

Uncertainty Adjusted GWP *in brief*



An Environmental Product Declaration (EPD) documents the global warming potential (GWP) and other impacts of manufacturing a product. Buyers including governments have begun setting limits, thresholds, or pricing to the GWP they will accept for some categories of materials, and requiring an EPD as evidence of compliance. The aim is to provide commercial incentives to disclose and reduce climate impacts, without being overly prescriptive.

Ideally, every EPD would be based on recent data for a specific product made at a particular facility, with all significant process inputs similarly documented back to primary sources. Such EPDs are not readily available, are expensive and time-consuming to create, and would require disclosing commercially sensitive information.

Fortunately, we can still use available EPDs to prove a product's true emissions are compliant, as long as the reported GWP result is far enough below the limit that we are confident the true value is unlikely to exceed that limit. For each EPD, we calculate an uncertainty-adjusted GWP (uaGWP). If $uaGWP < Limit$, then we can be at least 80% confident that the true GWP from a 'perfect' EPD would have $GWP < Limit$.

The uaGWP is calculated from the reported GWP by multiplying in the Uncertainty Factors driven by the product category and the following specificity criteria. The equation is [documented here](#). Category Uncertainty Factors are under active development by BT.org using LCA simulation and industry data.

Specificity Criterion to reduce uncertainty	Example
An EPD is Manufacturer Specific if it is based on data from a single manufacturer.	Industry or Sector EPDs are not manufacturer-specific
An EPD is Facility Specific if it is based on data from a specific production facility.	An EPD for a specific facility whose grid mix, equipment, and waste rates are known.
An EPD is Product Specific if it is based on data for the specific product being delivered, or a narrow range of products whose GWP per declared unit is verifiably shown to vary $< 3\%$.	<ul style="list-style-type: none"> - EPD for a specific concrete mix. - EPD for a range of carpet patterns using the same construction, materials, and thickness - Fabrication-specific steel EPD
Supply Chain Specificity is the proportion of the GWP data that is based on product-specific EPDs or 3P verified LCA of upstream inputs (e.g. cement in concrete).	Around 85% of concrete emissions are from cement. A concrete EPD referencing a specific cement EPD but generic LCA data for aggregates et.al. would be 85% specific.
An EPD is Batch Specific if it is based on data for the specific manufacturing batch of no more than 90 days.	An on-demand EPD produced as part of the manufacturing process, with up-to-date data.

uaGWP method encourages	uaGWP method avoids
<ul style="list-style-type: none"> - Transparency up the supply chain - Disclosure by most producers - Rapid creation of EPDs - Competition in low-carbon solutions 	<ul style="list-style-type: none"> - Lack of compliant products/EPDs - High-emission imports and processes hiding behind averages - Overly onerous documentation

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