Section 1: Summary

### CONTENT INVENTORY

<table>
<thead>
<tr>
<th>Threshold per material</th>
<th>Residuals and impurities considered in 3 of 3 materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>O 1,000 ppm</td>
<td>see Section 2: Material Notes</td>
</tr>
<tr>
<td>O Per GHS SDS</td>
<td>see Section 5: General Notes</td>
</tr>
<tr>
<td>O Other</td>
<td></td>
</tr>
</tbody>
</table>

Based on the selected Content Inventory Threshold:

- Characterized.................................................... Yes  No
- Are the Percent Weight and Role provided for all substances? Yes  No
- Screened........................................................................ Yes  No
- Are all substances screened using Priority Hazard Lists with results disclosed? Yes  No
- Identified................................................................... Yes  No
- Are all substances disclosed by Name (Specific or Generic) and Identifier? Yes  No

### 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.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>SUBSTANCE</th>
<th>RESIDUAL OR IMPURITY</th>
<th>GREENSCREEN SCORE</th>
<th>HAZARD TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEILING SUBSTRATE</td>
<td>FIBERGLASS UNK STARCH ACRYLIC BINDER UNK MODIFIED VEGETABLE OIL UNK COATING LIMESTONE CALCIUM CARBONATE LT-UNK DOLomite UNK CALCIUM CARBONATE BM-2 TITANIUM DIOXIDE LT-1 CAN ALUMINA TRIHYDRATE BM-2 RES POLYVINYL ACETATE (PVA) LT-UNK DIATOMACEOUS EARTH UNK MICA LT-UNK ALUMINUM HYDROXIDE UNK PROPRIETARY SCREENED INGREDIENT UNK FACING [ FIBERGLASS UNK POLY(VINYL ALCOHOL) LT-UNK POLYVINYL ACETATE (PVA) LT-UNK PROPRIETARY SCREENED INGREDIENT UNK PLASTICIZER UNK ]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Greenscreen BM-4/BM3 contents........... 1
Contents highest concern GreenScreen Benchmark or List translator Score.......... LT-1 Nanomaterial.......... No

### INVENTORY AND SCREENING NOTES:

Residuals/impurities in select raw materials are quantitatively measured, and are displayed in the HPD when greater than 1000ppm.

### VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

### CERTIFICATIONS AND COMPLIANCE

LCA: Environmental Product Declaration

See Section 3 for additional listings.
This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; "Not Found" does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: [www.hpd-collaborative.org](http://www.hpd-collaborative.org) and [www.greenscreenchemicals.org](http://www.greenscreenchemicals.org).

### CEILING SUBSTRATE

<table>
<thead>
<tr>
<th>Material</th>
<th>ID</th>
<th>Inventory Threshold</th>
<th>Residuals Considered</th>
<th>Material Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIBERGLASS</td>
<td>ID: 65997-17-3</td>
<td>65.0000 - 70.0000</td>
<td>Both</td>
<td>Core material</td>
</tr>
<tr>
<td>STARCH ACRYLIC BINDER</td>
<td>ID: 60323-79-7</td>
<td>5.0000 - 10.0000</td>
<td>None</td>
<td>Binder</td>
</tr>
<tr>
<td>MODIFIED VEGETABLE OIL</td>
<td>ID: 68918-91-2</td>
<td>0.5000 - 5.0000</td>
<td>UNK</td>
<td>Binder</td>
</tr>
</tbody>
</table>

### HAZARDS:

**None Found**

**AGENCY(IES) WITH WARNINGS:**

None Found

No warnings found on HPD Priority lists

### SUBSTANCE NOTES:

None found.
### COATING

**%: 6.0000 - 10.0000**  
**HPD URL:** [Inventory Threshold: 1000 ppm  Residuals Considered: Yes](HPD Collaborative)  
**Material Notes:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>ID</th>
<th>%:</th>
<th>GS:</th>
<th>RC:</th>
<th>NANO:</th>
<th>ROLE:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LIMESTONE: CALCIUM CARBONATE</strong></td>
<td>1317-65-3</td>
<td>6.0000 - 10.0000</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>NO</td>
<td>Filler</td>
</tr>
<tr>
<td><strong>HAZARDS:</strong></td>
<td></td>
<td>None Found</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AGENCY(IES) WITH WARNINGS:</strong></td>
<td></td>
<td>No warnings found on HPD Priority lists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SUBSTANCE NOTES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **DOLOMITE**                  | 16389-88-1  | 2.0000 - 5.0000     | UNK | UNK | NO | Filler |
| **HAZARDS:**                  |             | None Found          |     |     |       |       |
| **AGENCY(IES) WITH WARNINGS:**|             | No warnings found on HPD Priority lists |     |     |       |       |
| **SUBSTANCE NOTES:**          |             |                     |     |     |       |       |

| **CALCIUM CARBONATE**         | 471-34-1    | 2.0000 - 4.0000     | BM-3 | UNK | NO | Filler |
| **HAZARDS:**                  |             | None Found          |     |     |       |       |
| **AGENCY(IES) WITH WARNINGS:**|             | No warnings found on HPD Priority lists |     |     |       |       |
| **SUBSTANCE NOTES:**          |             |                     |     |     |       |       |

