

CO₂ Emissions Throughout the Supply Chain (Overall Picture of Scopes 1 to 3)

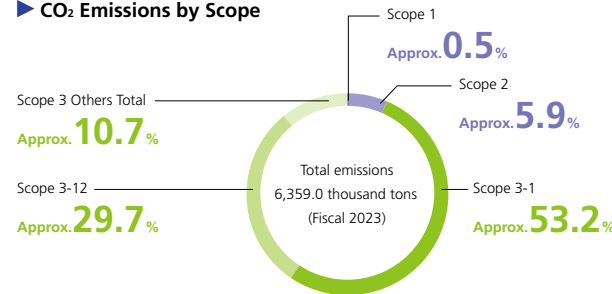
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Unicharm calculates its CO₂ emissions according to the Greenhouse Gas Protocol,*1 the standard for calculating greenhouse gas (GHG) emissions most widely used in the world today. In fiscal 2023, life cycle CO₂ emissions were estimated to be approximately 53.2% for Scope 3 purchased materials, 29.7% for disposal after use, 10.7% for others, and 6.4% for Scope 1 and Scope 2 manufacturing. Based on these estimates, we are working to reduce CO₂ emissions at all stages of the life cycle, from raw materials procurement to disposal after use.

CO₂ Emissions by Scope and Category

(Thousand tons)						
Scope	Category	Fiscal 2021	Fiscal 2022	Fiscal 2023	Remarks	
Scope 1	Direct emissions	35.5	31.6	29.2	*4	
Scope 2	Indirect emissions from energy sources	465.2	454.5	376.9		
Scope 3 *2,*3	1 Purchased goods and services	3,781.6	3,774.1	3,400.5		
	2 Capital goods	140.6	85.2	100.8		
	3 Fuel- and energy-related activities not included in Scope 1 or Scope 2	62.2	59.1	52.9		
	4 Upstream transportation and distribution	364.2	376.4	348.5		
	5 Waste generated in operations	43.1	45.0	28.7		
	6 Business travel	2.1	2.1	2.1		
	7 Employee commuting	12.5	12.7	13.1		
	8 Upstream leased assets	0.0	0.0	0.0	*4	
	9 Downstream transportation and distribution	108.3	110.5	111.3		
	10 Processing of sold products	0.0	0.0	0.0	*5	
	11 Use of sold products	0.0	0.0	0.0	*5	
	12 End-of-life treatment of sold products	2,033.4	2,138.0	1,896.3		
	13 Downstream leased assets	0.0	0.0	0.0	*5	
	14 Franchises	0.0	0.0	0.0	*5	
	15 Investments	40.2	39.6	34.7		
	Total for Scope 3	6,588.2	6,642.7	5,988.9		
Total		7,088.9	7,128.8	6,395.0		

CO₂ Emissions by Scope



P.061 Environmental Data > CO₂ Emissions by Scope and Category

Life Cycle CO₂ Emissions Ratio



*1 In 1998, the Greenhouse Gas Protocol was established to develop standards for calculating and reporting GHG emissions, led primarily by the World Resources Institute (WRI), an environmental NGO based in the United States, and the World Business Council for Sustainable Development (WBCSD), which comprises over 200 multinational corporations. In 2001, the first edition of the GHG Protocol Corporate Standard was established and, since then, this approach to calculating GHG emissions has become a global standard.

*2 Scope 3 was calculated only for Japan until *Sustainability Report 2023*, but from *Sustainability Report 2024*, overseas companies are also included in the scope of calculation. In calculating overseas figures, emission factors were changed from the Ministry of the Environment database to the LCI database IDEA version 3.2. Due to the expansion of boundaries and revision of emission factors, overseas Scope 3 emissions up to fiscal 2022 were added retroactively, and Japan emissions were recalculated using the LCI database IDEA version 3.2.

*3 The overseas portion of 3-1, 3-2, 3-3, 3-5, 3-6, 3-7, and 3-12 are calculated based on activity level, while other categories are estimated based on sales weight.

