



Optimization Summary

Environmental Product Declaration

Company Name

Validity Period

EPD Name, Declaration Number, Certification Period

Reference EPD Name, Declaration Number, Certification Period

Product Category Rules & Version

Reference EPD Product Specific Industry Average

Link to Optimization Addendum

Comparability Criteria Totals
(from comparability worksheet)



Conforms with LEED v4 Building Product Disclosure and Optimization - EPDs, Option 2. Multi-attribute optimization
The comparison of these construction products conforms to the requirements of ISO 14025 §5.6, §6.7.2 and ISO 21930 §5.5, §7.3.

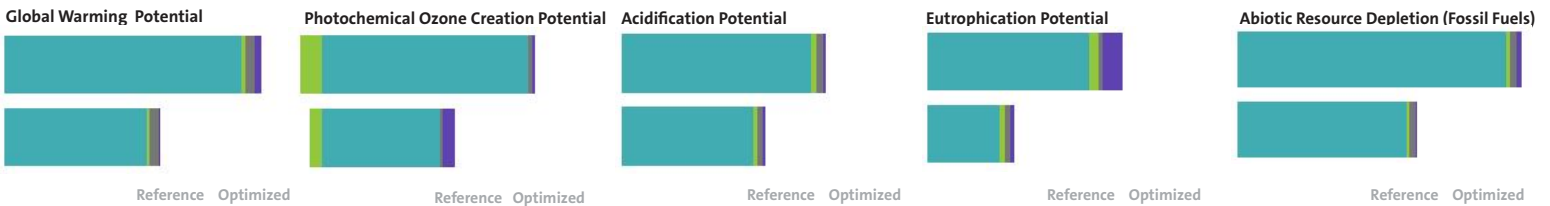
Results

Modules in Which Changes Occur

PRODUCT STAGE			CONSTRUCTION STAGE		USE STAGE							END OF LIFE STAGE				
Raw material supply	Transport	Manufacturing	Transport from gate to site	Assembly/Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/demolition	Transport	Waste processing	Disposal	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	

Environmental Impact Reduction

Percent change is not an appropriate method to represent changes in Ozone Depletion Potential, due to large differences in orders of magnitude between results.



PRODUCT
CONSTRUCTION
USE
END OF LIFE

Optimization Sources

Interpretation





Comparability Criteria

Environmental Product Declaration

UL Environment Comparability Rating Results

Select as applicable; totals displayed on Summary front

Interpretation

- ● ● ● **Representativeness**
- ● ● ● **Scope**
- ● ● ● **System Boundaries**
- ● ● ● **LCI Background Data & LCA software**
- ● ● ● **Data Quality**
- ● ● ● **Impact Assessment**
- ● ● ● **Use Phase Calculations**
- ● ● ● **End of Life Assumptions**
- ● ● ● **Allocation Rules**
- ● ● ● **Cut-Off Rules**
- ● ● ● **Materials & Additional Information**
- ● ● ● **EPD Content & PCR Version**

Comparability Criteria Totals ● ● ● ●

Robust Comparison

- ⚡ ≥ 7 More than half of criteria are equivalent or identical for comparison
- ⚡ ≤ 5 Less than half of criteria require additional interpretation for comparison
- ⊖ No criteria are flagged that warrant significant justification for comparison
- ⊖ No criteria are flagged that prevent comparison

Compare with Caution

- ⚡ ≤ 5 Less than half of criteria are equivalent or identical for comparison
- ⚡ ≥ 7 More than half of criteria require additional interpretation for comparison
- ⊖ ≤ 1 One or no criteria are flagged that warrant significant justification for comparison
- ⊖ No criteria are flagged that prevent comparison

Ineligible for Comparison

- ⊖ > 1 More than one criteria are flagged that warrant significant justification for comparison
- ⊖ ≥ 1 One or more criteria are flagged that prevent comparison

Results and interpretation are further explained in the Optimization Addendum provided at:

Comparability Criteria

Representativeness

- If benchmark EPD is industry average, the compared product specific EPD is represented in the average
- If benchmark EPD is product specific, the compared product is equivalent
- Product specific EPD is not represented in industry average EPD or not equivalent to benchmark

Scope

- Identical functional units, product category definition/description and equivalent period of validity
- Equivalent functional units, product category definition/description, and period of validity
- Different functional units, product category definition/description, and/or different period of validity

System Boundaries

- Equivalent system boundaries with equivalent modules excluded
- Includes A1-A3 with identical use phase and EOL options
- Includes A1 - A3, no use phase, no EOL options

LCI Background Data & Software

- Consistent LCI background data and software
- Consistent LCI background data, different software
- Consistent software, different LCI background data
- Different LCI background data, different software

Data Quality*

- Equivalent data quality with equivalent data collection procedures
- Some equivalent data quality and data collection procedures
- Different data quality with different data collection procedures

*Quality refers to coverage, precision, completeness, representativeness, consistency, reproducibility, and sources

Impact Assessment Method

- Identical inventory and impact assessment categories, method & version
- Equivalent inventory and impact assessment categories, method & version
- Different inventory and impact assessment categories, method & version

Assumptions & Calculations

Use phase

- Identical use phase calculations and units
- Different use phase calculations and units

End of Life

- Equivalent end of life assumptions by disposal option
- Different end of life assumptions by disposal option

Allocation

- Equivalent choice of allocation method(s)
- Different choice of allocation method(s) with robust sensitivity analysis showing allocation choice affects results by $< 5\%$
- Different choice of allocation method(s) w/o sensitivity analysis

Cut-off Rules

- Identical application of cut-off criteria for inclusion of flows
- Different application of cut-off criteria with robust sensitivity analysis showing cut-off criteria affects results by $< 5\%$
- Different application of cut-off criteria without sensitivity analysis

Materials & Additional Information

- Equivalent provision of additional environmental information, declared materials and substances
- Different additional environmental information, declared materials and substances

EPD Content and PCR Version

- Equivalent EPD content, format, and reference PCR version number
- Different EPD content, format, and reference PCR version number