Armstrong Ceilings Optima PB by Armstrong World Industries

CLASSIFICATION: 095100
PRODUCT DESCRIPTION: Optima ceiling family offers a fiberglass substrate made with a plant-based binder, formulated without formaldehyde resins that’s also rapidly renewable. Smooth textured Optima fiberglass ceiling systems provides excellent acoustical absorption high NRC and CAC performance for open plan areas where noise levels and speech privacy is needed; as well as light reflectance and durability including impact, scratch and soil resistance. Optima panels are lightweight, offer HumiGuard+ no sag performance, are resistant to surface growth of mold and mildew and can be recycled at the end of their usable life.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format
- Nested Materials Method
- Basic Method

Threshold Disclosed Per
- Material
- Product

Threshold level
- 100 ppm
- 1,000 ppm
- Per GHS SDS
- Per OSHA MSDS
- Other

Residuals/Impurities
- Considered
- Partially Considered
- Not Considered

All Substances Above the Threshold Indicated Are:
- Characterized Yes Ex/SC Yes No
  - % weight and role provided for all substances.
- Screened Yes Ex/SC Yes No
  - All substances screened using Priority Hazard Lists with results disclosed.
- Identified Yes Ex/SC Yes No
  - All substances disclosed by Name (Specific or Generic) and Identifier.

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
--- | --- | --- | --- | ---
ARMSTRONG CEILINGS OPTIMA PB | GLASS, OXIDE, CHEMICALS LT-UNK | CAN CALCIUM CARBONATE LT-UNK | STARCH ACRYLIC BINDER NoGS CALCUM MAGNESIUM CARBONATE NoGS | CALCIUM CARBONATE BM-3 POLYVINYL ACETATE LT-UNK POLYVINYL ALCOHOL LT-UNK TITANIUM DIOXIDE LT-1 | CAN | END ALUMINUM HYDROXIDE BM-2 | RES MODIFIED VEGETABLE OIL NoGS KIESELGUHR, SODA ASH FLUX-CALCINED LT-UNK MICA-GROUP MINERALS LT-UNK PROPOANOL, OXYBIS-, DIBENZOATE LT-F1 | MUL SILOXANES AND SILICONES, ME HYDROGEN NoGS 2-PROPENOIC ACID, 2-METHYL-, POLYMER WITH ETHYL 2-PROPENOATE LT-UNK

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE

VOC emissions: UL GreenGuard
Other: ILFI Declare - LBC Compliant
LCA: ILFI Declare - LBC Compliant

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1

Third Party Verified? Yes
PREPARER: Self-Prepared
VERIFIER: 
VERIFICATION #: 
SCREENING DATE: 2019-12-17
PUBLISHED DATE: 2019-12-17
EXPIRY DATE: 2022-12-17

Armstrong Ceilings Optima PB
hpdrepository.hpd-collaborative.org
HPD v2.1.1 created via HPDC Builder Page 1 of 10
Section 2: Content in Descending Order of Quantity

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 2.1.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-1-standard

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**ARMSTRONG CEILINGS OPTIMA PB**

**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 100ppm.

**OTHER PRODUCT NOTES:** For more information on this product visit https://www.armstrongceilings.com/commercial/en-us/commercial-ceilings-walls/optima-plant-based-ceiling-tiles.html#redirect_term=Optima+PB

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**GLASS, OXIDE, CHEMICALS**

**ID:** 65997-17-3

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17

<table>
<thead>
<tr>
<th>%: 65.00 - 75.00</th>
<th>GS: LT-UNK</th>
<th>RC: Both</th>
<th>NANO: Unknown</th>
<th>ROLE: Core Material</th>
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</thead>
<tbody>
<tr>
<td>HAZARD TYPE</td>
<td>AGENCY AND LIST TITLES</td>
<td>WARNINGS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANCER</td>
<td>EU - GHS (H-Statements)</td>
<td>H351 - Suspected of causing cancer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Base material

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**CALCIUM CARBONATE**

**ID:** 1317-65-3

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17

<table>
<thead>
<tr>
<th>%: 6.00 - 10.00</th>
<th>GS: LT-UNK</th>
<th>RC: None</th>
<th>NANO: Unknown</th>
<th>ROLE: Filler</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD TYPE</td>
<td>AGENCY AND LIST TITLES</td>
<td>WARNINGS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None found</td>
<td>No warnings found on HPD Priority Hazard Lists</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Filler in Coating

