

Recycling-Based Society

Plastic Waste Reduction Measures

Our Basic Approach and Strategy

Plastics are easy to process, durable, and essential to our hygienic lives, and it is important to properly dispose



of and recycle them. As a manufacturer that uses plastic in its products and packaging materials, Unicharm recognizes that it has a responsibility in this regard. Aiming to address the global problem of plastic, Unicharm supports the Plastics Smart campaign organized by the Ministry of the Environment.

In response to the problem of plastic waste, which was put forth as an issue to be addressed under Environmental Targets 2030 announced in May 2020, we declared “realizing a new society with zero plastic waste” as part of our 2050 Vision and laid out our 2030 targets. In fiscal 2022, we participated in the World Wide Fund for Nature (WWF) Japan’s Plastic Circular Challenge 2025 to express our commitment to resolving plastic pollution issues and set targets for 2025. Since fiscal 2023, Unicharm has also participated in the Business Coalition for a Global Plastics Treaty, for which the Japan coalition serves as

secretariat, to strengthen efforts to resolve plastic issues throughout the Group.



Risks and Opportunities

Risks

The sanitary pads and disposable diapers produced by Unicharm utilize plastic materials molded into sheets and films to create product and packaging materials. Accordingly, there is a risk that production costs will rise due to tighter regulations and enforcement of taxes on petroleum-derived plastics, as well as an imbalance between the supply and demand of raw materials due to the mandatory use of recycled plastics. Further, there is a risk that consumers will refrain from purchasing if nothing is done to address the use of petroleum-derived plastic materials.

Opportunities

Ongoing efforts to reduce the total amount of plastic used throughout our business activities will enable Unicharm to comply with stricter regulations on the use of petroleum-derived plastic materials and contain production cost increases due to

rising material prices. Further, there is an opportunity to increase sales with products that use less plastic, as they are more likely to be supported by consumers who wish to purchase and use environmentally friendly products.

Management Structure

At Unicharm, we report the progress of responses to environmental issues in accordance with Environmental Targets 2030 and Kyo-sei Life Vision 2030 based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Four times a year, the ESG Committee, chaired by the president & CEO, shares plans and progress on material issues related to our measures to overcome the problem of plastic waste and, upon approval from the Board of Directors, implements a PDCA cycle toward the achievement of targets.

P.023 Environmental Management Structure
P.009 Sustainability Promotion System

Indicators and Targets

Responding to the Problem of Plastic Waste 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 usage of plastic in packaging materials	Per unit of sales	2019*	-0.2%	-12.3%	-14.0%	-18.4%	-21.1%	-30%	Realizing a new society with zero plastic waste
Selling products that do not contain petroleum-derived plastic	—	—	Development ongoing	Development ongoing	Development ongoing	Development ongoing	Development ongoing	10 or more stock-keeping units (SKUs) sold	
Raising awareness about proper disposal of used products	—	—	38% (6 countries and regions)	50% (8 countries and regions)	56% (9 countries and regions)	56% (9 countries and regions)	63% (10 countries and regions)	Rolled out at all Group companies	
Eliminating the use of plastic in sales promotional items	—	2019	-8.9% (Japan)	-81.8% (Japan)	-30.0%	-86.9 (Japan) -76.5 (China)	-88.8 (Japan) -79.9 (China)	In principle, reduced to zero at all Group companies	

* We have updated our base year from fiscal 2016 to fiscal 2019 following a review in fiscal 2020.