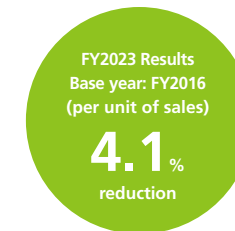
*4 Vehicles used for business purposes had been included under Scope 3-8 until *Sustainability Report 2023* because they are leased, but starting from *Sustainability Report 2024*, vehicles used for business purposes were included in Scope 1 resulting fiscal 2021 and fiscal 2022 were as well.

*5 Does not apply to any work process

CO₂ Emissions Associated with Raw Materials Procurement 305-5

With regard to CO₂ emissions associated with raw materials procurement, we have resubmitted to SBTi for certification of our targeted reduction in CO₂ emissions of 27.5% by 2031 compared to the base year of fiscal 2021. In fiscal 2023, we promoted the development of lighter, slimmer products and thinner packaging, and the transition to biomass and recycled materials.

Environmental Targets 2030: Reducing CO₂ emissions associated with raw materials procurement (Scope 3 Category 1)



P.061 Environmental Data > CO₂ Emissions by Scope and Category

Communicating the Importance of Climate Change Measures to Suppliers

As CO₂ emissions from Scope 3 purchased materials and the disposal of sold products account for approximately 82.8% of the overall product life cycle, it is essential that we promote measures together with suppliers.

In cooperation with suppliers, we are promoting the development and use of low-carbon raw materials, such as thinner and lighter materials, as well as plant-derived biomass materials and recycled materials. These efforts significantly contribute to low carbon emissions, both during procurement and at time of disposal.

P.024 Medium- to Long-Term Policy Briefing Session for Suppliers

GHG Emissions Visualization Project

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In May 2022, we launched the GHG Emissions Visualization Project to further enhance the promotion of initiatives responding to climate change in Environmental Targets 2030 and Kyo-sei Life Vision 2030. This project aims to quantitatively visualize the Carbon Footprint of Products (CFP)*1 for each of our products. For this project, we have teamed with Wastebox, Inc., and obtained the support of Deloitte Tohmatsu Consulting LLC, a company with a wealth of knowledge and experience related to comprehensive support for carbon neutrality.

Phase 1: Visible

In fiscal 2022, we obtained information on primary GHG emissions data*2 for each material covering approximately 80% (on a purchase amount basis) of personal care product materials procured mainly in Japan. This both facilitates accurate visualization of GHG emissions and reflects supplier efforts to mitigate climate change and improve productivity. We also established rules for calculating GHG emissions in accordance with the GHG protocol international standards, and have completed construction of a system that enables the calculation of CFP values by company and product.

GHG Emissions Visualization Project Road Map and Status of Progress



Phase 2: Measurable

In fiscal 2023, the CFP value calculation system constructed in Phase 1 commenced operation, and the accuracy of the values for each product was verified. We recognize that decarbonization is an issue for which it is difficult to achieve significant results on our own, and we believe it is important to expand our efforts beyond daily necessities to encompass the entire industry. To this end, we also held three information exchange meetings on the theme of visualizing GHG emissions in May, August, and November, inviting relevant government ministries and agencies, other businesses in our industry, and environment-related companies. In addition to complying with international calculation rules, we exchanged opinions extensively on how ultimately labeling should be easy to understand and familiar to consumers when they select products and services.

Phase 3: Manageable

In fiscal 2024, we will conduct hot spot analysis and take other actions to reduce GHG emissions and study reduction measures, as well as obtain primary data on materials for pet care products and begin implementation at overseas subsidiaries.

CO₂ Emissions During Manufacturing, Sales, and Distribution

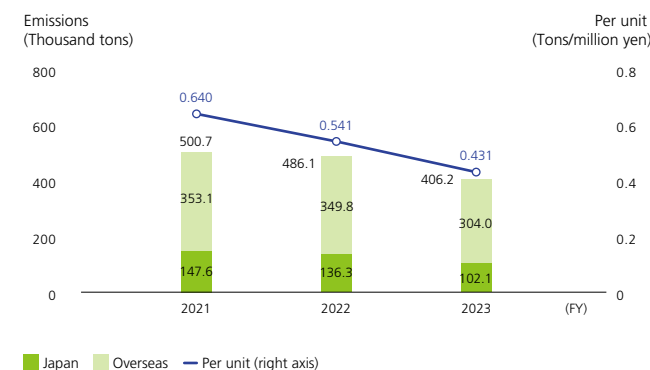
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Initiatives at Factories

