

CLASSIFICATION: 04 22 00 Masonry: Concrete Unit Masonry

PRODUCT DESCRIPTION: Angelus Block is the prominent producer of concrete masonry units (cmu), interlocking concrete pavers, permeable pavers, decorative site wall units, and segmental planter wall units in California. Angelus Block is committed to advancing its products in support of sustainability goals, and green rating system value. In addition to our collection of HPDs, we were the first to publish a Type III EPD based on North America's first PCR for concrete masonry products. This HPD covers Lightweight cmu in Precision, Split Face, Burnished, and Shotblast textures. Units are available in multiple widths and heights, with and without pigments.

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 except SC substances characterized according to SC guidance.

Screened Yes Ex/SC Yes No

All substances screened using Priority Hazard Lists with results disclosed except SC substances screened according to SC guidance.

Identified Yes Ex/SC Yes No

All substances disclosed by Name (Specific or Generic) and Identifier except SC substances identified according to SC guidance.

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

CONCRETE MASONRY UNIT (CMU) - LIGHT WEIGHT | SC:NATURAL SAND
Not Screened **SHALE, EXPANDED, AGGREGATES NoGS PORTLAND CEMENT LT-P1 | CAN | END LIMESTONE; CALCIUM CARBONATE LT-UNK**
SODIUM DODECYLBENZENE SULFONATE LT-P1 | MUL SC:CINDERS (VOLCANIC SCORIA) Not Screened IRON OXIDE LT-UNK | CAN FERRIC OXIDE BM-2 | CAN FERRIC OXIDE YELLOW LT-UNK CHROMIUM (III) OXIDE LT-P1 | SKI]

Number of Greenscreen BM-4/BM3 contents ... 0

Contents highest concern GreenScreen

Benchmark or List translator Score ... LT-P1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

Special conditions applied: GeologicalMaterial

[LEED v4] "Yes ex/SC" result is due only to materials and substances for which Special Conditions were applied. Thus "Yes ex/SC" does not disqualify the product for the LEED v4 Materials and Resources Disclosure and Optimization credit, Option 1.

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.1.1, and discloses hazards associated with all substances present at or above 100 parts per million (ppm) in the finished product, along with the role and percent weight.

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: CDPH Standard Method – Not tested

Multi-attribute: Type III Environmental Product Declaration (EPD)

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1 and Option 2

Third Party Verified?

- Yes

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2019-10-08

PUBLISHED DATE: 2019-10-10

EXPIRY DATE: 2022-10-08



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

CONCRETE MASONRY UNIT (CMU) - LIGHT WEIGHT

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Residuals and Impurities were considered by following the suggestions of Emerging Best Practices. As Pharos CML lists component substances of Portland cement and various geological materials as "Known or Potential Residuals", these components have been included in the relevant Substance Notes instead of as individual content entries. The typical composition for each of these entries is disclosed as per supplier SDS when available; otherwise, information is from Pharos CML. Components are listed by name, CASRN, percent by weight, and relevant GreenScreen score.

OTHER PRODUCT NOTES: Percent by weight of substances reported as ranges in order to account for formula variations between product options and manufacturing plants.

SC:NATURAL SAND

ID: SC:GeoMat

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-10-08

| | | | | |
|------------------|------------------|----------|----------|----------------------|
| #: 20.00 - 45.00 | GS: Not Screened | RC: None | NANO: No | ROLE: Fine Aggregate |
|------------------|------------------|----------|----------|----------------------|

| | | |
|-------------|------------------------|----------|
| HAZARD TYPE | AGENCY AND LIST TITLES | WARNINGS |
|-------------|------------------------|----------|

Hazard Screening not performed

SUBSTANCE NOTES:

Version: SCGeoMats/2018-02-23

Origin: Sun Valley, CA; San Bernadino, CA; Irwindale, CA; Corona, CA; Fillmore, CA; Frazier Park, CA; Indio, CA

Typical Composition: 70-90% Silica (Quartz, Cristobalite, Tridymite), SiO2 [14808-60-7; LT-1 | CAN]; 12-15% Aluminum Oxide [1344-28-1; BM-2 | RES]; 1.5-2.5% Calcium Oxide [1305-78-8; LT-P1 | NO]; 0.5-2.0% Iron Oxide [1309-37-1; BM-2 | CAN]

Potential presence of toxic metals: None indicated by suppliers

Presence of Radioactive Elements: None indicated by suppliers

Natural sand obtained from various suppliers in the Southern California region. Contact manufacturer if more information is required.

