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Kao Accelerates Activities to Achieve Plastic Packaging Net Zero Waste by 2040 and Negative Waste by 2050

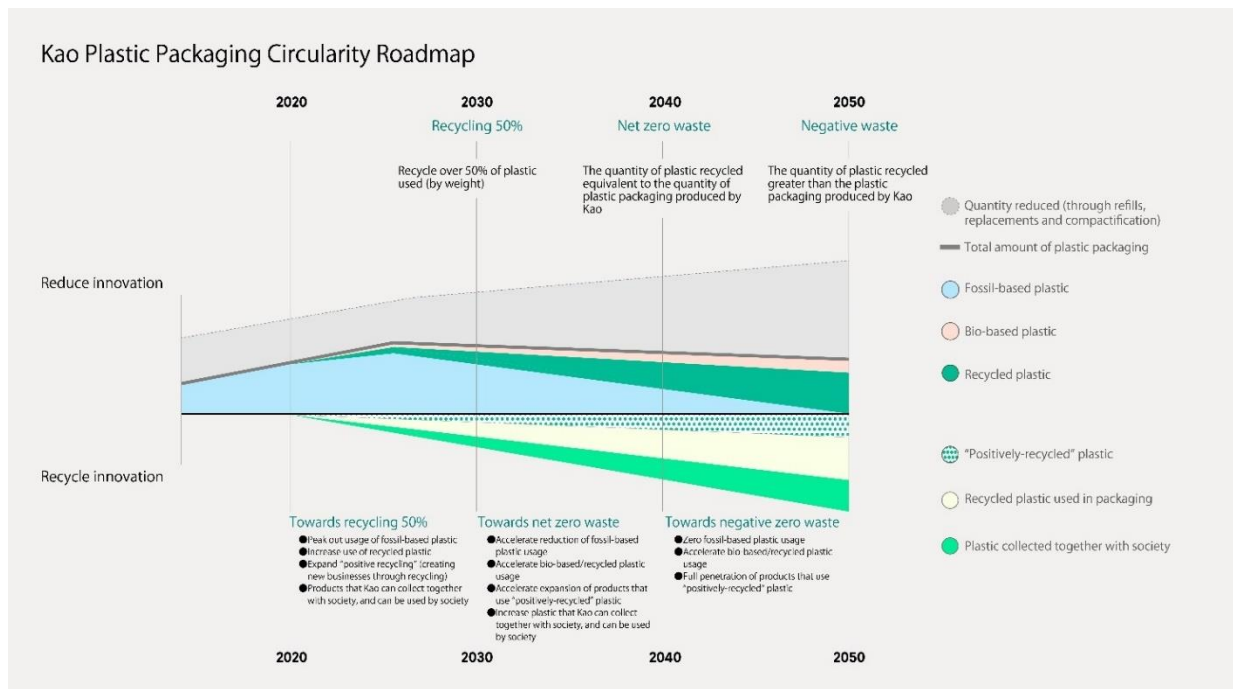
First Product Making Partial Use of Film-to-Film Recycled Plastic Reaches the Market

Kao Corporation aims to achieve plastic packaging net zero waste by 2040 and negative waste by 2050*¹ for plastic containers used and discharged in its business activities to realize resource circularity in society. The company intends to do this by first reducing the plastic packaging used in its business activities as much as possible and then by recycling plastic waste generated in society to create useful products and services. In April 2019, Kao established its ESG strategy, the Kirei Lifestyle Plan. This plan outlines 19 leadership actions, one of which is zero waste, to which this strategy contributes. Major progress achieved in 2023 includes the first commercialization of refill packs that make partial use of recycled materials, based on film-to-film recycling technology. The following describes this and other progress made in 2023.

*1 Kao's net zero waste initiative aims to make the quantity of plastic recycled equivalent to the quantity of plastic packaging it produces. Negative waste means reaching the stage where the quantity of plastic recycled is greater than the plastic packaging produced by Kao.

News Release from May 2023

[Announcing a Roadmap for Reaching Plastic Packaging Net Zero Waste by 2040 and Negative Waste by 2050](#)



Kao plastic packaging circularity roadmap

Approaches to Reaching the Goal

Innovation in Reduction

Kao is promoting the development of packaging made with less plastic and the use of recycled plastic and bio-based plastic. This will result in fossil-based plastic use peaking*² by 2030 and being phased out completely by 2050.