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

Indicators	Fiscal 2021 Results	Fiscal 2022 Results	Fiscal 2023 Results	2030 Targets
Material recycling of nonwoven products using recycling resources	Development ongoing	Development ongoing	Development ongoing	Start of commercial usage
Percentage of virgin plastics to total plastics	Development ongoing	Development ongoing	Development ongoing	Reduced by half (compared with fiscal 2020)

► **Our Commitment to Participation in the Plastic Circular Challenge 2025**

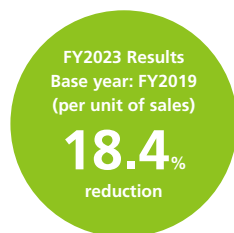
	Base Year	Fiscal 2025 Target	2030 Target
Plastic used in promotional materials	2019	Reduced by half	In principle, reduced to zero at all Group companies

Initiatives and Results

Reducing Usage of Plastic in Packaging Materials

We are working to reduce the amount of plastic used in packaging throughout the Group by making packaging thinner, minimizing the number of bonded parts, and adopting raw materials derived from plants. Through these efforts, in fiscal 2023 we reduced the amount of plastic used in packaging materials by 18.4% (per unit of sales) compared to fiscal 2019.

► **Environmental Targets 2030: Reducing usage of plastic in packaging materials**



Reducing Usage

• **Revising Package Designs**

Unicharm is continuously engaged in reducing plastic usage without compromising product quality or functionality by revising package designs, including making packages thinner, minimizing areas where packaging is pasted together, and reducing package size by altering the way products are packed. For example, in September 2022 we revamped the size of *Silver Spoon* cat food packaging while maintaining the same volume, which reduced the amount of plastic used by roughly 6%.

• **Wave Handy Wiper (Japan)**

In April 2023, we changed the packaging of cleaning product *Wave Handy Wiper* from a clear case to a polyethylene material, reducing the amount of plastic used by approximately 70%.



• **Moony and Moonyman Exclusive Online Products (Japan)**

In October 2022, *Moony* and *Moonyman* packaged without handles were launched exclusively online. When purchased, these products are delivered directly to customer homes, eliminating the need for handles. This contributes to an approximate 13% reduction in plastic use compared with products sold in retail stores.



Using Paper Packaging

Unicharm is working to reduce the amount of plastic used in packaging by switching packaging and some packaging materials to paper materials.

In Japan, for a limited time in August 2023, we released *Sofy Hadaomoi Organic Cotton*, *Sofy Hadaomoi Organic Cotton Ultra Thin Slim*, and *Sofy Orimono Sheet Organic Cotton Unscented*, which use paper materials and plant-derived biomass ink for packaging. We also use paper packaging for our *Moony Natural Newborn* (tape-type trial pack), which is available in baby stores.

In March 2022, Unicharm's subsidiary in South Korea released *Sofy Unbleached Sanitary Pads*, which come in paper packaging, at retail stores throughout the country and certain online stores. The use of paper packaging has reduced plastic use by over 80% compared with conventional packaging.



Switching to the Use of Paper Hooks for Period Underwear Packaging (Japan)

The hooks that are used to display Unicharm's period underwear products at retail stores were changed from a plastic to a paper material, reducing the amount of plastic used in packaging by roughly 20%.



Replacing Plastic Trays with Recycled Paperboard (United States)

At Unicharm's subsidiary in the United States, plastic trays for pet care product *Hairball Remedy Plus* were replaced with 100% recycled paperboard, reducing the amount of plastic used by approximately 290 kg per year.



Using Plant-Derived Plastics

Lifree Sawayaka for Men Comfortable Sheet (Japan)

In April 2023, we launched *Lifree Sawayaka for Men Comfortable Sheet*, an absorbent sheet for men that is approximately 2.0 mm thick and feels as comfortable to wear as underwear. The individual packaging of this product contains a bio-derived polyethylene film.



CHARM Daun Sirih + Herbal Bio (Indonesia)

In June 2023, Unicharm's subsidiary in Indonesia launched *CHARM Daun Sirih + Herbal Bio*, which uses biomaterials*1 in its packaging.

*1 Materials made from biomass or biomineral materials

P.031 CHARM Daun Sirih + Herbal Bio Using Biomaterials (Indonesia)

Using Recycled Materials

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Recycling Trimmings Generated in Manufacturing Process for Use in Packaging

The packaging (wrapping material) for the sanitary pads and disposable diapers Unicharm manufactures utilize film plastic materials. In the past, we disposed of excess materials (trimmings) generated when cutting materials in the manufacturing process. From November 2023, in cooperation with THE PACK CORPORATION, Fukusuke Kogyo Co., Ltd., and Unicharm subsidiary Cosmotec Corporation, we convert them into raw materials and use them as product packaging.