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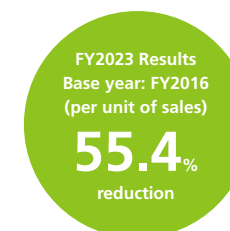
Regarding Scope 1 and Scope 2, we have set the goal of transitioning to 100% renewable electricity by 2030, and the entire Group is working to reduce CO₂ emissions. Energy conservation and renewable energy meetings are held four times a year with promoters of environmental activities at each site to confirm annual plans and progress, present case studies, and promote reductions in electricity consumption through energy conservation activities and the transition to renewable energy. In fiscal 2023, CO₂ emitted during manufacturing amounted to 406.2 thousand tons, a 55.4% reduction (per unit of sales) from the fiscal 2016 base year.

Progress on CO₂ Emissions (Scope 1 and Scope 2)



P.062 Scope 1 and Scope 2 CO₂ Emissions

Environmental Targets 2030: Reducing CO₂ emissions in manufacturing (Scope 1 and Scope 2)



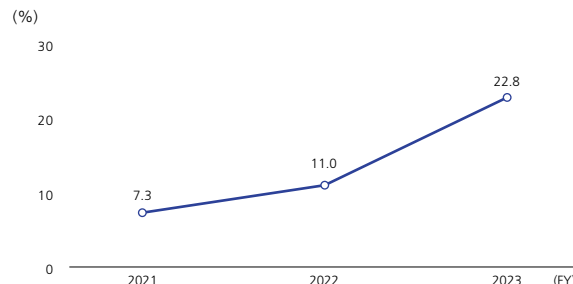
*1 System indicating GHG emissions throughout the entire life cycle of products and services, from the procurement of raw materials, to disposal and recycling, converted to CO₂.

*2 Data collected and measured by the business responsible for calculations (e.g., electricity consumed in the manufacture of its products), and interviews with external stakeholders (e.g., direct understanding of company-related emissions by business partners)

• **Switching to Renewable Electricity**

In fiscal 2023, 14 factories introduced renewable electricity, which accounted for 22.8% of the Group overall, and an approximately 34,000 tons reduction in CO₂ annually.

▶ **Percentage of Renewable Electricity Used**



▶ **Status of Transition to Renewable Electricity at Manufacturing Sites**

Commencement of Operations	Factory Name	Percentage of Renewable Electricity Used *4
January 2017	Jaguariúna Factory (Brazil)	100%
September 2020	Kyushu Factory (Japan)	100%
October 2020	Wellgrow Factory (Thailand)	Approx. 10%
December 2020	Bác Ninh Factory (Vietnam)	Approx. 14%
February 2021	Itami Factory (Japan)	Approx. 4%
April 2021	Toyohama Works, Shikoku Factory (Japan)	100%
July 2021	DSG Factory #2 (Thailand)	Approx. 21%
December 2021	Hartz Pleasant Plain Factory (United States)	100%
March 2022	Saitama Factory (Japan)	100%
April 2022	Mie Factory (Japan)	100%
April 2022	Peparlet's three factories (Japan)	100%
April 2022	Tianjin Factory (China)	Approx. 25%
April 2022	Jiangsu Factory (China)	Approx. 25%
July 2022	Karawang Factory No. 1 (Indonesia)	Approx. 11%
December 2022	DSG Malaysia Factory (Malaysia)	Approx. 20%
January 2023	Sri City Factory (India)	Approx. 14%
April 2023	Itami Factory (Japan)	100%
April 2023	Unicharm Kokko Nonwoven (3 manufacturing sites) (Japan)	100%
April 2023	Cosmotec (Japan)	100%
April 2023	Kinsei Products (Japan)	100%
May 2023	Shanghai Factory (China)	Approx. 17%
May 2023	Tianjin nonwoven fabric factory (China)	Approx. 17%
May 2023	Tianjin packaging factory (China)	Approx. 11%
July 2023	DSG Thailand Factory #1 (Thailand)	Approx. 20%
August 2023	East Java Factory (Indonesia)	Approx. 18%
August 2023	Nonwoven factory (Indonesia)	Approx. 33%
September 2023	Neemrana Factory (India)	Approx. 11%

*4 Percentage of conversion to renewable electricity throughout the year

India: Solar power generation systems were installed at the Sri City Factory in January 2023 and the Neemrana Factory in September 2023. This will generate approximately 10 million kWh per year and reduce CO₂ emissions by approximately 7,200 tons.



