Armstrong Ceilings Optima PB by Armstrong World Industries

Health Product Declaration v2.1.1

created via: HPDC Online Builder

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

Explanation(s) provided for Residuals/Impurities?
- ◉ Yes ○ No

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 CALCIUM 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 PROPANOL, OXYBIS-, DIBENZOATE LT-P1 | MUL SILOXANES AND SILICONES, ME HYDROGEN NoGS 2-PROPENOIC ACID, 2-METHYL-, POLYMER WITH ETHYL 2-PROPENOATE LT-UNK]

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 100ppm.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE *See Section 3 for additional listings.*

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

No

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

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

GLASS, OXIDE, CHEMICALS

ID: 65997-17-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2019-12-17**

%: **65.00 - 75.00**

GS: **LT-UNK**

RC: **Both**

NANO: **Unknown**

ROLE: **Core Material**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	EU - GHS (H-Statements)	H351 - Suspected of causing cancer

SUBSTANCE NOTES: Base material

CALCIUM CARBONATE

ID: 1317-65-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2019-12-17**

%: **6.00 - 10.00**

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: Filler in Coating

STARCH ACRYLIC BINDER

ID: 60323-79-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2019-12-17**

%: **5.00 - 10.00**

GS: **NoGS**

RC: **None**

NANO: **Unknown**

ROLE: **Binder**

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

SUBSTANCE NOTES: Plant based binder

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**

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

SUBSTANCE NOTES: Filler in coating

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**

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

SUBSTANCE NOTES: Ingredient in filler

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**

HAZARD TYPE	AGENCY AND LIST TITLES	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**

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

SUBSTANCE NOTES: Ingredient in adhesive

TITANIUM DIOXIDE

ID: 13463-67-7

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

%: **1.00 - 3.00** GS: **LT-1** RC: **None** NANO: **Unknown** ROLE: **Pigment**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CANCER	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
CANCER	MAK	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**

%: **0.60 - 2.00** GS: **BM-2** RC: **None** NANO: **Unknown** ROLE: **Filler**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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**

%: **0.50 - 5.00** GS: **NoGS** RC: **None** NANO: **Unknown** ROLE: **Binder**

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

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

PROPANOL, 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

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

%: **0.01 - 0.10** GS: **LT-UNK** 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

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:	EXPIRY DATE:	CERTIFIER OR LAB:
2018-04-16	2020-04-16	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:	EXPIRY DATE:	CERTIFIER OR LAB:
2019-04-01	2020-04-01	ILFI

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

LCA — **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:	EXPIRY DATE:	CERTIFIER OR LAB:
2016-03-31	2021-03-31	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

be located at www.armstrongceilings.com.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Armstrong World Industries**
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Lancaster PA 17603, USA
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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 (insuficient 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 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.