What is important to know about EPDs

Sustainability is part of the key objectives of Solar Gard and Saint-Gobain.

Saint-Gobain designs, manufactures and distributes materials and services for the construction and industrial markets. "MAKING THE WORLD A BETTER HOME" is Saint-Gobain's purpose and it formulates the vision of Saint-Gobain to become a worldwide leader in light, sustainable construction.

To achieve carbon neutrality, Saint-Gobain has published a CO_2 roadmap. The roadmap incorporates the Group's new commitments through to 2030 in terms of reducing not only its direct and indirect CO_2 emissions, but also the emissions along its value chain. These new targets for 2030 have been validated by the Science-Based Targets (SBT) initiative which considers them aligned with the Group's 2050 net-zero commitment:

2030 COMMITMENTS

-33%	-50%	-80%	
scope 1 &2 CO_2 emissions	industrial water withdrawal	non-recovered production waste	(versus 2017)

- 33% reduction in scope 1 and 2 emissions in absolute terms compared to a 2017 baseline
- 16% reduction in scope 3 emissions compared to 2017

https://www.saint-gobain.com/en/corporate-responsibility/our-pillars/climate-change

Saint-Gobain also has set other sustainability related objectives, other than the ones on CO_2:

https://www.saint-gobain.com/sites/saint-gobain.com/files/20201112_roadmap_net_zero_carbon_va.pdf

KEY ACTION in SUPPORT of the above is that Saint-Gobain wants to have EPD and Verified LCA for all Saint-Gobain products by end 2030.

TARGET is: Saint-Gobain to be NET-ZERO CARBON by 2050.

Also Solar Gard invests in sustainable production and takes measures to make Solar Gard window films more sustainable during their lifetime by optimization and reduction of its energy use, innovation in its processes and product design, transitioning towards carbon-free energy for its different sites and mobilization of suppliers and alternatives for transport.

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A VERIFIED EPD (TYPE III):

- ☑ is also called EPD Type III
- ☑ is a Publicly available document
- ☑ represents in a concise way and in one single document the environmental impact of a product, group of products, or a product family
- ☑ is based on and consistent with international and national standards such as ISO14025, ISO14044 and EN15804
- ☑ represents the information according to the relevant PCR (Product Category Rules) of the relevant official Program Operator
- ☑ is subject to external and independent verification based on ISO 14025 from an verifier accredited by Program Operator

Nearly all of Solar Gard 's architectural window films are subject to a verified EPD. Some of the Solar Gard EPDs are product EPDs, most are product group EPDs. They are based on EN 15804 +A2 version and are published under different program operators: The International EPD System, NMD, IBU, INIES.

MAKING THE WORLD A BETTER HOME

Understanding ENVIRONMENTAL PRODUCT DECLARATION

WHAT IS AN EPD?

Manufacturers bring through EPDs environmental performance data for a wide range of products & services to market. To ensure credibility of the EPD, there are standards set the rules, more in particular the standards ISO 14025, EN 15804 (for the building and construction sector,) and further ISO 14040 and ISO 14044. And finally there is also a system for independent verification.

An EPD is a picture of the environmental impacts of a product. It shows the will of the manufacturer to be transparent on the environmental impact of its products.

With a verified EPD, manufacturers report comparable, objective and third-party verified data about the environmental performance of their products and services in a transparent way.

When developing an EPD, the environmental performance of the product shall be described from a life cycle perspective by carrying out a life cycle assessment (LCA) of the product.

The results of the LCA study and other information mandated by the reference PCR and general program instructions shall be compiled in the EPD reporting format. The EPD shall then be verified by an approved independent verifier before being registered and published via the portal of the program operator.

WHY USING PRODUCTS WITH EPD?

Architects and building owners should prioritize products with verified Environmental Product Declarations (EPDs Type III) as they offer transparent, third-party verified insight into a product's environmental impact.

Choosing materials with verified EPDs enables architects to design sustainable buildings that align with green building standards and contribute to a healthier environment.

For building owners, selecting products with verified EPDs demonstrates a commitment to sustainability, enhances the building's value, and promotes occupant well-being. In addition there is a growing trend whereby legislators require products with EPD for new built projects and big renovations.

WHICH TYPES OF EPD EXIST?

A verified EPD is also referred to as EPD type III.

Look for the logo:

Verified EPDs are available on the official websites of the program operators.
So: check those websites rather than looking at other sources: you are sure to find the most up-to-date versions.

There also exists a Type II EPD which is a self-declared environmental claim. A Type II EPD is very different from the Type III EPD because a Type II EPD has not been verified by an independent and accredited verifier according to the rules of the relevant program operator.

In general, there are 3 families of EPD:

- **product specific EPDs** (1 manufacturer - 1 product produced in 1 (or several) production site(s)),
- **product group EPDs** (1 manufacturer, several products (same product family; respecting the allowed variation as per the program operator), produced in 1 (or several) production site(s)) and
- **industrywide EPDs** (An industrywide EPD represents an average for a specific industry or product type, i.e. concrete elements, glass or gypsum boards and cover several manufacturers and several

HOW TO READ AN EPD

It is not easy nor evident to compare verified EPDs.

ISO 14044 (§ 4.2.3.7) mentions clearly ***"the equivalence of the systems being compared shall be evaluated before interpreting the results."***

The key points to consider when interpreting EPDs:

Is it a **verified EPD?** Or a manufacturer declaration?
What was verified? The **data for each individual product or the overall production process?**

What is the type of EPD? (single product, group of products, industry EPD).

Which of the **life cycle phases** are covered: A1 (Raw materials supply), A2 (Transport to the manufacturer), A3 (Manufacturing), A4 (logistics), A5 (installation), B (service life), C1-C4 (stages in end of life) and D (recycling)?

And what are **System Boundaries** within each stage?
What is the geographical scope covered?
What is the functional unit?

What are the applicable **Product Category Rules** (ie program operator): INIES for France, NMB for the Netherlands, IBU for (Germany)?

What was the **standard** and which **version** of the standard was used for the LCA? (EN 15804+A1 or +A2 version?)

When all of the above is the same, even then there are further elements to consider when comparing EPDs: for instance where is the plant situated because different countries have different energy mix that could explain a portion of the difference in CO_2 emissions.

SAINT-GOBAIN

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