Sri City Factory



Neemrana Factory

China: In May 2023, solar power generation equipment was installed at the Shanghai Factory, Tianjin nonwoven fabric factory, and Tianjin packaging factory. This will generate approximately 8.5 million kWh per year and reduce CO₂ emissions by approximately 3,570 tons.



Shanghai Factory



Tianjin nonwoven fabric factory



Tianjin packaging factory

Indonesia: In August 2023, solar power generation equipment was installed at the East Java Factory and nonwoven factory. This will generate approximately 8.6 million kWh per year and reduce CO₂ emissions by approximately 7,000 tons.



East Java Factory



Nonwoven factory

Japan: In April 2023, the Saitama Factory converted a portion of its FIT Non-Fossil Certificate With Tracking*1 to renewable electricity through an Off-Site Physical Corporate Power Purchase Agreement (PPA). *2 We make efforts to proactively utilize renewable electricity that contributes to additional*3 through the use of farm-based solar power generation utilizing idle or abandoned land.

Additionally, in April 2023, the Itami Factory, three Unicharm Kokko Nonwoven manufacturing sites, Cosmotec, Kinsei Products, and a development technical center switched to using non-fossil certificates and a renewable energy power source menu.

*1 Non-fossil certificates that separate the non-fossil value of electricity generated from non-fossil sources, derived from solar, wind, hydroelectric, geothermal, biomass, and other renewable energy sources

*2 Purchase of electricity and environmental value from off-site remotely located power generation facilities

*3 Contribution to the adoption and expansion of new renewable electricity sources through purchase of renewable electricity

• Installing Energy-Saving and Efficiently Operated Equipment

Energy-saving measures are being implemented in each policy and at each factory, including the introduction of high-efficiency motors and other energy-saving equipment, efficient equipment operations such as motor speed adjustments, and the use of LED lighting. Meetings on energy conservation and renewable energy are held four times a year to share best practices facilitating the horizontal deployment of energy conservation and renewable energy measures throughout the Group.

Development-Related Initiatives

Unicharm applies the SDGs Theme Guideline with the aim of constantly improving products and services during the new product development and improvement stages. This guideline aims to develop products and services that contribute to achieving the SDGs by realizing reduced output (contributing to reductions in environmental impact through reduced use of raw materials) and increased output (ensuring greater customer satisfaction by providing even more value through our products and services). Through these activities, we aim to provide products and services that contribute to resolving environmental and social issues through Unicharm's business.

P.068 SDGs Theme Guideline: Internal Guideline for Contributing to Sustainability

Office-Related Initiatives

We have established 22 energy-saving measures including appropriate air conditioning settings, use of blinds, turning off unnecessary lights, and recommending the use of stairs, and continue to promote energy-saving efforts in the office.

▶ 22 Energy-Saving Measures

Subcategory		Activities
1	Blinds	Blinds are lowered during work and blades are set at a 45-degree angle
2	Blinds	Blinds are closed when leaving the office
3	Air conditioning	Set at 26°C near south-side windows
4	Air conditioning	Others set at 28°C
5	Air conditioning	Circulator used to circulate air
6	Air conditioning	Window fans used on east-side windows
7	Air conditioning	Use of window ventilation openings
8	Air conditioning	Air conditioning auxiliary fans installed
9	Air-conditioning	Replace old air conditioners
10	Multi-functional machines	Power saving mode after use
11	Power supplies	Unplug microwave ovens when not in use
12	Lighting	Use outside light on sunny days
13	Lighting	Dim lighting
14	Lighting	Turn off when leaving conference rooms
15	Lighting	Changed to LED bulbs
16	Elevators	"2 Up 3 Down" policy, prioritize use of stairs
17	Computers	Set to standby mode when away from computers for long periods of time
18	Computers	Prioritize use of laptop computers on battery power
19	Vending machines	Turn off beverage vending machines
20	Work	Set up floor for working on holidays
21	Work	Introduce daylight saving time
22	Work	Concentrate flex holidays in August and September

• Unplugging Activities

In response to recent tight energy supply and demand conditions, we are promoting unplugging activities. Every day from 12:00 to 16:00 is designated peak power time, during which laptop computers are unplugged from power outlets and used on battery power to the extent that it does not interfere with business operations, and smartphone and cell phone charging is discouraged.