SHALE, EXPANDED, AGGREGATES

ID: 68334-37-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-10-08

| | | | | |
|------------------|----------|----------|----------|-----------------------------|
| #: 20.00 - 55.00 | GS: NoGS | RC: None | NANO: No | ROLE: Lightweight Aggregate |
|------------------|----------|----------|----------|-----------------------------|

| | | |
|-------------|------------------------|----------|
| HAZARD TYPE | AGENCY AND LIST TITLES | WARNINGS |
|-------------|------------------------|----------|

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: TSCA Definition 2018: The product formed by heating crushed and screened shale in a rotary kiln to a plastic state, cooling, crushing, and screening into the proper sized units. It contains, but is not limited to aluminum, calcium, iron, magnesium, oxygen, potassium silicon, sodium, and sulfur.

PORTLAND CEMENT

ID: 65997-15-1

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

HAZARD SCREENING DATE: **2019-10-08**

#: **10.00 - 15.00** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Binder**

| HAZARD TYPE | AGENCY AND LIST TITLES | WARNINGS |
|-------------|---------------------------------------|--|
| CANCER | MAK | Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification |
| ENDOCRINE | TEDX - Potential Endocrine Disruptors | Potential Endocrine Disruptor |

SUBSTANCE NOTES: NIST lists the composition of Portland Cement as including: Calcium Oxide (64%) [1305-78-8; LT-P1 | NO]; Silicon Dioxide (20%) [7631-86-9; LT-P1 | CAN]; Aluminum Oxide (5%) [1344-28-1; BM-2 | RES]; Iron III Oxide (4%) [1309-37-1; BM-2 | CAN]; Sulfur Trioxide (3%) [7446-11-9; LT-P1 | MAM]; and Magnesium Oxide (1%) [1309-48-4; LT-UNK | CAN]. Supplier documentation also includes the following components: 0-15% Limestone [1317-65-3; LT-UNK | NO]; 5-7% Gypsum [13397-24-5; LT-UNK | NO]; 0-0.3% Quartz [14808-60-7; LT-1 | CAN]. Supplier SDS states: "Trace Elements: Portland cement is made from materials mined from the earth and is processed using energy provided by fuels. Trace amounts of naturally occurring, potentially harmful chemicals might be detected during chemical analysis. For example, Portland cement may contain up to 1.50% insoluble residue, some of which may be free crystalline silica. Other trace constituents may include calcium oxide, free magnesium oxide, potassium and sodium sulfate compounds, and trace metal compounds." A Type III Environmental Product Declaration (EPD) is available for the Portland Cement used in this product.

LIMESTONE; CALCIUM CARBONATE

ID: 1317-65-3

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

HAZARD SCREENING DATE: **2019-10-08**

#: **1.00 - 5.00** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Pigment; Filler**

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

SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List (Green Circle - Verified Low Concern).

SODIUM DODECYLBENZENE SULFONATE

ID: 25155-30-0

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

HAZARD SCREENING DATE: **2019-10-08**

#: **0.01 - 0.03** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Admixture; Plasticizer**

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

SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List (Green Circle - Verified Low Concern).

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

HAZARD SCREENING DATE: **2019-10-08**

#: **0.00 - 25.00** GS: **Not Screened** RC: **None** NANO: **No** ROLE: **Lightweight Aggregate**

| HAZARD TYPE | AGENCY AND LIST TITLES | WARNINGS |
|-------------|--------------------------------|----------|
| | Hazard Screening not performed | |

SUBSTANCE NOTES:

Version: SCGeoMats/2018-02-23
 Origin: Little Lake, CA; Lucerne Valley, CA
 Typical Composition: SiO₂, Silica (amorphous) [7631-86-9; LT-P1 | CAN]
 Potential presence of toxic metals: None indicated by suppliers
 Presence of Radioactive Elements: None indicated by suppliers

Substance not used in all manufacturing facilities. Cinders (Volcanic Scoria) obtained from two suppliers in the Southern California region. Contact manufacturer if more information is required.

