### Section 1: Summary

### CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

#### MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY | GREENSCREEN SCORE | HAZARD TYPE

- **ULTIMA WITH AIRGUARD COATING**
  - Mineral Wool (Bioinsoluble, with Alkaline Oxide and Alkali Earth Oxide Content Greater Than 18% by Weight) LT-UNK
  - Perlite (Perlrite) LT-UNK
  - Cellulose Pulp NoGS
  - Starch LT-UNK
  - Limestone LT-UNK
  - Titanium Dioxide LT-1
  - Kaolin Clay LT-UNK
  - Dolomite NoGS
  - Polyvinyl Acetate (PVA) LT-UNK
  - Quartz LT-1
  - Silica, Amorphous LT-P1
  - Poly(Vinyl Alcohol) LT-UNK
  - Unsaturated Fatty Acids, C16-22 and C18-unsatd. MUL
  - Undisclosed LT-UNK

#### VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

#### CERTIFICATIONS AND COMPLIANCE


#### CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.
This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold.
- Nested Material Inventory method with individual Material-level thresholds.

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.1, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-1-standard](http://www.hpd-collaborative.org/hpd-2-1-standard)

### ULTIMA WITH AIRGUARD COATING

**PRODUCT THRESHOLD:** 1000 ppm  
**RESIDUALS AND IMPURITIES CONSIDERED:** Yes  
**RESIDUALS AND IMPURITIES NOTES:** Residuals / impurities in select raw materials are quantitatively measured and are displayed in the HPD when greater than 1000ppm.  
**OTHER PRODUCT NOTES:** None

### MINERAL WOOL (BIOINSOLUBLE, WITH ALKALINE OXIDE AND ALKALI EARTH OXIDE CONTENT GREATER THAN 18% BY WEIGHT)

<table>
<thead>
<tr>
<th>%:</th>
<th>30.0000 - 50.0000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GS:</strong></td>
<td>LT-UNK</td>
</tr>
<tr>
<td><strong>%:</strong></td>
<td>30.0000 - 50.0000</td>
</tr>
<tr>
<td><strong>GS:</strong></td>
<td>LT-UNK</td>
</tr>
<tr>
<td><strong>ROLE:</strong></td>
<td>Core</td>
</tr>
</tbody>
</table>

**HAZARDS:**  
**AGENCY(IES) WITH WARNINGS:**  
**R40 - Limited Evidence of Carcinogenic Effects**  
**CANCER**  
**EU - R-phrases**  
**H351 - Suspected of causing cancer**

**SUBSTANCE NOTES:** Mineral fiber is not classified as a carcinogen by IARC, NTP, CA Proposition 65 or OSHA. The R40 and H351 phrases below are triggered by a special provision “Note Q”, found only in the EU’s CLP Regulation and for which the applicability to the provided products is neither certain nor adopted by the manufacturer. The world’s leading institute on carcinogen classification, the International Agency for Research on Cancer (IARC) has determined that there is insufficient evidence to classify this material as carcinogenic. The EU’s CLP Regulation focused on creating criteria to characterize biosolubility, but did not provide data to support a causal relationship between the EU test method and actual carcinogenicity.

### PERLITE (PERLITE)

<table>
<thead>
<tr>
<th>%:</th>
<th>5.0000 - 15.0000</th>
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<tr>
<td><strong>GS:</strong></td>
<td>LT-UNK</td>
</tr>
<tr>
<td><strong>%:</strong></td>
<td>5.0000 - 15.0000</td>
</tr>
<tr>
<td><strong>GS:</strong></td>
<td>LT-UNK</td>
</tr>
<tr>
<td><strong>ROLE:</strong></td>
<td>Filler</td>
</tr>
</tbody>
</table>

**HAZARDS:**  
**AGENCY(IES) WITH WARNINGS:**  
**None Found**  
**No warnings found on HPD Priority lists**

**SUBSTANCE NOTES:** None

### CELLULOSE PULP

<table>
<thead>
<tr>
<th>%:</th>
<th>1.0000 - 10.0000</th>
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</thead>
<tbody>
<tr>
<td><strong>GS:</strong></td>
<td>NoGS</td>
</tr>
<tr>
<td><strong>%:</strong></td>
<td>1.0000 - 10.0000</td>
</tr>
<tr>
<td><strong>GS:</strong></td>
<td>NoGS</td>
</tr>
<tr>
<td><strong>ROLE:</strong></td>
<td>Binder</td>
</tr>
</tbody>
</table>

