

HPD UNIQUE IDENTIFIER: 28996

CLASSIFICATION: 09 30 13 Ceramic Tiling

PRODUCT DESCRIPTION: ARDEX X 4™ is a polymer modified mortar for setting most types of tile including mosaics and natural stone* over common interior surfaces including exterior grade plywood, as well as over exterior concrete and masonry surfaces. ARDEX X 4 mortar can be used to set porcelain tiles on horizontal exterior concrete or masonry surfaces.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format ☐ Nested Materials Method ☒ Basic Method	Threshold Level ☐ 100 ppm ☒ 1,000 ppm ☐ Per GHS SDS ☐ Other	Residuals/Impurities ☒ Considered ☐ Partially Considered ☐ Not Considered Explanation(s) provided for Residuals/Impurities? ☒ Yes ☐ No	<i>All Substances Above the Threshold Indicated Are:</i> Characterized ☐ Yes Ex/SC ☒ Yes ☐ No <i>% weight and role provided for all substances.</i> Screened ☐ Yes Ex/SC ☒ Yes ☐ No <i>All substances screened using Priority Hazard Lists with results disclosed.</i> Identified ☐ Yes Ex/SC ☐ Yes ☒ No <i>One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.</i>
Threshold Disclosed Per ☐ Material ☒ Product			

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 BM-1 | CAN PORTLAND CEMENT LT-P1 | CAN | END ETHYLENE VINYL ACETATE POLYMER (EVA) LT-UNK LIMESTONE, CALCIUM CARBONATE BM-3dg CALCIUM DIFORMATE BM-3 CELLULOSE ETHER BM-2]

Number of Greenscreen BM-4/BM3 contents ... 1

Contents highest concern GreenScreen Benchmark or List translator Score ... BM-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: UL/GreenGuard Gold Certified

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: 2022-06-30 PUBLISHED DATE: 2022-06-30 EXPIRY DATE: 2025-06-30
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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

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: 2022-06-30 11:43:43

%: 30.0000 - 50.0000

GS: BM-1

RC: None

NANO: No

SUBSTANCE ROLE: **Filler**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	US NIH - Report on Carcinogens	Known to be Human Carcinogen (respirable size - occupational setting)
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]
CAN	GHS - New Zealand	Carcinogenicity category 1

SUBSTANCE NOTES:

PORTLAND CEMENT

ID: 65997-15-1

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

HAZARD SCREENING DATE: 2022-06-30 11:43:44

%: 30.0000 - 50.0000

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:		

ETHYLENE VINYL ACETATE POLYMER (EVA)

ID: 24937-78-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-06-30 11:43:44		
%: 1.0000 - 5.0000	GS: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Viscosity modifier
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES:				

LIMESTONE, CALCIUM CARBONATE

ID: 1317-65-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-06-30 11:43:45		
%: 1.0000 - 5.0000	GS: BM-3dg	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:				

CALCIUM DIFORMATE

ID: 544-17-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-06-30 11:43:45		
%: 1.0000 - 5.0000		GS: BM-3		RC: None NANO: No SUBSTANCE ROLE: Viscosity modifier
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found		No warnings found on HPD Priority Hazard Lists		
SUBSTANCE NOTES:				

CELLULOSE ETHER

ID: 9032-42-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2022-06-30 11:43:46		
%: 0.1000 - 1.0000		GS: BM-2		RC: None NANO: No SUBSTANCE ROLE: Viscosity modifier
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
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	UL/GreenGuard Gold Certified		
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All ARDEX manufacturing facilities. CERTIFICATE URL: http://spot.ul.com CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2020-07-01	EXPIRY DATE:	CERTIFIER OR LAB: UL Environment
MULTI-ATTRIBUTE	Environmental Product Declaration (EPD) by UL - Industry Generic		
CERTIFYING PARTY: Third Party 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:	ISSUE DATE: 2016-09-30	EXPIRY DATE: 2021-09-30	CERTIFIER OR LAB: UL

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

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.