Vitro Architectural Glass
400 Guys Run Road
Cheswick, PA 15024 USA
www.VitroGlassHub.com

Recycled Materials Content

Regarding the matter of recycled content of architectural glass when pursuing a Leadership in Energy and Environmental Design (LEED), or other, green building rating certification, there has been some confusion. There are two citations available that define recycled content for building materials, which typically are found within the building Materials and Resources (M&R) category. This correspondence will provide explanation to the definitions and criteria of the referenced standards and give explanation as to why Vitro typically can no longer claim any pre- or post-consumer recycled for its glasses, including 19mm Starphire® glass.

Cullet Background

Float glass manufacturing feedstock materials are scrutinized as part of a quality process given the sensitive nature of glass production. It is common for manufacturers to produce scrap glass, called cullet, which is stockpiled and then reprocessed and reutilized into the manufacturing process. The range of cullet typically comprises between 10%- 20% of the final manufactured glass product. Since cullet is generated at the manufacturing site, the chemical make-up of the cullet is known, and it can be sorted and stockpiled appropriately prior to reutilization as feedstock.

Can this reprocessed material be considered 'recycled content' for LEED or other projects adhering to a green building rating system? The following provides excerpts from standards that are referenced within green building rating systems regarding a product's recycled content.

For LEED-NC v. 2.1 and Canadian Green Building Council (CaGBC) LEED projects

Reference Standard*: 15 U.S.C. §§ 41-58, Part 260 – Guides for the use of Environmental Marketing Claims*

> (e) ***Recycled content*****:** A recycled content claim may be made only for materials that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer). To the extent the source of recycled content includes pre-consumer material, the manufacturer or advertiser must have substantiation for concluding that the pre-consumer material would otherwise have entered the solid waste stream. In asserting a recycled content claim, distinctions may be made between pre-consumer and post-consumer materials. Where such distinctions are asserted, any express or implied claim about the specific pre-consumer or post-consumer content of a product or package must be substantiated.
>
> It is deceptive to misrepresent, directly or by implication, that a product or package is made of recycled material, which includes recycled raw material, as well as used, reconditioned and remanufactured components. Unqualified claims of recycled content may be made if the entire product or package, excluding minor, incidental components, is made from recycled material. For products or packages that are only partially made of recycled material, a recycled claim should be adequately qualified to avoid consumer deception about the amount, by weight, of recycled content in the finished product or package. Additionally, for products that contain used, reconditioned or remanufactured components, a recycled claim should be adequately qualified

Vitro Architectural Glass
400 Guys Run Road
Cheswick, PA 15024 USA
www.VitroGlassHub.com

to avoid consumer deception about the nature of such components. No such qualification would be necessary in cases where it would be clear to consumers from the context that a product's recycled content consists of used, reconditioned or remanufactured components.

Example 1:
A manufacturer routinely collects spilled raw material and scraps left over from the original manufacturing process. After a minimal amount of reprocessing, the manufacturer combines the spills and scraps with virgin material for use in further production of the same product. A claim that the product contains recycled material is deceptive since the spills and scraps to which the claim refers are normally reused by industry within the original manufacturing process, and would not normally have entered the waste stream.

For LEED-NC v. 2.2, 2009 (v 3.0), 2014 (v4.0) or 2019 (v4.1) projects:

Reference Standard: *ISO 14021: Environmental labels and declarations — Self-declared Environmental Claims (Type II environmental labeling)*

7.8 Recycled content

7.8.1 Usage of terms

7.8.1.1 Recycled content and its associated terms shall be interpreted as follows:

a) Recycled content

Proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content, consistent with the following usage of terms.

1) Pre-consumer material:

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.

2) Post-consumer material:

Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

Additionally, the United States Green Building Council (USGBC) provides Credit Interpretation Ruling (CIR) on their website. A similar ruling was posted regarding site generated scrap/waste being re-introduced into the manufacturing process. The ruling deemed such material cannot be claimed as recycled content. The ruling can be browsed under Materials and Resources (M&R) / MRc41 / Credit 4.1 / Recycled Content, Specify 25%, at the following website: http://www.usgbc.org/search/recycled%20content?filters=type:credit_definition.

The CIR is dated September 22, 2005. The ruling was posted October 24, 2005.

Vitro Architectural Glass
400 Guys Run Road
Cheswick, PA 15024 USA
www.VitroGlassHub.com

Summary

Based on the above standards and referenced CIR, it is difficult to claim glass as meeting the recycled content criteria for LEED or other green building projects.

Cullet is a valuable feedstock that is not intended for discard or disposal. The reutilization of cullet is necessary to optimize the manufacturing processes to reduce waste, energy consumption, and raw material acquisition.

Therefore, Vitro reports 0% (zero) post or pre-consumer recycled content in our architectural glass.