**HAZARDS:**  
**AGENCY(IES) WITH WARNINGS:**  
**None Found**  
**No warnings found on HPD Priority lists**
### STARCH

<table>
<thead>
<tr>
<th>ID</th>
<th>9005-25-8</th>
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</thead>
<tbody>
<tr>
<td>%</td>
<td>1.0000 - 10.0000</td>
</tr>
<tr>
<td>GS</td>
<td>LT-UNK</td>
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<td>RC</td>
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</tr>
<tr>
<td>NANO</td>
<td>No</td>
</tr>
<tr>
<td>ROLE</td>
<td>Core</td>
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</table>

HAZARDS:

None Found

No warnings found on HPD Priority lists

### LIMESTONE

<table>
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<tr>
<td>%</td>
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<td>GS</td>
<td>LT-UNK</td>
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<td>RC</td>
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</tr>
<tr>
<td>NANO</td>
<td>No</td>
</tr>
<tr>
<td>ROLE</td>
<td>Filler</td>
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</table>

HAZARDS:

None Found

No warnings found on HPD Priority lists

### TITANIUM DIOXIDE

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<thead>
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</thead>
<tbody>
<tr>
<td>%</td>
<td>1.0000 - 5.0000</td>
</tr>
<tr>
<td>GS</td>
<td>LT-1</td>
</tr>
<tr>
<td>RC</td>
<td>None</td>
</tr>
<tr>
<td>NANO</td>
<td>No</td>
</tr>
<tr>
<td>ROLE</td>
<td>Pigment</td>
</tr>
</tbody>
</table>

HAZARDS:

- **CANCER**
  - US CDC - Occupational Carcinogens
  - Occupational Carcinogen
  - CA EPA - Prop 65
  - Carcinogen - specific to chemical form or exposure route
  - IARC
  - Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
  - TEDX - Potential Endocrine Disruptors
  - Potential Endocrine Disruptor
  - MAK
  - Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value

SUBSTANCE NOTES:

Titanium Dioxide is bound within the coating and is not inhalable. Accordingly, it is excluded from regulatory hazard lists. It is not in a respirable form in the final product.

### FIBERGLASS

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<thead>
<tr>
<th>ID</th>
<th>65997-17-3</th>
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<tbody>
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<td>LT-UNK</td>
</tr>
<tr>
<td>RC</td>
<td>None</td>
</tr>
<tr>
<td>NANO</td>
<td>No</td>
</tr>
<tr>
<td>ROLE</td>
<td>Fiber Core</td>
</tr>
</tbody>
</table>

HAZARDS:

- **CANCER**
  - EU - R-phrases
  - R40 - Limited Evidence of Carcinogenic Effects
  - EU - GHS (H-Statements)
  - H351 - Suspected of causing cancer
**KAOLIN CLAY**

<table>
<thead>
<tr>
<th>%: 0.5000 - 10.0000</th>
<th>GS: LT-UNK</th>
<th>RC: None</th>
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**HAZARDS:**

<table>
<thead>
<tr>
<th>CANCER</th>
<th>AGENCY(IES) WITH WARNINGS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAK</td>
<td>Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** None

---

**DOLOMITE**

<table>
<thead>
<tr>
<th>%: 0.5000 - 5.0000</th>
<th>GS: NoGS</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Filler</th>
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**HAZARDS:**

None Found

No warnings found on HPD Priority lists

**SUBSTANCE NOTES:** None

---

**POLYVINYL ACETATE (PVA)**

<table>
<thead>
<tr>
<th>%: 0.1000 - 1.0000</th>
<th>GS: LT-UNK</th>
<th>RC: None</th>
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<th>ROLE: Binder</th>
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**HAZARDS:**

None Found

No warnings found on HPD Priority lists

**SUBSTANCE NOTES:** None

---

**QUARTZ**

<table>
<thead>
<tr>
<th>%: 0.1000 - 1.0000</th>
<th>GS: LT-1</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Filler</th>
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**HAZARDS:**

