

CLASSIFICATION: Tile and Stone Mortar

PRODUCT DESCRIPTION: ARDEX X 4™ is a polymer-modified, thin set mortar for setting quarry, ceramic and most natural stone* tiles over common interior surfaces, including exterior-grade plywood, as well as over exterior concrete and masonry surfaces. ARDEX X 4 also can be used to install porcelain tile over common interior surfaces as well as and exterior, horizontal concrete and masonry surfaces. ARDEX X 4 is recommended for most tile sizes,** including mosaics.

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

ARDEX X 4 [QUARTZ LT-1 | CAN PORTLAND CEMENT LT-P1 | END | CAN ETHYLENE VINYL ACETATE POLYMER (EVA) LT-UNK LIMESTONE, CALCIUM CARBONATE LT-UNK CALCIUM DIFORMATE LT-UNK CELLULOSE ETHER LT-UNK]

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

Contents highest concern GreenScreen Benchmark or List translator Score ... LT-1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

The exact percentages have been withheld by the manufacturer as trade secrets.

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 V1.2 (Section 01350/CHPS) - Classroom & Office scenario
Multi-attribute: Environmental Product Declaration (EPD) by UL - Industry Generic

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Third Party Verified?

- Yes
- No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2019-03-15

PUBLISHED DATE: 2019-03-15

EXPIRY DATE: 2022-03-15



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

ARDEX X 4

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: ARDEX uses naturally ingredients, such as quartz, cement, limestone, and gypsum. As a result, suppliers of these ingredients indicate that raw materials may contain residual earthen material, such as sand, in residual quantities. These materials are listed on suppliers' Safety Data Sheets (SDS) and they are accounted for on the Safety Data Sheets of ARDEX products.

OTHER PRODUCT NOTES:

QUARTZ

ID: 14808-60-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-03-15

#: 30.0000 - 50.0000

GS: LT-1

RC: None

NANO: No

ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	IARC	Group 1 - Agent is Carcinogenic to humans
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CANCER	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources
CANCER	US NIH - Report on Carcinogens	Known to be Human Carcinogen (respirable size - occupational setting)
CANCER	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CANCER	New Zealand - GHS	6.7A - Known or presumed human carcinogens
CANCER	Japan - GHS	Carcinogenicity - Category 1A
CANCER	Australia - GHS	H350i - May cause cancer by inhalation

SUBSTANCE NOTES:

PORTLAND CEMENT

ID: 65997-15-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2019-03-15

#: 30.0000 - 50.0000

GS: LT-P1

RC: None

NANO: No

ROLE: Binder

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

ENDOCRINE

TEDX - Potential Endocrine Disruptors

Potential Endocrine Disruptor

CANCER

MAK

Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

SUBSTANCE NOTES:

ETHYLENE VINYL ACETATE POLYMER (EVA)

ID: 24937-78-8

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

HAZARD SCREENING DATE: **2019-03-15**

#: 1.0000 - 5.0000

GS: LT-UNK

RC: None

NANO: No

ROLE: Modifier

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

No hazards found

SUBSTANCE NOTES:

LIMESTONE, CALCIUM CARBONATE

ID: 1317-65-3

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

HAZARD SCREENING DATE: **2019-03-15**

#: 1.0000 - 5.0000

GS: LT-UNK

RC: None

NANO: No

ROLE: Filler

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

No hazards found

SUBSTANCE NOTES:

CALCIUM DIFORMATE

ID: 544-17-2

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

HAZARD SCREENING DATE: **2019-03-15**

#: 1.0000 - 5.0000

GS: LT-UNK

RC: None

NANO: No

ROLE: Modifier

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

No hazards found

SUBSTANCE NOTES:

CELLULOSE ETHER

ID: 9032-42-2

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

HAZARD SCREENING DATE: **2019-03-15**

#: **0.1000 - 1.0000**

GS: **LT-UNK**

RC: **None**

NANO: **No**

ROLE: **Modifier**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

No hazards found

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

CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario

CERTIFYING PARTY: **Third Party**

ISSUE DATE: **2019-03-13**

EXPIRY DATE:

CERTIFIER OR LAB: **UL**

APPLICABLE FACILITIES: **All ARDEX manufacturing facilities.**

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES:

MULTI-ATTRIBUTE

Environmental Product Declaration (EPD) by UL - Industry Generic

CERTIFYING PARTY: **Third Party**

ISSUE DATE: **2016-09-30**

EXPIRY DATE: **2021-09-30**

CERTIFIER OR LAB: **UL**

APPLICABLE FACILITIES: **All ARDEX Manufacturing Facilities**

CERTIFICATE URL:

<https://www.tcnatile.com/images/pdfs/EPDs/EPD-for-Cement-Mortar-Made-in-North-America.pdf>

CERTIFICATION AND COMPLIANCE NOTES:

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.

WATER

HPD URL: **No HPD Available**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Mix each bag of ARDEX X 4 with clean, potable water in accordance with the Technical Data Sheet.

Section 5: General Notes

Refer to the GHS Formatted Safety Data Sheet (SDS) and the Technical Data Sheet for additional information regarding the proper mixing and application of this product. Information can be found at www.ardexamericas.com.



MANUFACTURER INFORMATION

MANUFACTURER: **ARDEX Engineered Cements**
 ADDRESS: **400 Ardex Park Drive**
Aliquippa PA 15001, USA
 WEBSITE: **www.ardexamericas.com**

CONTACT NAME: **Steven Newbrough**
 TITLE: **Environmental Programs Specialist**
 PHONE: **724-203-5445**
 EMAIL: **steven.newbrough@ardexamericas.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	GLO Global warming	PHY Physical Hazard (reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive toxicity
DEV Developmental toxicity	MUL Multiple hazards	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	OZO Ozone depletion	LAN Land Toxicity
GEN Gene mutation	PBT Persistent Bioaccumulative Toxic	NF Not found on Priority Hazard Lists

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

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.