<p>| <strong>TITANIUM DIOXIDE</strong>          | 13463-67-7  | 1.0000 - 3.0000     | LT-1 | UNK | NO | Pigment |
| <strong>HAZARDS:</strong>                  |             | Cancer              |     |     |       |       |
| <strong>AGENCY(IES) WITH WARNINGS:</strong>|             | US CDC - Occupational Carcinogens |     |     |       |       |
| <strong>CANCER</strong>                    |             | Occupational Carcinogen |     |     |       |       |</p>
<table>
<thead>
<tr>
<th>Substance Name</th>
<th>ID</th>
<th>Percentage</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALUMINA TRIHYDRATE</td>
<td>21645-51-2</td>
<td>0.5000 - 1.0000</td>
<td>BM-2</td>
<td>UNK</td>
<td>NO</td>
<td>Filler</td>
</tr>
<tr>
<td>POLYVINYL ACETATE (PVA)</td>
<td>9003-20-7</td>
<td>0.1000 - 1.0000</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>NO</td>
<td>Binder</td>
</tr>
<tr>
<td>DIATAMACEOUS EARTH</td>
<td>68855-54-9</td>
<td>0.1000 - 1.0000</td>
<td>UNK</td>
<td>UNK</td>
<td>NO</td>
<td>Filler</td>
</tr>
<tr>
<td>MICA</td>
<td>12001-26-2</td>
<td>0.1000 - 1.0000</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>NO</td>
<td>Filler</td>
</tr>
</tbody>
</table>

**HAZARDS:**

**Agency(Ies) with warnings:**

**Respiratory:**
- AOEC - Asthmagens

**SUBSTANCE NOTES:**

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

None Found

No warnings found on HPD Priority lists
<table>
<thead>
<tr>
<th>Substance</th>
<th>ID</th>
<th>Percentage</th>
<th>GS</th>
<th>RC</th>
<th>Nano</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Hydroxide</td>
<td>21645-51-2</td>
<td>0.1000 - 1.0000</td>
<td>UNK</td>
<td>UNK</td>
<td>NO</td>
<td>Filler</td>
</tr>
<tr>
<td>Proprietary Screened Ingredient</td>
<td>Proprietary</td>
<td>0.0100 - 0.2000</td>
<td>UNK</td>
<td>None</td>
<td>NO</td>
<td>Preservative</td>
</tr>
<tr>
<td>Fiberglass</td>
<td>65997-17-3</td>
<td>2.0000 - 4.0000</td>
<td>UNK</td>
<td>Both</td>
<td>NO</td>
<td>Fiber Core</td>
</tr>
<tr>
<td>Poly(Vinyl Alcohol)</td>
<td>9002-89-5</td>
<td>1.0000 - 3.0000</td>
<td>LT-UNK</td>
<td>UNK</td>
<td>NO</td>
<td>Binder</td>
</tr>
</tbody>
</table>

**HAZARDS:**

None Found

No warnings found on HPD Priority lists

**SUBSTANCE NOTES:**

This ingredient has been screened against all HPDv2 Priority Hazard Lists, and no hazards are indicated.

FACING

%: 3.0000 - 6.0000  
HPD URL:  
Inventory Threshold: 1000 ppm  
Residuals Considered: Yes  
Material Notes:  

**FIBERGLASS**  
ID: 65997-17-3  
%: 2.0000 - 4.0000  
GS: UNK  
RC: Both  
NANO: NO  
ROLE: Fiber Core  

**HAZARDS:**

None Found

No warnings found on HPD Priority lists

**SUBSTANCE NOTES:**

**POLY(VINYL ALCOHOL)**  
ID: 9002-89-5  
%: 1.0000 - 3.0000  
GS: LT-UNK  
RC: UNK  
NANO: NO  
ROLE: Binder  

**HAZARDS:**

None Found

No warnings found on HPD Priority lists

**SUBSTANCE NOTES:**
### 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**

**CERTIFYING PARTY:** Second Party

**APPLICABLE FACILITIES:**


**CERTIFICATION AND COMPLIANCE NOTES:**

**Clear Chem - Berkeley Analytical - Third party compliant with California Dept. of Public Health CDPH/EHLB/Standard Method Version 1.1 2010.**

<table>
<thead>
<tr>
<th>ISSUE DATE:</th>
<th>EXPIRY DATE:</th>
<th>CERTIFIER OR LAB:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-02-02</td>
<td>2018-02-02</td>
<td>Berkeley Analytical</td>
</tr>
</tbody>
</table>

**Environmental Product Declaration**
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.

**ARMSTRONG SUSPENSION SYSTEMS**

**HPD URL:** No HPD link provided

**CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:** Suspension System available to create complete Armstrong Ceiling System.

Section 5: General Notes

Please refer to the Armstrong Commercial Ceilings website for more information on this product.

https://www.armstrongceilings.com/commercial/en-us/commercial-ceilings-walls/optima-plant-based-ceiling-tiles.html Armstrong World Industries expresses no opinion to its applicability, suitability, or completeness of the declaration form or the standards and criteria utilized or referenced therein. Information provided by Armstrong World Industries herein is qualified in the entirety by reference to the product Safety Data Sheet (SDS), which can be located at www.armstrongceilings.com.
Section 6: References

MANUFACTURER INFORMATION

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

CONTACT NAME: Armstrong Technical Services
TITLE: Techline
PHONE: 1-877-276-7876
EMAIL: techline@armstrong.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
PHYS 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)
UNK Unknown (no data on List Translator Lists)

Recycled Types

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

Other

Nano Composed of nanoscale particles or nanotechnology

Declaration Level

Self-declared Manufacturer’s self-declaration (First Party)
Independent Lab Manufacturer’s self-declaration using results from an independent lab
Second Party Verification by trade association or other interested party
Third Party Verification by independent certifier
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 does not provide an assessment of health impacts throughout the product life cycle. It does not provide an assessment of exposure or risk associated with product handling or use. It also does not address potential health impacts of: (i) substances used or created during the manufacturing process unless they remain in the final product, or (ii) substances created after the product is delivered for end use (e.g., if the product burns, degrades, or otherwise changes chemical composition).

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

A disclosure completed in compliance with the HPD Open Standard is referred to as a “Health Product Declaration,” or “HPD.” 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 Open Standard noted.