IRON OXIDE

ID: 1317-61-9

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

HAZARD SCREENING DATE: **2019-10-08**

#: **0.00 - 1.00** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Pigment**

| HAZARD TYPE | AGENCY AND LIST TITLES | WARNINGS |
|-------------|------------------------|--|
| CANCER | MAK | Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification |

SUBSTANCE NOTES: Substance not used in all color formulations. Contact manufacturer if more information is required.

FERRIC OXIDE

ID: 1309-37-1

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

HAZARD SCREENING DATE: **2019-10-08**

#: **0.00 - 1.00** GS: **BM-2** RC: **None** NANO: **No** ROLE: **Pigment**

| HAZARD TYPE | AGENCY AND LIST TITLES | WARNINGS |
|-------------|------------------------|--|
| CANCER | MAK | Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification |

SUBSTANCE NOTES: GreenScreen Benchmark® assessment score of BM-2 was provided by the HPD Builder Tool. Substance not used in all color formulations. Contact manufacturer if more information is required.

FERRIC OXIDE YELLOW

ID: 51274-00-1

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

HAZARD SCREENING DATE: **2019-10-08**

#: **0.00 - 1.00** GS: **LT-UNK** RC: **None** NANO: **No** ROLE: **Pigment**

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

SUBSTANCE NOTES: Substance not used in all color formulations. Contact manufacturer if more information is required.

CHROMIUM (III) OXIDE

ID: 1308-38-9

| | | | | |
|---|------------------|--|-----------------|----------------------|
| HAZARD SCREENING METHOD: Pharos Chemical and Materials Library | | HAZARD SCREENING DATE: 2019-10-08 | | |
| %: 0.00 - 1.00 | GS: LT-P1 | RC: None | NANO: No | ROLE: Pigment |

| HAZARD TYPE | AGENCY AND LIST TITLES | WARNINGS |
|----------------|------------------------|---|
| SKIN SENSITIZE | MAK | Sensitizing Substance Sh - Danger of skin sensitization |

SUBSTANCE NOTES: Substance not used in all color formulations. Contact manufacturer if more information is required.

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

CDPH Standard Method – Not tested

CERTIFYING PARTY: **Self-declared**

ISSUE DATE: **2019-**

EXPIRY DATE:

CERTIFIER OR LAB: **N/A**

APPLICABLE FACILITIES: **N/A**

05-20

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES:

MULTI-ATTRIBUTE

Type III Environmental Product Declaration (EPD)

CERTIFYING PARTY: **Third Party**

ISSUE

EXPIRY

CERTIFIER OR LAB:

APPLICABLE FACILITIES: **Tuxford Plant (Sun Valley, CA 91352); Orange Plant (Orange, CA 92865); Fontana Plant (Fontana, CA 92335); Gardena Plant (Gardena, CA 90248); Oxnard Plant (Oxnard, CA 93036); Indio Plant (Indio, CA 92202)**

DATE:

DATE:

ASTM

**2015-
03-16**

**2020-
03-16**

International

CERTIFICATE URL:

http://www.angelusblock.com/assets/docs/Angelus_Block_CMU_Type_III_EPD.pdf

CERTIFICATION AND COMPLIANCE NOTES: **This document is a product-specific Type III environmental product declaration (EPD) for 69 concrete masonry unit (CMU) mix designs manufactured by Angelus Block Co., Inc. This declaration has been prepared in accordance with ISO 14025, ISO 21930, and ASTM International's EPD program operator rules. Declared Unit: 1 m3 of concrete formed into manufactured concrete and concrete masonry products. ASTM Declaration Number: EPD-010.**

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.

SPEC MIX® PREBLENDED MORTAR

HPD URL: **No HPD Available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Use for installation of concrete masonry units.

SPEC MIX® IWR PREBLENDED MORTAR

HPD URL: **No HPD Available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Use for installation of concrete masonry units where an integral water repellent is desired.

Section 5: General Notes



MANUFACTURER INFORMATION

MANUFACTURER: **Angelus Block Co., Inc.**

ADDRESS: **11374 Tuxford Street**

Sun Valley CA 91352, USA

WEBSITE: **www.AngelusBlock.com**

CONTACT NAME: **John Surratt**

TITLE: **Architectural Sales Manager**

PHONE: **714-637-8594**

EMAIL: **jsurratt@angelusblock.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 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.