

Position Paper

Plastics Europe Position on recycled content in the End-of-Life Vehicle Directive Revision

Plastics Europe supports an ambitious binding legislative target for recycled content in automotive plastics of 20% by 2030 and 25% by 2035, which will require acceptance of chemical recycling with mass balance to meet the expected demand for recycled content.

To reach Plastics Europe's proposed targets, we believe only a 10% recycled content target is possible with current mechanical recycling technologies by 2030. To double this and hit the 20% target will require acceptance of chemical recycling as well as a regulatory framework that ensures investment security, usage of all recycled material streams available, and increased collection, sorting and recycling of automotive waste.

Plastics used in the automotive industry are high performance products, which need to meet safety, durability, and light weighting criteria for the whole lifetime of a vehicle and often requires the highest quality of polymer available. The mechanical recycling technologies currently in use today can provide only half of the recycled content required to achieve the industries' ambitious goal of 20% recycled content by 2030¹. Furthermore, mechanical recycling cannot always reprocess all types of plastics, nor provide the quality that is needed for safety, performance, and other requirements in automotive. To fill this gap new innovative technologies such chemical recycling will be required to make up the shortfall of recycled materials. To achieve these targets Plastics Europe believes there are several essential preconditions required in the legislative framework:

1. Acceptance of chemical recycling using the mass balance credit model

To meet the future needs for circularity in the plastics sector, including the provision of high-quality plastics for the automotive market, significant investments from industry are needed². Plastics Europe sees the acceptance of chemical recycling using a mass-balance credit model³ as an essential step in securing the required amounts of high-quality recycled materials for the market that

¹ Numbers based off independent survey performed by ARCO consultants for Plastics Europe over the summer of 2022

² Reshaping Plastics Report, SystemIQ, 2022

³ Using a chain of custody approach compliant with the current definitions on recycling within the Waste Framework Directive

fulfil all the required performance, environmental and safety obligations. This technology will complement existing mechanical recycling capabilities, and Plastics Europe believes our proposed target can only be met through a combination of mechanical and chemical recycling⁴.

To accelerate the needed growth in capacity of chemical recycling, investors need long term confidence and security, including the full recognition of chemical recycling as well as transparent calculation and verification methods for chemically recycled content. This includes the acceptance of the mass balance chain of custody model which is already well recognised in other sectors such as the power and food sectors.

2. Design for recycling

Design for recycling is an essential element for improving circularity. However, for automotive plastics, the design for circularity must not negatively affect the safety, performance, and light-weighting considerations that are always at the forefront of design for the automotive industry. Limiting plastic materials that are permitted for use in automotive plastics, e.g., through bans or negative lists, has the potential to result in materials substitutions with heavier, and less durable alternatives that negatively impact fuel efficiency and GHG emissions.

We therefore see a clear need for securing a framework for innovation that ensures we deliver on our circular economy goals. This includes measures to support new processes, systems and products such as innovations in the recycling of automotive high-performance components and product, design for recycling and strongly oppose the unjustified limitation of materials used in automotive parts.

3. Material streams accounted for as recycled content

a. Open loop recycling is an enabler of circularity

Open loop recycling helps ensure there will be enough material available across the industry to meet the targets. To facilitate the uptake of recyclates, the quality of the output of recycling streams is a decisive factor. The main objective should be to incentivise the use of sustainable feedstock to improve plastics circularity and reduce dependence on primary fossil feedstocks to manufacture plastic products.

In industry sectors that depend on the use of high-performance materials, a mandatory use of mechanically recycled materials from post-consumer and closed loop systems may not meet the physical performance that are required. This may in some instances be compensated for by increasing wall thicknesses, but this does translate into more material being used with corresponding increasing GHG emissions and decreasing fuel efficiency.

Furthermore, new car parts using recycled materials from a mandatory closed-loop recycling would be obliged to use recyclates (including additives) from materials taken for vehicles 10+ years old which may not meet current chemicals policy. These recyclates could contain substances of concern

⁴ [Plastics Europe position on complementarity of chemical and mechanical recycling](#)

that were not restricted in the past and are now prohibited by the End-of-Life Vehicle Directive, REACH or other regulations (e.g. Perfluorooctanoic acid with a threshold of 25 ppb).

Therefore, current post shredder recycling technology (PST) using a simple density separation is not able to provide the traceability for PST feedstock which is required to comply with existing chemical regulation. For the future, we see a value in having all chemical regulations relating to automotive specific plastics formulated under REACH.

b. Acceptance of pre- and post-consumer recyclates accelerating recycled content use

To quickly raise the recycled content used in new cars, pre- and post-consumer recyclates should be accounted for as recycled content equally as both promote plastics circularity. Plastics Europe supports precautionary measures to ensure pre-consumer waste has achieved waste status according to the Waste Framework Directive.

4. Vehicles should be assessed at fleet level

Increasing the circularity of automotive plastics will require a huge effort along the value chain both in terms of investment and building the required infrastructure within a reasonable timeframe. The initial level of mandatory recycled content should be on the level of the vehicle manufacturer (fleet average) to allow more flexibility, where the availability of suitable recycled materials will be limited. This will ensure that any potential supply issues in material do not result in production shortages.

5. Enhanced collection and sorting on national level

Sorting and collection are key for transforming waste into a valuable source for mining carbon for a circular economy. To accelerate the quantities and qualities of recycled content for automotive plastics, an upscaling of collection, sorting and recycling of automotive plastics at a national level is urgently needed.

Conclusion:

We believe a mandatory recycled content target of 20% in 2030 and 25% in 2035 is an important step to increase the circularity of automotive plastics. This target can only be met with a combination of mechanical and chemical recycling technologies. A regulatory framework that accommodates innovative advanced recycling technologies and that encourages investment and further accelerates commercialization of this technology is now urgently needed to provide the required quantities and qualities of recyclates for the automotive sector and ensure the path towards the circular economy.

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