

Flat Glass Global Warming Potential

The request:

When states or jurisdictions compile global warming potential for flat glass, we request setting the Global Warming Potential (GWP) limit for flat glass to:

1716 kg CO₂ eq.

The request of 20% above the industry-average referenced in Declaration Number ASTM-EPD121 is due to the inherent uncertainty of the life cycle assessment process and the inclusion of estimated variables and assumptions including, but not limited to, weighted averages, upstream/ downstream transportation and building/service life.

The issue:

Stakeholders and sustainability programs want to better understand the environmental performance of glass products manufactured for buildings.

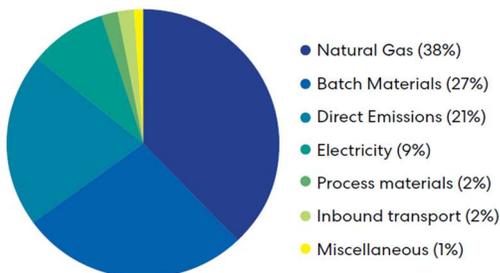
IANA Product Category Rule (PCR) for Flat Glass was published by NSF in 2014 describing the requirements for life cycle assessments (LCAs) and environmental product declaration (EPD) of flat glass.

NGA flat glass* member companies published an industry-average EPD for flat glass sold in the US in December 2019 (ref: ASTM-EPD121).

The EPD scope includes raw material production, transport of materials, manufacturing processes, product packaging, onsite storage and manufacturing waste (cradle to gate).

*members of the Forming Committee

Relative contribution of manufacturing inputs and outputs to Global Warming Potential



The strategy:

Results of the Flat Glass Industry-Average EPD:

- The industry-average Global Warming Potential for flat glass is 1430 kg CO₂ eq.
- Raw materials and direct emissions are the largest drivers of potential environmental impact of flat glass products.
- Many North American flat glass plants have taken measures to more efficiently control emissions using environmental emission control systems.

The declared unit evaluated is one metric tonne (1000 kg) of flat glass, maintained for 30 years.

National Glass Association (NGA) combined with the Glass Association of North America (GANA) in 2018 to create the largest trade association serving our industry. We develop standards, create technical resources, and promote and advocate for glass in the built environment. Learn more at glass.org/about-nga/advocacy. For further information on glass industry sustainability efforts and CO₂ eq. please feel free to contact NGA Technical Staff at <mailto:technicalsvcs@glass.org>.