

Dismantling automotive glass is a mandatory step to increase recycling of end-of-life vehicles

Position on the revision of the End-of-Life of Vehicles Directive

Flat glass components used in vehicles, e.g., windscreens, side windows, or panoramic sunroofs, enable users' visibility, safety and comfort.

If one dismantles and sorts automotive glass parts correctly at the end-of-life of vehicles, recycling this glass is possible. This reduces raw materials consumption by 1.2 tonnes for each tonne of used cullets. It also reduces CO₂ emissions, cutting at least 600 kgCO₂ from the production process for each tonne of used cullets¹.

Today, however, treatment facilities rarely dismantle automotive glass parts before shredding vehicles (less than 10% of the time). This is problematic for glass recycling since, once shredded, other vehicle materials will contaminate the crushed glass (a.k.a. "cullet"), which prevents it from being transformed into new glass products.

Dismantling glass parts at the end-of-life of vehicles is therefore a crucial starting point to increase the availability of quality cullet from automotive glass.

Glass for Europe supports the European Commission's (EC) provisions on glass dismantling in the proposal for an End-of-Life of Vehicles (ELV) Regulation. This provision alone has the potential to increase the availability of high-quality glass cullet that is required to increase recycled content and improve circularity and sustainability in glass manufacturing.

1. Why a mandatory glass dismantling provision?

Recycling cullets contaminated by non-glass components is unsafe as it can seriously damage the glass manufacturing industrial equipment². Additionally, it risks hindering the properties of the future glass parts and the safety of pedestrians and passengers.

When Authorised Treatment Facilities (ATF) dismantle and sort the glass, the dismantling process required to avoid contamination depends on the parts (and the non-glass elements they contain). In principle, **these processes are sufficiently effective to enable recycling of the resulting cullet.**

Across several glass sectors, **there is a high demand for high-quality glass cullet.** As soon as the dismantling of automotive glass takes place before shredding, this glass cullet becomes a resource for which a very competitive market exists.

Today, in more than 90%³ of the cases, there is no recovery of glass before shredding, resulting in contamination of the cullet. This market failure needs to be overturned by a mandatory glass dismantling provision.

¹ Favaro, N., & Ceola, S. (2021). Glass Cullet: Sources, Uses, and Environmental Benefits. *Encyclopedia of Glass Science, Technology, History, and Culture*, 2, 1179-1189. <https://doi.org/10.1002/9781118801017.ch9.9>

² Ift Rosenheim for Undesverband Flachglas, Recycling of flat glass in the building industry, 2019

³ Calculation for 2021 based on Eurostat data and the fact glass represents, on average, 3% of vehicles' weight. Using these numbers, we find that glass represented ~195'780 tonnes of the 6'526'000 tonnes of end-of-life vehicles' waste in 2021. Considering that 12'482 tonnes of glass were retrieved from end-of-life vehicles in the EU in 2021, we evaluate that ~6.4% of glass is currently retrieved.



2. Why is a recycled content obligation not adapted to automotive glass?

The provision on glass treatment of the EC proposal for an ELV Regulation is the best approach to turning automotive glass waste into a resource. It outranks the policy option of a recycled content target for automotive glass because the latter is not expected to increase the availability of automotive glass cullet.

A recycled content target will simply shift overly limited glass cullet resources from one flat glass product type, e.g. building glass, to another, e.g. automotive, without generating any increase in recycling rates.

It would also transfer the responsibility of achieving the target to glass manufacturers whereas dismantling and sorting glass to obtain more cullet from vehicle treatment is out of glass manufacturers' control. It is the responsibility of ATF to dismantle the glass, eventually financially supported by an automotive Extended Producer Responsibility Scheme, and glass companies will compete to access the resource.

- ▶ **Glass for Europe calls on policymakers to maintain the EC proposal on glass dismantling and recycling of the future ELV Regulation.**
- ▶ **Only such a mandatory glass dismantling provision will allow the legislation to produce tangible results in terms of automotive glass recycling and positively contribute to circularity and greater sustainability.**

Glass for Europe is the trade association for Europe's flat glass sector. Flat glass is the material that goes into a variety of end products, primarily in windows and facades for buildings, windscreens and windows for automotive and transport as well as solar energy equipment, furniture and appliances. Glass for Europe brings together multinational firms and thousands of SMEs across Europe, to represent the entire flat glass value-chain. It is composed of flat glass manufacturers, AGC Glass Europe, Guardian, NSG-Group, Saint-Gobain, and Şişecam and works in association with national partners gathering glass processors and transformers. European automotive glass producers supply advanced glazing systems to both Original Equipment Manufacturers and the replacement market all over the world.

EUROSTAT, End-of-life vehicle statistics, Retrieved June 7, 2024. https://ec.europa.eu/eurostat/statistics-explained/index.php?oldid=555195#Total_weight_of_end-of-life_vehicles

Deloitte Développement Durable, Véronique MONIER, Radia BENHALLAM, Florent MACCARIO, Rafael BASCIANO. ADEME, Eric LECOINTRE. February 2019