Plastic material trimmings

Utilizing Reusable Plastic (United States)

Our subsidiary in the United States uses blister packaging comprising approximately 20% recycled plastic for its *Chew'n Clean Tuff Bone Extra Small* and *Chew'n Clean Twisty Bone* dog toys. In addition, packaging used for *Home Protection* pet sheets for dogs comprise approximately 10% PIR.*2



*2 Post-industrial recycled plastic

Product Initiatives

In light of the fact that products manufactured and sold by Unicharm are disposed of as waste after use, we are promoting product development focused on reducing environmental impact upon disposal of our products. We are making efforts to develop lighter and thinner products by combining raw materials, increase the number of products using plant-derived raw materials, and develop products that do not use petroleum-derived plastic.

▶ Environmental Targets 2030: Selling products that do not contain petroleum-derived plastic



Reducing Usage

• Making Products Thinner to Reduce Raw Material Usage

Unicharm continues to reduce the use of raw materials while maintaining and improving product functions by combining raw materials to make thinner products. As an example, *Moony Imperial Soft Firm Skin*, launched in China in September 2023, uses 16.2% fewer raw materials than previous products with thinner absorbent materials that meet consumer ventilation needs.

• Reducing Adhesive Usage (Japan)

In November 2023, Unicharm launched *Lifree Thin Lightweight Comfortable Pants* with improved comfort that utilize an ultrasonic bonding technology to join thread elastic at the waist. The use of this technology reduces the amount of hot melt (adhesive) used in bonding by approximately 190 tons per year. Reducing the amount of adhesive makes the product easier to recycle, and improving the compression ratio when packaged increases loading efficiency, further contributing to a reduction in environmental impact during distribution and delivery.



• Promoting Awareness of Benefits of Using Both Disposable Diapers and Absorption Pads

At Unicharm, we strive to reduce waste by promoting awareness of the benefits of combining disposable adult diapers (outer layer) and urine absorption pads (inner layer). For example, when used together, only the inner layer needs to be replaced, reducing waste by roughly 20% compared with using and replacing the outer layer alone.

• Promoting Reuse Through Refillable and Replaceable Products

Unicharm is committed to reducing waste through the supply of *Wave* cleaning products that use replaceable sheets, refillable *Moony* baby wipes, *Silcot* wet wipes, and other products that enable the container or the main unit to be reused repeatedly, thereby reducing the amount of plastic waste.

• Reusable Water-Absorbent Sanitary Underwear (Japan)

In January 2024, we launched *Sofy Fit-to-Body Absorbent Underwear* for purchase online as well as at select retail stores. This absorbent sanitary underwear offers excellent absorbency and fit, and a single pair can be used safely, even on heavy days. They can also be washed for repeated use.



• Sales of Replacement Grating Parts (Japan)

In June 2023, Unicharm launched sales of replacement grate parts for the *Deo-Toilet* litter box for cats on the Unicharm Direct Shop website. By replacing only the grate, plastic waste can be reduced by approximately 70%* compared with replacing the entire *Deo-Toilet* unit.



* Half-cover type grating (calculated based on product weight)

• Utilizing Organic Cotton Rather Than Super Absorbent Polymer (Japan)

In the *Sofy Hadaomoi Organic Cotton* series of sanitary pads and panty liners, the surface sheet top layer that touches the skin is made of 100% organic cotton, which is manufactured with minimal environmental impact on soil and water quality. These products do not use super absorbent polymer.



