

EPD Quick-Start Guide

5 Easy Steps

Get what you need from an Environmental Product Declaration, *fast*.

Step 1

Note validity and verification.



According to ISO 14025 and ISO 21930

First, make sure the EPD is still valid. Search for an update if its period of validity has passed.

For LEED v4, make sure the EPD complies with all ISO standards listed in the LEED Reference Guide (14025, 14040, 14044, and 21930), as verified by a third-party program operator.

Step 4

Scan the impact assessment.

Most people are seeking out EPDs for the actual data. Here's how to get a quick read on that.

- 1) Estimate how many units of the material you'll be using, based on the size of your project and the functional or declared unit of the EPD.
- 2) Focus on the biggest impacts identified in the impact assessment, and multiply to get back-of-the-envelope projections for your whole project. In general, embodied carbon (a.k.a. global warming potential, or GWP) is the most reliable piece of data and serves as a proxy for other impacts as well.
- 3) For LEED v4, just collecting EPDs is enough to get a point for transparency. To get points for optimization, you will need to demonstrate reductions in three major impact categories.

IMPACT MEASURE ³	TOTAL ¹	PRODUCTION	USE PHASE	END OF LIFE	REDUCTION ²
Primary Energy (MJ)	10.3	8.9	0.4	1.0	-2%
Global Warming Potential (kg CO ₂ equivalent)	0.80	0.56	0.04	0.20	-2%
Ozone Depletion (kg CFC-11 equivalent)	2.20E-08	2.20E-08	2.46E-15	1.61E-14	-1%
Acidification Potential (H ⁺ moles equivalent)	0.21	0.18	0.01	0.02	-4%
Eutrophication Potential (kg PO ₄ equivalent)	4.83E-04	2.62E-04	3.60E-05	1.85E-04	-3%
Smog - Photochemical Oxidant Creation Potential (kg O ₃ -Equivalent)	0.054	0.037	0.004	0.012	-2%

Step 5

Dare to compare.

The numbers from Step 4 generally make sense for comparing EPDs among multiple products or against an industry baseline, as suggested in LEED v4. This is rocky terrain due to the complexity of life-cycle assessment, but you can get a rough comparison if you ensure the following are all the same among EPDs being compared:

- product category rule
- functional or declared unit
- system boundary

Step 2

1 sq ft

Identify the declared or functional unit.

There's a big difference between a square meter and a cubic meter. Knowing the basic unit being used throughout the EPD is essential.

Step 3

Comprehend the system boundary.

... packaged and ready for shipment at the manufacturing gate ...

The importance of understanding this section can't be overstated.

All the info in the EPD depends on assumptions made about the system boundary. This section should start by telling you which parts of the life cycle are considered. The two most common:

- *Cradle-to-gate* tracks impacts from extraction of raw materials through manufacturing and packaging.
- *Cradle-to-grave* tracks impacts from extraction of raw materials through manufacturing, transportation to the jobsite, use, and end of life.

Watch for the nitty-gritty, especially with cradle-to-grave assessments. A lot may be excluded from consideration, like the carbon impacts of deforestation. Unexpected things may also be included, like the benefits of reclaiming a waste material rather than sending it to a landfill. Many exclusions and inclusions of this sort are reasonable, as long as they are clearly declared.

Even if you can't compare against a baseline or another product, there's another great way to use EPD data: shave off embodied impacts. If you're trying to reduce embodied carbon, for example, optimize your design so you need less of the highest-carbon materials.