*² By reducing quantity vs. the previous year.

Kao launched *Attack ZERO Perfect Stick*, a stick-shaped powdered laundry detergent wrapped in water-soluble film in single-load portions, in August 2023. Instead of using a hard plastic container, the laundry detergent comes in a pouch, which reduces the amount of plastic used for the product per load*³. In September, Kao launched a bottle-type refill pack for *CuCute* dishwashing liquid, which reduces plastic compared to existing bottles by approximately 40%*⁴ by making the plastic bottle thinner.

*³ In the case of 30-l loads. The *Attack ZERO Perfect Stick* pouch reduces plastic use by approximately 64% vs. Kao's non-concentrated liquid detergent bottles

*⁴ By weight, compared to existing packaging

Indicator	Mid-to long-term targets Target value	Mid-to long-term targets Year	2023 results (2022 results)
Quantity of innovative film-based packaging penetration for Kao and others per annum	300 million	2030	14 million (13 million)
Quantity of fossil-based plastics used in packaging	Will peak and begin to decline	2030	74,000 tons (88,000 tons)

Innovation in Recycling

Kao will recycle resources by producing products and services making use of the plastic waste discarded by all sectors of society and will begin by boosting the recycle rate for plastics it uses to over 50% (by weight) by 2030 through three approaches.

Indicator	Mid-to long-term targets Target value	Mid-to long-term targets Year	2023 results (2022 results)
Plastic recycling rate with Kao involvement	50%	2030	6% (3%)

● Positive recycling of used plastic

Through its research and development activities, Kao has successfully developed technologies to recycle used plastics into useful products and services.

NEWTLAC 5000 asphalt modifier, created and offered by the Kao Chemical Business, converts waste PET into a modifier using technology developed in-house. Adding NEWTLAC 5000 to asphalt improves pavement durability by up to five times compared to ordinary pavements. Making asphalt pavement highly durable can help reduce damage to road surfaces and suppress the generation of CO₂ associated with repair work. In 2023, the Kao Chemical Business launched a new series featuring improved durability that also resolves pavement issues seen in cold regions with regular snowfall.

[Highly durable asphalt modifier made from waste PET NEWTLAC 5000 | Asphalt, Civil engineering & Construction | Kao Chemical](#)

● **Using recycled plastic for packaging**

Promoting the use of recycled plastic under Innovation in Reduction also contributes to recycling, as this approach uses plastic waste discarded by all sectors of society.

In 2023, Kao started using 6% recycled plastic in its packaging. Recycled plastic is increasingly being used in PET plastic containers sold in Japan in 2023, for example in the bottle-type refill pack (extra-large size) for *CuCute* dishwashing liquid and for *Resesh Disinfecting EX Wide Jet* clothing and fabric deodorizer.

Indicator	Mid-to long-term targets Target value	Mid-to long-term targets Year	2023 results (2022 results)
% of recycled plastic used in PET containers (Japan)	100%	2025	81% (69%)

● **Turning used plastic packaging collected with partners into useful products**

Kao, partnering with local governments, businesses and other stakeholders, has established a collection scheme for used plastic containers and is developing recycling technologies.

Together with Lion Corporation, Kao for the first time commercialized refill packs partially made with recycled plastic from collected used refill packs in 2023. While the new packaging was initially only available in limited quantities, Kao will continue research and development to ensure continuous product availability. The company is also conducting various types of field tests, and began testing a new collection scheme in 2023 in Satsumasendai City, Kagoshima Prefecture in Japan that uses the municipal government’s resource collection routes. In March 2024, Kao and Kao Group company Kao Transport and Logistics Company Limited received approval from the Ministry of Economy, Trade and Industry and the Ministry of the Environment for voluntary collection by a manufacturer or retailer for plastic packaging at Kao business locations and in Kamakura City, Kanagawa Prefecture in Japan. With this approval, Kao and Kao Logistics are able to collect used refill packs within the Kao Group and in the city of Kamakura without needing to obtain service permission. Kao will continue to examine recycling schemes to expand self-directed participation by stakeholders in

each step of the recycling process, from sorting and collection to transport and recycling. The company aims to gain the understanding and support of consumers in particular as active participants in resource circularity, from product selection and use to sorting, collection and recycling of packaging.