<table>
<thead>
<tr>
<th>CANCER</th>
<th>AGENCY(IES) WITH WARNINGS:</th>
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</thead>
<tbody>
<tr>
<td>US CDC - Occupational Carcinogens</td>
<td>Occupational Carcinogen</td>
</tr>
<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
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<tr>
<td>CANCER</td>
<td>IARC</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
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<tr>
<td>CANCER</td>
<td>MAK</td>
</tr>
<tr>
<td>CANCER</td>
<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
</tr>
</tbody>
</table>

CANCER

US CDC - Occupational Carcinogens

Occupational Carcinogen

CANCER

CA EPA - Prop 65

Carcinogen - specific to chemical form or exposure route

CANCER

IARC

Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources

CANCER

US NIH - Report on Carcinogens

Known to be Human Carcinogen (respirable size - occupational setting)

CANCER

MAK

Carcinogen Group 1 - Substances that cause cancer in man
<table>
<thead>
<tr>
<th>Substance</th>
<th>ID</th>
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<th>Nano</th>
<th>Role</th>
<th>HAZARDS</th>
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<tbody>
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<td>SILICA, AMORPHOUS</td>
<td>7631-86-9</td>
<td>0.1000 - 0.5000</td>
<td>LT-P1</td>
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<td>CANCER Japan - GHS Carcinogenicity - Category 1A</td>
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<td>POLY(VINYL ALCOHOL)</td>
<td>9002-89-5</td>
<td>0.1000 - 5.0000</td>
<td>LT-UNK</td>
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<td>Binder</td>
<td>None Found No warnings found on HPD Priority lists</td>
</tr>
<tr>
<td>VINYL ACETATE</td>
<td>108-05-4</td>
<td>0.1000 - 1.0000</td>
<td>LT-P1</td>
<td>None</td>
<td>No</td>
<td>Adhesive</td>
<td>CANCER IARC Group 2b - Possibly carcinogenic to humans</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>CANCER EU - GHS (H-Statements) H351 - Suspected of causing cancer</td>
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<tr>
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<td></td>
<td></td>
<td>ENDOCRINE TEDX - Potential Endocrine Disruptors Potential Endocrine Disruptor</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MULTIPLE German FEA - Substances Hazardous to Waters Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CANCER MAK Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MAMMALIAN US EPA - EPCRA Extremely Hazardous Substances Extremely Hazardous Substances</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GENE MUTATION New Zealand - GHS 6.6A - Known or presumed human mutagens</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PHYSICAL HAZARD (REACTIVE) EU - GHS (H-Statements) H225 - Highly flammable liquid and vapour</td>
</tr>
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</table>

SUBSTANCE NOTES: None
<table>
<thead>
<tr>
<th>Material</th>
<th>ID</th>
<th>% range</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
<th>HAZARDS</th>
<th>AGENCY(IES) WITH WARNINGS</th>
<th>SUBSTANCE NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNDISCLOSED</td>
<td></td>
<td>0.1000 - 0.2000</td>
<td></td>
<td></td>
<td></td>
<td>Binder</td>
<td></td>
<td>No warnings found on HPD Priority lists</td>
<td>All ingredients have been screened using the HPD Builder.</td>
</tr>
<tr>
<td>PHOSPHATED STARCH</td>
<td>11120-02-8</td>
<td>0.0100 - 0.1000</td>
<td></td>
<td></td>
<td></td>
<td>Binder</td>
<td></td>
<td>No warnings found on HPD Priority lists</td>
<td>None</td>
</tr>
<tr>
<td>ALUMINA TRIHYDRATE</td>
<td>21645-51-2</td>
<td>0.0100 - 0.1000</td>
<td></td>
<td></td>
<td></td>
<td>Filler</td>
<td></td>
<td>Asthmagen (ARs) - sensitizer-induced - inhalable forms only</td>
<td>None</td>
</tr>
<tr>
<td>UNDISCLOSED</td>
<td></td>
<td>0.0100 - 0.0200</td>
<td></td>
<td></td>
<td></td>
<td>Dispersant</td>
<td></td>
<td>R22 - Harmful if Swallowed</td>
<td>All ingredients have been screened using the HPD Builder.</td>
</tr>
<tr>
<td>FATTY ACIDS, C16-22 AND C18-UNSATD. (FATTY ACIDS, C16-22 AND C18-UNSATD.)</td>
<td>68424-13-5</td>
<td>0.0100 - 0.1000</td>
<td></td>
<td></td>
<td></td>
<td>Binder</td>
<td></td>
<td>R35 - Causes severe burns</td>
<td>None</td>
</tr>
</tbody>
</table>
## Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

