

HPD UNIQUE IDENTIFIER: 25458

CLASSIFICATION: 04 22 00 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

Table with 4 columns: Inventory Reporting Format, Threshold level, Residuals/Impurities, and screening options. Includes radio buttons for 'Basic Method', '100 ppm', 'Considered', etc.

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 LT-UNK SODIUM DODECYLBENZENESULFONATE LT-P1 | MUL SC:CINDERS (VOLCANIC SCORIA) Not Screened FERROSFERRIC OXIDE BM-1 | CAN FERRIC OXIDE BM-1 | CAN FERRIC OXIDE, YELLOW LT-UNK DICHROMIUM TRIOXIDE BM-1 | SKI]

Number of Greenscreen BM-4/BM3 contents ... 0 Contents highest concern GreenScreen Benchmark or List translator Score ... BM-1 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 2.2, 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: Inherently non-emitting source per LEED® LCA: Environmental Product Declaration (EPD) by ASTM

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified? [] Yes [x] No PREPARER: Self-Prepared VERIFIER: VERIFICATION #: SCREENING DATE: 2021-07-20 PUBLISHED DATE: 2021-07-20 EXPIRY DATE: 2024-07-20

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 2.2, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-2-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 documentation 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 potential variations during manufacturing.

SC:NATURAL SAND

ID: SC:GeoMat

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: Not Screened

#: 20.0000 - 45.0000 GS: Not Screened RC: None NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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Hazard Screening not performed

SUBSTANCE NOTES:

Version: SCGeoMats/2019-06-20

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: 2021-07-20 9:19:24

#: 20.0000 - 55.0000 GS: NoGS RC: None NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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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: 2021-07-20 9:19:24

#: 10.0000 - 15.0000

GS: LT-P1

RC: None

NANO: No

SUBSTANCE ROLE: Binder

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

ID: 1317-65-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-07-20 9:19:25

#: 1.0000 - 5.0000

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: 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 DODECYLBENZENESULFONATE

ID: 25155-30-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-07-20 9:19:25

#: 0.0100 - 0.0300

GS: LT-P1

RC: None

NANO: No

SUBSTANCE ROLE: Plasticizer

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

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

SC:CINDERS (VOLCANIC SCORIA)

ID: SC:GeoMat

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: Not Screened

#: 0.0000 - 25.0000

GS: Not Screened

RC: None

NANO: No

SUBSTANCE ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
	Hazard Screening not performed	

SUBSTANCE NOTES:

Version: SCGeoMats/2019-06-20

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.

FERROSFERRIC OXIDE

ID: 1317-61-9

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-07-20 9:19:26**

#: **0.0000 - 1.0000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

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

SUBSTANCE NOTES: GreenScreen Benchmark® assessment score of BM-1 was provided by the HPD Builder Tool. 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: **2021-07-20 9:19:26**

#: **0.0000 - 1.0000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

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

SUBSTANCE NOTES: GreenScreen Benchmark® assessment score of BM-1 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: **2021-07-20 9:19:27**

#: **0.0000 - 1.0000** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE 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.

DICHRONIUM TRIOXIDE

ID: 1308-38-9

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-07-20 9:19:28**

#: **0.0000 - 1.0000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

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

SUBSTANCE NOTES: GreenScreen Benchmark® assessment score of BM-1 was provided by the HPD Builder Tool. 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	Inherently non-emitting source per LEED®
CERTIFYING PARTY: Self-declared APPLICABLE FACILITIES: All CERTIFICATE URL:	ISSUE DATE: 2021-06-28 EXPIRY DATE: CERTIFIER OR LAB: N/A
CERTIFICATION AND COMPLIANCE NOTES: This product qualifies as an inherently non-emitting source per LEED. As per LEED, "Products that are inherently nonemitting sources of VOCs (stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood) are considered fully compliant without any VOC emissions testing if they do not include integral organic-based surface coatings, binders, or sealants."	

LCA	Environmental Product Declaration (EPD) by ASTM
CERTIFYING PARTY: Third Party 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). CERTIFICATE URL: https://www.angelusblock.com/sustainable_design/epd-index.cfm	ISSUE DATE: 2021-05-04 EXPIRY DATE: 2026-05-04 CERTIFIER OR LAB: ASTM
CERTIFICATION AND COMPLIANCE NOTES: Product-specific Type III environmental product declarations (EPD) are available by product mix and manufacturing location. Reference PCR: Part B: Concrete Masonry and Segmental Concrete Paving Product EPD Requirements, November 11 2020. V1.0. Declared Unit: One cubic meter (m3) of concrete formed into manufactured concrete products. Scope: Cradle to Gate.	

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

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY**Hazard Types**

AQU Aquatic toxicity	LAN Land toxicity	PHY Physical hazard (flammable or reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive
DEV Developmental toxicity	MUL Multiple	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	NF Not found on Priority Hazard Lists	UNK Unknown
GEN Gene mutation	OZO Ozone depletion	
GLO Global warming	PBT Persistent, bioaccumulative, and toxic	

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
BM-2 Benchmark 2 (use but search for safer substitutes)	
BM-1 Benchmark 1 (avoid - chemical of high concern)	
BM-U Benchmark Unspecified (due to insufficient data)	
LT-P1 List Translator Possible 1 (Possible Benchmark-1)	NoGS No GreenScreen.

Recycled Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

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.