Contribute to Recycling Resources

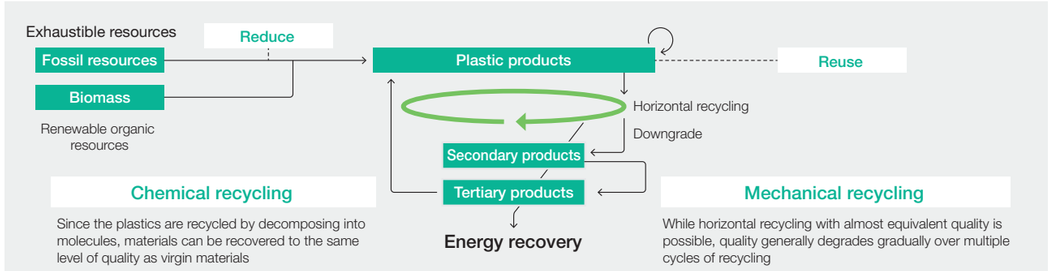
For sustainable use of resources, it is essential to reduce resource consumption and create a system to efficiently recycle currently available resources. In addition to waste management and effective use of resources at our offices and Works, Sumitomo Chemical is working on the development and social implementation of recycling technologies for carbon resources such as plastics.

Contribute to Recycling Resources (Sustainability Report)

Overview of Carbon Resource Circulation, including Plastics

To achieve carbon resource recycling such as for plastics, it is important to make 3R efforts (reduce, reuse, and recycle (mechanical and chemical recycling)) at each stage of the plastics value chain.

Overall picture of circular system for plastics



KPIs for Carbon Resource Recycling

KPI	The amount of recycled plastics utilized in manufacturing processes
Target	200k tons/year by FY2030
Results	FY2025 14,420 tons

Development of the Meguri™ Brand

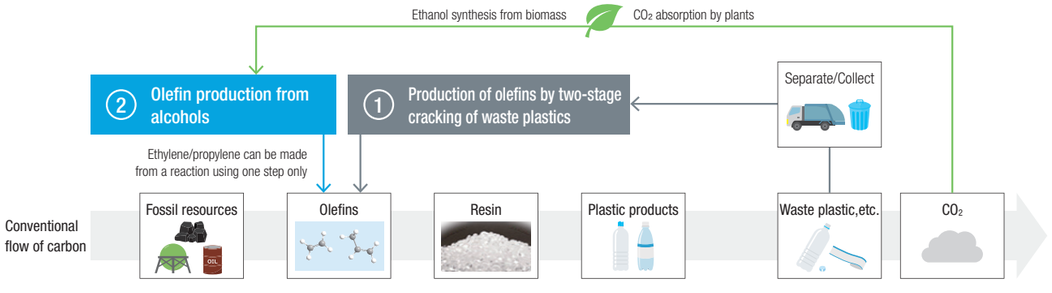
Meguri™ is a brand of plastic products and chemicals that can be obtained through recycling technology and contribute to reducing environmental impact. We will expand the Meguri™ product lineup and increase production and sales of these products, thereby playing a role in realizing a circular economy.

Meguri CIRCULARITY FOR ALL

Circular System for Plastics Website

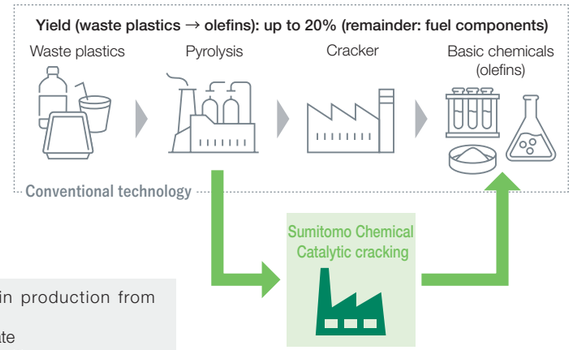
Initiatives to Promote Carbon Resource Circulation

Leveraging our expertise in catalyst and chemical process design, we are working with external organizations to develop technologies for multiple carbon circulation pathways. By focusing our development resources on the following two priority areas, we aim to accelerate technology development and achieve early commercial deployment.



① Production of olefins by two-stage cracking of waste plastic (Chemical Recycling)

We are developing a chemical recycling technology that uses our proprietary catalyst to efficiently convert pyrolysis oil obtained by heating waste plastics at 300 -400°C into olefins. By utilizing a broad range of waste plastics of varying quality as recycled feedstock, including materials that have traditionally been difficult to recycle, and by using nearly all of the resulting pyrolysis oil as feedstock, we aim to achieve an olefin yield of at least 60%.
Commercializing this technology will promote the resource circulation of waste plastics currently sent for incineration or energy recovery. Locating pyrolysis units near waste generation sites and intermediate treatment facilities will also improve transportation efficiency, promote local resource circulation and, ultimately, contribute to regional revitalization. Working with our partners, we aim to complete development of the technology by 2028 and commercialize it in the early 2030s.



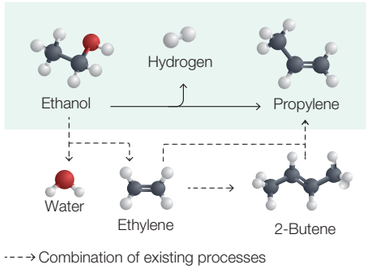
Features of this technology

- Technology for high-yield olefin production from waste-plastic pyrolysis oil
- High carbon resource circulation rate
- Catalyst with high tolerance to impurities

② Technology for Olefin Production from Alcohols (Olefin production from biomass-derived feedstocks)

We are developing technology to produce olefins directly from ethanol, which has been attracting attention as a sustainable chemical raw material. In bench trials, we achieved a target olefin yield of 80%.
Furthermore, we completed construction of a pilot facility at our Chiba Works in June 2025 and are now advancing data acquisition using the facility. Going forward, we will continue to accelerate development toward the establishment of the technology and aim for its early societal implementation.

Our direct production process



Features of this technology

- Producing olefins directly from ethanol
- A newly-developed compact and low-cost process
- Producing hydrogen as a by-product, in addition to olefins

Looking ahead, through the deployment of these technologies, we aim to reduce the use of fossil resources, waste plastic generation, and GHG emissions from waste plastic incineration. We also envision a business model in which we receive fees reflecting the value of the GHG emission reductions achieved through the adoption of our technologies.

Strengthening of the base for the environmental impact solutions business

STEP1

Technology development out to 2030

Quickly develop and validate innovative technologies that achieve GX

STEP2

Commercialization out to 2035

Exhibit concrete environmental value at commercial scale and accelerate commercialization

STEP3

Global deployment

Expand solutions business through licensing overseas