News Releases from May 2023

[Kao and Lion Partner in Film-to-Film Recycling of Used Refill Packs; First Product Making Partial Use of Recycled Materials Reaches the Market](#)

[Kao Develops Practicable Technology for Film-to-Film Recycling of Used Refill Packs](#)

News Release from March 2024

[Kao Becomes the First Manufacturer or Retailer to Receive Approval for Voluntary Collection of Plastic Packaging from Consumers in Japan under the Plastic Resource Circulation Act](#)

Indicator	Mid-to long-term targets Target value	Mid-to long-term targets Year	2023 results (2022 results)
Practical use of innovative film-based packaging made from collected refill packs	Product launch	2025	Product launch (ongoing development)

Reducing Plastic Use in Society (Reduction Contribution)

Kao is providing packaging technology that used less plastic to society to contribute to reducing plastic use in broader society. Kao has set “reduction contribution” as an indicator of the amount of reduced plastic use, based on the amount of reduced plastic use in new products compared to existing products and the amount of reduced plastic with refill packs compared to the original product packaging.

Indicator	Mid-to long-term targets Target value	Mid-to long-term targets Year	2023 results (2022 results)
Reduction in plastic use in packaging by Kao and in broader society	200,000 tons	2030	128,600 tons (-)

Initiatives to Reduce and Recycle Waste at Kao Business Locations

Kao is taking steps to reduce waste generated at its plants and business locations and increase recycling.

In 2023, Kao began outlet sales via its e-commerce website My Kao Mall of consumer products that were not shipped from plants or logistics centers and needed to be discarded as well as some cosmetics products.

Indicator	Mid-to long-term targets	Mid-to long-term targets	2023 results (2022 results)
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	Target value	Year	
% of the waste generated from Kao sites*, ratio of waste that cannot be recycled * Beginning with production sites	Zero (less than 1%)	2030	4.4% (4.2%)
% reduction of discarded products and discarded sales promotion materials (Base year: 2020)	95%	2030	43% (20%)

Since 2021, the Kao Group has been promoting the Kao Group Mid-term Plan with its vision of “protecting future lives” and “sustainability as the only path.” The Kao Group will continue to integrate its ESG strategy into its management practices, develop its business, provide better products and services for consumers and society, and work toward its purpose, “to realize a Kirei world in which all life lives in harmony.”

About the Kirei Lifestyle Plan

Over the past 130 years, Kao has worked to improve people’s lives and help them realize more sustainable lifestyles—a Kirei Lifestyle. The Japanese word ‘kirei’ describes something that is clean, well-ordered and beautiful, all at the same time. The Kao Group established its ESG strategy, the Kirei Lifestyle Plan in April 2019, which is designed to deliver the vision of a gentler and more sustainable way of living. By 2030, Kao aims to empower at least 1 billion people, to enjoy more beautiful lives and have 100% of its products leave a full lifecycle environmental footprint that science says our natural world can safely absorb.

Please visit [the Kao sustainability website](#) for more information.

About Kao

Kao creates high-value-added products and services that provide care and enrichment for the life of all people and the planet. Through its portfolio of over 20 leading brands such as *Attack*, *Bioré*, *Goldwell*, *Jergens*, *John Frieda*, *Kanebo*, *Laurier*, *Merries*, and *Molton Brown*, Kao is part of the everyday lives of people in Asia, Oceania, North America, and Europe. Combined with its chemical business, which contributes to a wide range of industries, Kao generates about 1,530 billion yen in annual sales. Kao employs about 34,300 people worldwide and has 137 years of history in innovation.

Please visit [the Kao Group website](#) for updated information.

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Related Information

[Kao launches new ESG Strategy “Kirei Lifestyle Plan” to support consumer lifestyle changes](#)

[Kao’s New Challenges for the Future: Accelerating Purposeful Business Commitment with ESG](#)

[Kao sustainability website](#)