### VOC EMISSIONS


<table>
<thead>
<tr>
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<tr>
<td>APPLICABLE FACILITIES:</td>
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<tr>
<td>ISSUE DATE:</td>
<td>2016-07-20</td>
</tr>
<tr>
<td>EXPIRY DATE:</td>
<td>2018-07-20</td>
</tr>
<tr>
<td>CERTIFIER OR LAB:</td>
<td>Berkeley Analytical</td>
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</tbody>
</table>

### OTHER

**International Living Future Institute - Ultima AirGuard Declare Label**

<table>
<thead>
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</tr>
</thead>
<tbody>
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<td>APPLICABLE FACILITIES:</td>
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<tr>
<td>CERTIFICATE URL:</td>
<td><a href="https://access.living-future.org/ultima%C2%AE-ceiling-panels-airguard%E2%84%A2-coating">https://access.living-future.org/ultima%C2%AE-ceiling-panels-airguard%E2%84%A2-coating</a></td>
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<td>CERTIFIER OR LAB:</td>
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**Environmental Product Declaration for Ultima AirGuard**

<table>
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</thead>
<tbody>
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<tr>
<td>CERTIFIER OR LAB:</td>
<td>UL Environment</td>
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### Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.
All Armstrong ceiling panels can be combined with Armstrong Suspension systems to create a total ceiling solution.

Section 5: General Notes

This HPD is provided solely for the intended recipient in connection with its assessment of products and for no other purpose. In providing information, AWI expresses no opinion and makes no representations as to the applicability, suitability, accuracy or completeness of the declaration form, or the standards, rules, classifications, warnings or criteria utilized or referenced therein. Information provided herein is qualified in the entirety by reference to the applicable product Safety Data Sheet (SDS) which can be located at www.armstrongceilings.com, as well as by the additional ingredient information provided for specified substances.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: Armstrong World Industries
ADDRESS: 2500 Columbia Ave.
Lancaster PA 17603, USA
WEBSITE: www.armstrongceilings.com

CONTACT NAME: Armstrong Technical Services
TITLE: Techline
PHONE: 1-877-276-7876
EMAIL: techline@armstrongceilings.com

KEY

| OSHA MSDS | Occupational Safety and Health Administration Material Safety Data Sheet |
| GHS SDS  | Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet |

Hazard Types

- AQU Aquatic toxicity
- CAN Cancer
- DEV Developmental toxicity
- END Endocrine activity
- EYE Eye irritation/corrosivity
- GEN Gene mutation
- GLO Global warming
- MAM Mammalian/systemic/organ toxicity
- MUL Multiple hazards
- NEU Neurotoxicity
- OZO Ozone depletion
- PBT Persistent Bioaccumulative Toxic
- PHY Physical Hazard (reactive)
- REP Reproductive toxicity
- RES Respiratory sensitization
- SKI Skin sensitization/irritation/corrosivity
- LAN Land Toxicity
- NF Not found on Priority Hazard Lists

GreenScreen (GS)

- BM-4 Benchmark 4 (prefer-safer chemical)
- BM-3 Benchmark 3 (use but still opportunity for improvement)
- BM-2 Benchmark 2 (use but search for safer substitutes)
- BM-1 Benchmark 1 (avoid - chemical of high concern)
- BM-U Benchmark Unspecified (insufficient data to benchmark)

- LT-P1 List Translator Possible Benchmark 1
- LT-1 List Translator Likely Benchmark 1
- LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
- NoGS Unknown (no data on List Translator Lists)

Recycled Types

- PreC Preconsumer (Post-Industrial)
- PostC Postconsumer
Both Preconsumer and Postconsumer
Unk Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms
Inventory Methods:
- **Nested Method / Material Threshold** Substances listed within each material per threshold indicated per material
- **Nested Method / Product Threshold** Substances listed within each material per threshold indicated per product
- **Basic Method / Product Threshold** Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology
Third Party Verified Verification by independent certifier approved by HPDC
Preparer Third party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:
- a method for the assessment of exposure or risk associated with product handling or use,
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.