

Neste pledges to boost the uptake of recycled and bio-based plastics

Our ambition

Neste, the world's leading producer of renewable diesel emerging into chemicals, focuses on waste-based and bio-based raw materials to combat climate change and accelerate circular economy. Being recognized as an expert in refining a diverse pool of renewable raw materials, the company aims to additionally introduce liquefied plastic waste as a future raw material to traditional oil refining. First industrial scale trials are scheduled for 2019. By 2030, the company's target is to process annually more than 1 million tons of waste plastic to produce high quality fuels, chemicals, and new plastics.

Neste sees a combination of solutions, e.g. mechanical recycling, chemical recycling and bio-based material solutions, as an essential approach to the Plastics Strategy agenda. Using waste plastic as a refinery raw material helps increase recycling rates by creating a new outlet for plastic waste currently being landfilled or incinerated. Chemical recycling of plastics enables utilization of plastic waste streams that currently have low or no value in plastic recycling.

Neste's bio-based and chemically recycled plastics serve as drop-in solutions in a variety of applications without compromising quality, product safety or processability.

Enabling virgin grade recycled products

Neste's chemical recycling of waste plastic opens up totally new usage areas for recycled polymers. Chemical recycling means converting waste plastic into raw material for the chemical industry, where it can be processed into end products, such as fuels, chemicals, and new plastics.

Neste's chemically recycled plastics are comparable to virgin grade polymers. They enable utilization of recycled plastics also in applications where traditional recyclates fail to reach the food safety, hygiene or mechanical quality requirements. They are suitable for sensitive applications, such as food packaging or toys. They are equally suited for applications requiring material strength, such as e.g. producing vehicle parts.

Developing partnerships, value chains and technologies

To boost the uptake of recycled and bio-based plastics, Neste aims to create and grow partnerships throughout the value chain; from sourcing to processing and up to end-user offerings via brandowners.

While Neste's bio-based polymers are fully compatible with existing processes, large scale production of goods based on plastic waste requires development of new technologies. For Neste to reach its waste plastics processing target, plastic liquefaction technology closing the circular economy loop needs to be further developed to enable industrial scale operations that are safe, reliable, as well as sustainable.

Neste primarily focuses on waste plastic which is already collected and sorted, but is of low value or not at all suitable for mechanical recycling. Sorting plastics from mixed waste intended for incineration or landfilling could provide another stream of material. This may, however, require further development of sorting technologies.

Recognition of chemical recycling needed to speed up development

In order to reach the ambitious EU plastics recycling targets, chemical recycling needs to be recognized in the EU regulation as a complementing recycling method to other methods, such as mechanical recycling.

If utilization of recycled material e.g. in packaging will be mandated in the future, chemically recycled material should be considered as recycle.

Additional information

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Web pages for further information:

1. [Neste Waste Plastics page](#)
2. [Neste Bioplastics](#)