CERTIFIED
ENVIRONMENTAL PRODUCT DECLARATION OPTIMIZATION
UL.COM/EPD

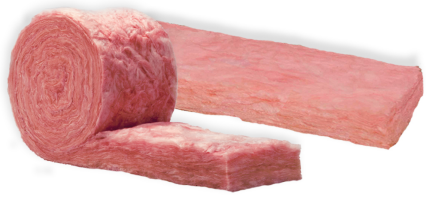
# Optimization Summary
## Environmental Product Declaration

**Company Name** Owens Corning

**Validity Period** 11/9/18-11/9/2021

**EPD Name, Declaration Number, Certification Period**
EcoTouch® PINK® Fiberglas™ Batt & Roll Insulation - Unfaced and Faced, 4788548937.101.1, September 19, 2018-September 19, 2023

**Reference EPD Name, Declaration Number, Certification Period**
EcoTouch® Unfaced Insulation, 12CA25418.103.1, July 31, 2013-July 31, 2018



**Product Category Rules & Version Number** UL Part B: Building Envelope Thermal Insulation EPD Requirements, UL 10010-1

**Reference EPD** ☑ Product Specific ☐ Industry Average

**Link to Optimization Addendum** https://spot.ul.com/data/spot/api/v1/products/5ad1f0c355b0e82d946aca18/documents/5be5966c95c1556524973680

**Comparability Criteria Totals (from comparability worksheet)** 8 4 0 0

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.

| | Global Warming Potential | | Photochemical Ozone Creation Potential | | Acidification Potential | | Eutrophication Potential | | Abiotic Resource Depletion (Fossil Fuels) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Reference | Optimized | Reference | Optimized | Reference | Optimized | Reference | Optimized | Reference | Optimized |
| PRODUCT | 5.4E-01 | 4.6E-01 | 2.1E-02 | 2.1E-02 | 2.1E-03 | 2.0E-03 | 2.7E-03 | 2.2E-03 | 7.7E-01 | 7.0E-01 |
| CONSTRUCTION | 5.8E-02 | 3.2E-02 | 1.0E-02 | 5.3E-03 | 3.6E-04 | 1.9E-04 | 5.0E-05 | 2.6E-05 | 1.3E-01 | 6.8E-02 |
| USE | 0.0x | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| END OF LIFE | 8.7E-03 | 8.6E-03 | 1.5E-03 | 1.5E-03 | 5.5E-05 | 5.4E-05 | 7.5E-06 | 7.4E-06 | 2.0E-02 | 2.0E-02 |
| | -17% | | -17% | | -11% | | -20% | | -15% | |

## Optimization Sources

The environmental impact reductions were due to improved efficiencies in raw materials, inbound transportation, manufacturing, outbound transportation and end of life transportation.

## Interpretation

Using the comparability criteria, the comparison can be termed a robust comparison. Eight of the criteria were identical or equivalent. Four of the criteria required additional interpretation for comparison. For Scope and PCR Version, there are differences since this summary compares an earlier version of the same product. For Data Quality, the number of plants was increased and level of primary emission data included in the analysis was more detailed for the optimized version of the EPD. For Cut-off Rules, the packaging end of life was not modeled in the reference EPD.

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# Comparability Criteria
## Environmental Product Declaration

## UL Environment Comparability Rating Results
Select as applicable; totals displayed on Summary front

- 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** 8 | 4 | 0 | 0

## Interpretation

*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
- 0 No criteria are flagged that warrant significant justification for comparison
- 0 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
- 0 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: https://spot.ul.com/data/spot/api/v1/products/5ad1f0c355b0e82d946aca18/documents/5be5966c95c1556524973680

## 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 exluded
- 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