Utilizing Plant-Derived Plastics

CHARM Daun Sirih + Herbal Bio Using Biomaterials (Indonesia)

Since 2021, in conjunction with World Environment Day, Unicharm's subsidiary in Indonesia has continued to launch environmentally friendly sanitary pads under the *CHARM* brand. In June 2023, the third year of this project, we launched limited sales of *CHARM Daun Sirih + Herbal Bio* using biomaterials.*

These products utilize previously discarded biomaterials such as sugarcane pomace, limestone, botanical oils, and natural resins for approximately 80% of the raw materials used in surface sheets that touch the skin, back sheets that come in contact with underwear, and individual product wrapping and packaging.



* Materials using biomass or biomineral materials

Deo-Toilet Using Plant-Derived Plastic (Japan)

In June 2023, we released limited quantities of *Deo-Toilet*, a plastic molded litter box for cats weighing up to five kilograms, and *Deo-Toilet Half-Cover Sets* incorporating plant-derived plastic for 10% of the raw materials used in the plastic toilet containers.



Toilet for cats weighing up to five kilograms

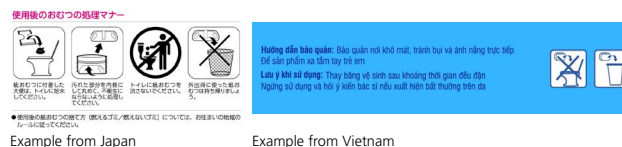
Half cover

Efforts Associated with Disposal and Recycling of Used Products

In some countries and regions where Unicharm provides products, awareness is not yet widespread regarding correct methods of waste disposal, separation, and collection. As a manufacturer that provides consumer goods essential for hygienic daily life, we believe it is important to educate people about the correct disposal method for used products and spread awareness regarding sorting and recycling activities.

Raising Awareness About Proper Disposal of Used Products

Although waste disposal methods vary between countries and regions, the entire Unicharm Group is raising awareness of proper disposal methods for used products through product packaging displays and other methods in accordance with the laws and standards of the countries and regions where our products are sold. In fiscal 2023, we engaged in awareness-raising activities by displaying disposal methods on product packaging in 56% of our sales area (nine out of 16 target countries and regions). We also conduct classes on sorting and recycling for children, who are the future of our society.



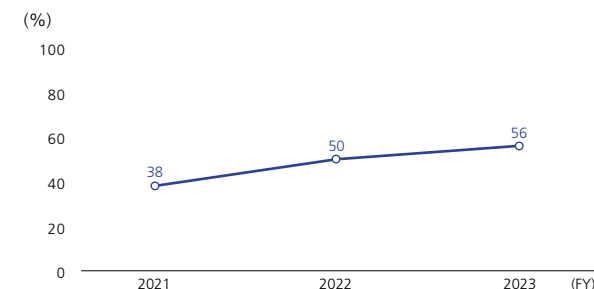
Example from Japan

Example from Vietnam

Environmental Targets 2030: Raising awareness about proper disposal of used products



Coverage of Efforts to Raise Awareness of Disposal Methods on Product Packaging



Lectures on Waste Separation (Indonesia)

In response to the national issue of increased waste accompanying economic growth, Unicharm's subsidiary in Indonesia has been engaged in raising awareness since fiscal 2019 by experimenting with emerging organic waste treatment technologies such as black soldier fly larvae (BSFL) to reduce landfill waste generated by disposable diapers, conducting cleanup activities along river banks near factories, installing trash cans, and educating children about waste separation. In fiscal 2023, we conducted classes on waste separation for 40 high school students in the Special Capital Region of Jakarta in February, and for 46 high school students from East Java in June.



Promoting the Recycling of Used Disposable Diapers

Since 2015, Unicharm has conducted demonstration trials involving the recycling of disposable diapers. In June 2022, select nursing care facilities in Kagoshima Prefecture began using disposable adult diapers that use recycled materials for a portion of their absorbent paper, realizing the horizontal recycling of used disposable diapers. In our recycling system, collected diapers are washed and separated, then undergo a unique ozone treatment process to sterilize and recycle the extracted pulp, making it equivalent to unused raw materials in terms of hygiene, safety, and use.