• Super Cool Biz and Warm Biz

To save electricity, we set air conditioning temperatures to 28°C in summer and 20°C in winter. We have implemented Super Cool Biz and Warm Biz since fiscal 2011, and permit employees to work wearing polo shirts in summer and jackets in winter.

P.111 Matching Fund (Support for Disaster-Affected Areas)

• Head Office Relocated to ZEB Ready Certified Office Tower

In July 2023, we relocated our head office to a new ZEB Ready* certified office tower that consumes 50% less energy compared with conventional buildings. Primary energy consumption has been reduced by more than 50% through the installation of solar power generation systems, highly insulated glass, and high-efficiency air conditioning and lighting equipment.

* One in four tiers of the Net Zero Energy Building (ZEB) series. The certification criteria for ZEB Ready are applied to buildings that reduce primary energy consumption by 50% or more from the standard primary energy consumption through energy conservation, excluding renewable energy.

Transportation-Related Initiatives

Unicharm has been working with business partners to improve transportation efficiency, promote modal shift, and enhance cargo loading efficiency by making corrugated cardboard smaller and streamlining pallet modules. These are some of the measures actively being pursued toward the reduction of CO₂ emissions during transportation and the development of a sustainable logistics structure.

Expanding Modal Shift Using Trains and Ships

As part of Unicharm's efforts to reduce CO₂ emissions, we are promoting a modal shift to rail and maritime shipping, which emit less GHG than trucks. Unicharm Products Co., Ltd. has been certified as a leading business under the Eco-Ship Mark certification system. We are also working to expand environmentally friendly rail transportation, especially for long-distance transportation between our Fukushima and Shikoku factories, and in fiscal 2019 we received Eco-Rail Mark certification, promoted by the Ministry of Land, Infrastructure, Transport and Tourism.



エコシップマーク



エコレールマーク
認定企業 T19-006

Joint Transportation via Rail Freight Container

In 2021, Unicharm Products and Suntory Logistics, Ltd., a logistics subsidiary of Suntory Holdings Limited, began joint transportation via rail freight container over the route between Shizuoka Prefecture and Fukuoka Prefecture. By combining Suntory beverages, which are heavy goods, and our products, which are light goods, we maximize container loading efficiency. With this weekly joint transportation system, we have reduced CO₂ emissions by a combined total of approximately two tons per year.



Joint Delivery of In-Store Promotional Materials

Unicharm has been working together with FineToday Co., Ltd. and Lion Corporation for the integration of logistics operations for promotional materials used at retail stores and on sales floors, conducting joint deliveries since fiscal 2019. This collaborative effort enables the three companies to use the same packaging materials, bundle deliveries, reduce the use of delivery trucks, conserve resources, and minimize environmental impact through reductions in CO₂ emissions. It also contributes to improvements in backyard operations by reducing the burden of receiving cargo and the storage space for promotional materials at retailers.

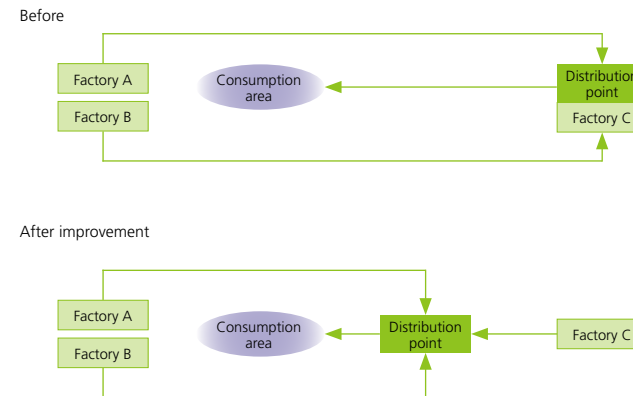
Adopting Ultrasonic Coupling Technology to Improve Transportation Efficiency

