

Environmental Product Declarations (EPD's)

An Environmental Product Declaration (EPD) is a transparent, objective report that communicates what a product is made of, how it impacts the environment and its impact on human health across its entire life cycle. The objective report called is a life cycle assessment (LCA) which examines every stage in the life cycle of a product including raw material extraction, manufacturing, transportation, use, maintenance and disposal.

All EPD's must be defined by a Product Category Rule (PCR) so products within a category (insulation) report the same information in a streamlined manner.

Valid LCA's are required to conform with international standards such as ISO 14044, 14025 and 21930. Upon the completion of a product's LCA, it's critically reviewed by an independent expert to verify its conformance with ISO standards. Following an LCA's review, an EPD is developed which summarizes the LCA. The EPD is then verified by a third party for accuracy. Finally, a verified EPD is registered by a program operator and is typically valid for 5 years.

Architects and mechanical engineers are increasingly seeking and specifying manufacturers who offer EPD's which can help them to achieve points towards credits and certification with the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED®) and other green building rating systems.

The LEED Materials & Resources category offers a credit called Building Product Disclosure and Optimization - Environmental Product Declarations. This credit offers up to 2 points for 2 different options at one point each. Option 1 is an Environmental Product Declaration. Design professionals must identify and specify at least 20 different permanently installed products sourced from at least 5 different manufacturers. The disclosure criterias are:

- Products with a publically available, critically reviewed life cycle assesement conforming to ISO 14044 with a cradle-to-gate scope are valued as 1 whole product
- Products with industry-wide Type III EPD's that conform to ISO 14025 are valued as 1 whole product

- Product-Specific Type III EPD's with 3rd-party certification are valued as 1.5 whole products

Aeroflex USA's Aerocel® brand of EPDM closed cell elastomeric foam insulation offers mechanical engineers Product-Specific Type III EPD's valued at 1.5 as follows:

- Aerocel Rubber Pipe Insulation
- Aerocel Sheet & Roll Insulation
- Aerocel AeroFit, Aerofix & SaniGuard
- Aerocel Accessories

Aeroflex USA's Product-Specific Type III EPD's are publically available on the following websites:

- <https://www.aeroflexusa.com/environmental-product-declarations-aeroflex/>
- <https://mindfulmaterials.origin.build/#/shared/materials/>
- <https://www.scsglobalservices.com/certified-green-products-guide?program=192&manuf=44528>

Sources:

SCS Global Services - <https://www.scsglobalservices.com/services/environmental-product-declarations>

USGBC - <https://www.usgbc.org/credits/new-construction-core-and-shell-schools-new-construction-retail-new-construction-data-15?return=/credits/New%20Construction/v4.1>