We are also working to promote the understanding and spread of sorted collection through the installation of disposable diaper collection boxes in Shibushi City (since March 2024) and the distribution of used diaper collection bags made with plastic separated in the recycling process in Osaki Town (since December 2022).



Aiming to inspire those who will shape the future of our planet, Unicharm's corporate website offers an illustrated guide to recycling disposable diapers, intended for elementary and junior high school students.

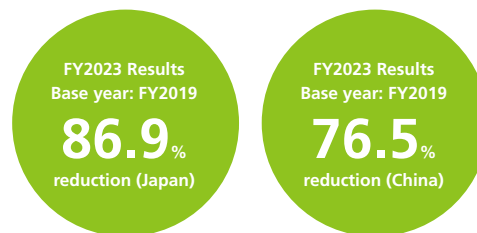


[web https://www.unicharm.co.jp/en/csr-eco/education.html](https://www.unicharm.co.jp/en/csr-eco/education.html)

Initiatives Involving Promotion Items

Unicharm makes efforts to reduce the amount of plastic used in promotional materials for display products in retail stores. We aim for a 50% reduction in plastic throughout the Group by fiscal 2025 compared to base year fiscal 2019, and then zero plastic usage by 2030. This initiative was promoted first in Japan and is gradually being expanded to all Group companies. In fiscal 2023, we stepped up our efforts in China.

► Environmental Targets 2030: Eliminating the use of plastic in sales promotional items



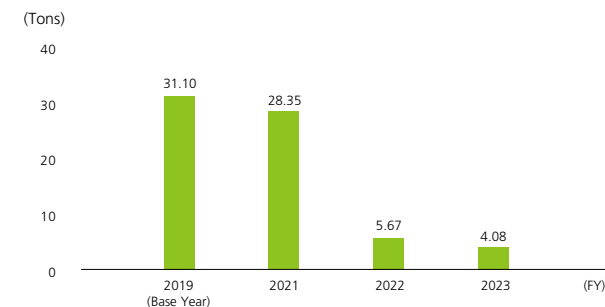
Initiatives in Japan

We are replacing the plastic used in display hooks and fixtures and point-of-purchase (POP) displays with paper materials and are developing racks made of paper. As a result, in fiscal 2023 plastic use in sales promotional items in Japan amounted to 4.1 tons, an 86.9% decrease from fiscal 2019.



Sales promotional items made from paper

► Plastic Use in Sales Promotional Items (Japan)



► Plastic Use (Tons) in Sales Promotional Items (Japan)

	Fiscal 2019 (Base Year)	Fiscal 2021	Fiscal 2022	Fiscal 2023
Display hooks	6.25	0.49	1.45	0.09
Fixtures	0.92	0.56	0.18	0.02
Racks	6.89	23.53	0.58	0.00
Others (including packaging materials)	17.04	3.77	3.46	3.97
Total	31.10	28.35	5.67	4.08

• **Declaration on Reducing Plastic Use in Sales Promotional Items (Japan)**

Unicharm has declared its commitment to reduce plastic use through a united effort with Shiseido Japan Co., Ltd., FineToday Co., Ltd., and Lion Corporation to gradually replace the plastic used in parts for sales promotional items at retail stores and on sales floors with paper materials. Through the commitment of each company to reduce plastic use in not only their products but also sales promotional items, we will leverage their strengths as leaders of the consumer products and cosmetics categories toward the realization of an environmentally friendly society and the development of the industry as a whole.

■ **Initiatives in China**

Unicharm’s subsidiary in China has set fiscal 2026 as the target year for zero use of plastic in promotional items, and is working to switch to paper POP displays.

In fiscal 2023, efforts to introduce paper racks and verify degradable materials resulted in approximately 28.2 tons of plastic used in promotional items in China, a 76.5% reduction compared to fiscal 2019.



Paper promotional POP display (China)

▶ **Plastic Use in Sales Promotional Items (China)**