In November 2023, Unicharm launched *Lifree Thin Lightweight Comfortable Pants* with improved comfort by replacing conventional hot-melt (adhesive) thread elastic used in the waist with ultrasonic bonding. By eliminating the need to consider the impact of compression on adhesive when filling the package, the package size is made approximately 10% more compact,*¹ increasing loading efficiency during distribution and delivery. This is expected to reduce CO₂ emissions by approximately 220 tons per year.

*1 Front width comparison

Establishing Distribution Points on the Outskirts of Consumption Areas

Beyond consumption areas where products are consumed in large quantities, we are working to reduce delivery waste, improve delivery efficiency, and reduce CO₂ emissions by consolidating products from factory-based distribution points to distribution points established on the outskirts of consumption areas.

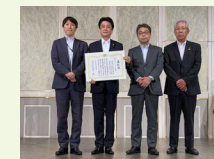


Jointly Received Excellence Award at Supply Chain Innovation Awards 2023



In recognition of efforts to improve receiving efficiency and truck turnover ratio through jointly implemented Advanced Shipping Notice (ASN) data*² distribution, Unicharm, Japell Co., Ltd., and K.R.S. Corporation jointly received the Excellence Award at the Supply Chain Innovation Awards*³ (sponsored by the Ministry of Economy, Trade and Industry and managed by the Manufacturing/Distribution/Sales Cooperation Council*⁴) held in July 2023. ASN delivery does away with the inspection process, eliminating the need to input expiration dates at time of cargo receipt and reducing the need to determine inventory at time of cargo storage. In addition, floor-by-floor

sorting and delivery reduces the need for sorting at the time of cargo receipt and the issuance and affixing of receiving labels. By sequentially implementing these initiatives at nine distribution centers, we estimate that cumulative monthly driver work is reduced by 209.6 hours and cumulative monthly warehouse employee work is reduced by 137.2 hours.



Award ceremony

*² Shipment information provided by suppliers to distribution centers in advance
*³ Awards given to businesses that have led the industry with outstanding efforts through cooperation among the manufacturing, distribution, and sales sectors to optimize the entire supply chain
*⁴ Council established in May 2011 with the aim of enhancing industrial competitiveness and contributing to human prosperity through collaboration among manufacturers (manufacturing), intermediary distributors and wholesalers (distribution), and retailers (sales) to eliminate waste throughout the supply chain and create a system for the creation of new value. GS1 Japan and The Distribution Economics Institute of Japan serve as secretariat.

CO₂ Emissions at Time of Disposal After Use

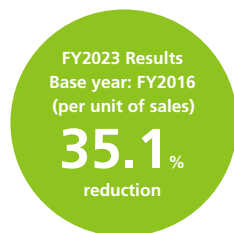
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Unicharm works to reduce CO₂ emissions when used products are disposed of by promoting the 3Rs (reducing the amount of materials used by making products lighter and slimmer, using thinner packaging, and other efforts; reusing by providing refill and replacement products; and recycling used disposable diapers and other products). Through these efforts, in fiscal 2023 we reduced CO₂ emissions from the disposal and processing of used products by 35.1% (per unit of sales) compared with fiscal 2016.

P028 Reducing Usage of Plastic in Packaging Materials

P030 Product Initiatives

► Environmental Targets 2030: Reducing CO₂ emissions associated with the disposal of used products (Scope 3, Category 12)



■ Raising Awareness of Proper Waste Separation and Disposal Methods

Although waste disposal methods vary between countries and regions, in some countries and regions where we provide our products, awareness of waste separation and collection is not widespread. In addition to raising awareness of proper disposal methods through product packaging, we conduct classes in various countries and regions for children, who are the future of our society, on the correct way to dispose of garbage, how garbage can be transformed into resources through sorting, and the recycling of used disposable diapers.

P031 Raising Awareness About Proper Disposal of Used Products