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**STARCH ACRYLIC BINDER**

**ID:** 60323-79-7

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17

<table>
<thead>
<tr>
<th>%: 5.00 - 10.00</th>
<th>GS: NoGS</th>
<th>RC: None</th>
<th>NANO: Unknown</th>
<th>ROLE: Binder</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD TYPE</td>
<td>AGENCY AND LIST TITLES</td>
<td>WARNINGS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### Calcium Magnesium Carbonate

**ID:** 16389-88-1  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 2.00 - 5.00  
**GS:** NoGS  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Filler  

**WARNINGS:** None found  
No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** Plant based binder

### Calcium Carbonate

**ID:** 471-34-1  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 2.00 - 4.00  
**GS:** BM-3  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Filler  

**WARNINGS:** None found  
No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** Filler in coating

### Polyvinyl Acetate

**ID:** 9003-20-7  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 1.00 - 4.00  
**GS:** LT-UNK  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Binder  

**WARNINGS:** None found  
No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** Ingredient in binder

### Polyvinyl Alcohol

**ID:** 9002-89-5  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 1.00 - 3.00  
**GS:** LT-UNK  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Adhesive  

**WARNINGS:** None found  
No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** Ingredient in binder
### TITANIUM DIOXIDE

**ID:** 13463-67-7  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 - 3.00</td>
<td>LT-1</td>
<td>None</td>
<td>Unknown</td>
<td>Pigment</td>
</tr>
</tbody>
</table>

- **HAZARD TYPE:**  
  - 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  
  - ENDOCRINE: TEDX - Potential Endocrine Disruptors: Potential Endocrine Disruptor  
  - CANCER: MAK  
    - Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value  
    - Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels

**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.

### ALUMINUM HYDROXIDE

**ID:** 21645-51-2  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.60 - 2.00</td>
<td>BM-2</td>
<td>None</td>
<td>Unknown</td>
<td>Filler</td>
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</tbody>
</table>

- **HAZARD TYPE:**  
  - RESPIRATORY: AOEC - Asthmagens: Asthmagen (Rs) - sensitizer-induced

**SUBSTANCE NOTES:** Ingredient in coating

### MODIFIED VEGETABLE OIL

**ID:** 68918-91-2  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50 - 5.00</td>
<td>NoGS</td>
<td>None</td>
<td>Unknown</td>
<td>Binder</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Ingredient in binder
### KIESELGUHR, SODA ASH FLUX-CALCINED

**ID:** 68855-54-9  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 0.10 - 1.00  
**GS:** LT-UNK  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Filler  

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
None found  
No warnings found on HPD Priority Hazard Lists  

**SUBSTANCE NOTES:** Ingredient in filler

### MICA-GROUP MINERALS

**ID:** 12001-26-2  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 0.10 - 1.00  
**GS:** LT-UNK  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Filler  

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
None found  
No warnings found on HPD Priority Hazard Lists  

**SUBSTANCE NOTES:** ingredient in filler

### PROPAILO, OXYBIS-, DIBENZOATE

**ID:** 27138-31-4  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 0.10 - 1.00  
**GS:** LT-P1  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Filler  

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
MULTIPLE  
German FEA - Substances Hazardous to Waters  
Class 2 - Hazard to Waters

**SUBSTANCE NOTES:** Ingredient in coating

### SILOXANES AND SILICONES, ME HYDROGEN

**ID:** 63148-57-2  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-12-17  
**%:** 0.10 - 0.20  
**GS:** NoGS  
**RC:** None  
**NANO:** Unknown  
**ROLE:** Adhesive  

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
None found  
No warnings found on HPD Priority Hazard Lists  

**SUBSTANCE NOTES:** Ingredient in adhesive

### 2-PROPENOIC ACID, 2-METHYL-, POLYMER WITH ETHYL 2-PROPENOATE

**ID:** 25212-88-8
<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE: 2019-12-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.01 - 0.10 GS: LT-UNK RC: None NANO: Unknown ROLE: Adhesive</td>
<td></td>
</tr>
<tr>
<td>HAZARD TYPE</td>
<td>AGENCY AND LIST TITLES</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>None found</td>
<td>No warnings found on HPD Priority Hazard Lists</td>
</tr>
</tbody>
</table>

**Substance Notes:** Ingredient in adhesive
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
- **UL GreenGuard**
  - **CERTIFYING PARTY:** Third Party
  - **APPLICABLE FACILITIES:** All
  - **CERTIFICATE URL:** https://www.armstrongceilings.com/content/dam/armstrongceilings/commercial/north-america/certificates/optima-pb-greenguard-certificate.pdf
  - **ISSUE DATE:** 2018-04-16
  - **EXPIRY DATE:** 2020-04-16
  - **CERTIFIER OR LAB:** UL Environment

