

Glass for Europe statement on Recycled Content of flat glass for LEED Certification

Leadership in Energy and Environmental Design (LEED) is a rating system, developed by the U.S. Green Building Council, which aims to promote sustainable buildings, by awarding credit points in different categories. It addresses, amongst others, reduction of energy use, improvement to the indoor environment quality and the recycling of materials. One of these categories, Materials and Resources, enables credits to be earned on the basis of the recycled content of products.

- ▶ **With this statement, Glass for Europe wishes to explain how the general definitions should be understood in the context of flat glass to clarify and bring uniformity to the quantification of recycled content under the LEED scheme¹.**

1. Definitions

The material definitions in LEED are taken from section 7.8.1.1 of ISO 14021:20012 Environmental labels and declarations, where:

RECYCLED CONTENT is defined as: proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content.

POST-CONSUMER MATERIAL is defined as: material generated by households or commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose.

In practice, in the case of flat glass, all material coming from glass recycling collection schemes falls under this category, i.e. glass waste from end-of-life vehicles, construction and demolition waste, etc.

PRE-CONSUMER MATERIAL is defined as: material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being **reclaimed within the same process** that generated it.

In the case of flat glass, this waste originates from the processing or re-processing of glass that takes place before the final product reaches the consumer market. Pre-consumer waste flat glass is made of cut-offs, losses during laminating, bending and other processing, including the manufacture of insulating glass units or automotive windscreens. This processing could be at the same facility as the production furnace but is separate to the flat glass manufacturing process.

¹ LEED v4 for BUILDING DESIGN AND CONSTRUCTION, 2014

Only material that would otherwise have entered the solid waste stream, but is in fact being reused qualifies as recycled content. Pre-consumer recycled content therefore **excludes** material that can be reclaimed within **the same process** that generated it. Cullet generated in the furnace plant and which is reintroduced into the furnace cannot be considered as pre-consumer recycled content, since there was never an intent to discard it and therefore it would never have entered the solid waste stream.

2. Recycled content claims for flat glass

A recycled content claim should be made only for those materials that have been recovered, or diverted, from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).

- ▶ **Glass cullet, obtained from glass processing operations, and then reused in the flat glass manufacturing process (melting and annealing), does qualify as pre-consumer recycled content for LEED certification.**
- ▶ **Waste glass, originating from the disposal of previous glass products and that has been collected and sorted, when reused in the flat glass manufacturing process, does qualify as post-consumer recycled content for LEED certification.**
- ▶ **Internal glass cullet generated during the flat glass melting and annealing production process, when reintroduced into the production original process, does NOT qualify as pre-consumer recycled content for LEED certification.**

In making a recycled content claim, a proper distinction between pre-consumer and post-consumer waste glass should be made, since they contribute differently to the calculation of the recycled content materials.

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 building glass value-chain. It is composed of flat glass manufacturers, AGC Glass Europe, Guardian, NSG Group, Saint-Gobain Glass Industry and Siseçam-Trakya Cam, and works in association with national partners gathering thousands of building glass processors and transformers all over Europe.