  **CERTIFICATION AND COMPLIANCE NOTES:** UL GreenGuard Gold and Formaldehyde Free

### OTHER
- **ILFI Declare - LBC Compliant**
  - **CERTIFYING PARTY:** Second Party
  - **APPLICABLE FACILITIES:** All
  - **CERTIFICATE URL:** https://www.armstrongceilings.com/content/dam/armstrongceilings/commercial/north-america/certificates/optima-pb-declare.pdf
  - **ISSUE DATE:** 2019-04-01
  - **EXPIRY DATE:** 2020-04-01
  - **CERTIFIER OR LAB:** ILFI

  **CERTIFICATION AND COMPLIANCE NOTES:** LBC Compliant - Proof from supply chain of no red list ingredients.

- **ILFI Declare - LBC Compliant**
  - **CERTIFYING PARTY:** Third Party
  - **APPLICABLE FACILITIES:** All
  - **CERTIFICATE URL:** https://www.armstrongceilings.com/content/dam/armstrongceilings/commercial/north-america/epds/optima-epd.pdf
  - **ISSUE DATE:** 2016-03-31
  - **EXPIRY DATE:** 2021-03-31
  - **CERTIFIER OR LAB:** UL Environment

  **CERTIFICATION AND COMPLIANCE NOTES:** Third Party Product Specific EPD

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.

No accessories are required for this product.

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
## MANUFACTURER INFORMATION

<table>
<thead>
<tr>
<th>MANUFACTURER:</th>
<th>Armstrong World Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDRESS:</td>
<td>2500 Columbia Avenue</td>
</tr>
<tr>
<td></td>
<td>Lancaster PA 17603, USA</td>
</tr>
<tr>
<td>WEBSITE:</td>
<td><a href="http://www.armstrongceilings.com">www.armstrongceilings.com</a></td>
</tr>
<tr>
<td>CONTACT NAME:</td>
<td>Anita Snader</td>
</tr>
<tr>
<td>TITLE:</td>
<td>Sustainability Manager</td>
</tr>
<tr>
<td>PHONE:</td>
<td>717 396 6486</td>
</tr>
<tr>
<td>EMAIL:</td>
<td><a href="mailto:alsnader@armstrongceilings.com">alsnader@armstrongceilings.com</a></td>
</tr>
</tbody>
</table>

## KEY

<table>
<thead>
<tr>
<th>OSHA MSDS</th>
<th>Occupational Safety and Health Administration Material Safety Data Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS SDS</td>
<td>Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet</td>
</tr>
</tbody>
</table>

### Hazard Types

<table>
<thead>
<tr>
<th>AQU</th>
<th>Aquatic toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN</td>
<td>Cancer</td>
</tr>
<tr>
<td>DEV</td>
<td>Developmental toxicity</td>
</tr>
<tr>
<td>END</td>
<td>Endocrine activity</td>
</tr>
<tr>
<td>EYE</td>
<td>Eye irritation/corrosivity</td>
</tr>
<tr>
<td>GEN</td>
<td>Gene mutation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GLO</th>
<th>Global warming</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAM</td>
<td>Mammalian/systemic/organ toxicity</td>
</tr>
<tr>
<td>MUL</td>
<td>Multiple hazards</td>
</tr>
<tr>
<td>NEU</td>
<td>Neurotoxicity</td>
</tr>
<tr>
<td>OZO</td>
<td>Ozone depletion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHY</th>
<th>Physical Hazard (reactive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REP</td>
<td>Reproductive toxicity</td>
</tr>
<tr>
<td>RES</td>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td>SKI</td>
<td>Skin sensitization/irritation/corrosivity</td>
</tr>
<tr>
<td>LAN</td>
<td>Land Toxicity</td>
</tr>
<tr>
<td>NF</td>
<td>Not found on Priority Hazard Lists</td>
</tr>
</tbody>
</table>

### GreenScreen (GS)

| BM-4 Benchmark 4 (prefer-safer chemical) | LT-P1 List Translator Possible Benchmark 1 |
| BM-3 Benchmark 3 (use but still opportunity for improvement) | LT-1 List Translator Likely Benchmark 1 |
| BM-2 Benchmark 2 (use but search for safer substitutes) | LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark) |
| BM-1 Benchmark 1 (avoid - chemical of high concern) | NoGS Unknown (no data on List Translator Lists) |
| BM-U Benchmark Unspecified (insufficient data to benchmark) | |

### 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 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

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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.