

HPD UNIQUE IDENTIFIER: 2686703405056

CLASSIFICATION: 09 90 00 Painting and Coating

PRODUCT DESCRIPTION: Armourcoat Limewash is a natural ecological mineral paint composed of slaked lime putty and white Kaolin clay. Armourcoat Limewash is pigmented with natural oxide pigments to create a breathable surface with soft tonal variation. The colour range consists of 45 beautiful limewash tones. The Armourcoat limewash gradually hardens as it absorbs CO2 from the atmosphere in a process known as carbonation. This process ensures the product has a significantly lower GWP (Global Warming Potential) than conventional water based paints.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold Level	Residuals/Impurities Evaluation	For all contents above the threshold, the manufacturer has:
☐ Nested Materials Method	☐ 100 ppm	Completed in 7 of 7 Materials	Characterized ☒ Yes ☐ No
☐ Basic Method	☒ 1,000 ppm	Explanation(s) provided for Residuals/Impurities?	<i>Provided weight and role.</i>
Threshold Disclosed Per	☐ Per GHS SDS	☒ Yes ☐ No	Screened ☒ Yes ☐ No
☐ Material	☐ Other		<i>Provided screening results using HPDC-approved methods.</i>
☒ Product			Identified ☐ Yes ☒ No
			<i>Provided name and CAS RN or other identifier.</i>

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.

NESTED MATERIAL | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE

LIME PUTTY [WATER (PRIMARY CASRN IS 7732-18-5) BM-4
CALCIUM HYDROXIDE LT-P1 | SKI | MAM | EYE] WATER [WATER (PRIMARY CASRN IS 7732-18-5) BM-4] KAOLIN CLAY [KAOLIN CLAY (PRIMARY CASRN IS 1332-58-7) LT-UNK | CAN] CRUSHED MARBLE POWDER [CALCIUM CARBONATE BM-3 | EYE] UNDISCLOSED [UNDISCLOSED LT-UNK] UNDISCLOSED [UNDISCLOSED LT-UNK] UNDISCLOSED [UNDISCLOSED NoGS]

Number of Greenscreen BM-4/BM3 contents ... 3

Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-P1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This Health Product declaration (HPD) was completed in accordance with the HPD Standard Version 2.3 and discloses hazards associated with all substances present at or above 1000 parts per million (ppm) in the finished product along with the role and percentage weight therefore. Therefore, this HPD qualifies for the LEED v4 MR credit Building Product Disclosure and Optimization: Material Ingredient Reporting (Option 1). Substances not "Identified" are those considered proprietary to suppliers, and thus are "Undisclosed" on this HPD.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

Material (g/l): <1 Regulatory (g/l): N/A

Does the product contain exempt VOCs: No

Are colorants available that do not increase the VOC content of the base paint when tinted: No

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC emissions: Eurofins Indoor Air Comfort GOLD - certified product

VOC content: Eurofins Confirmation LEEDv4 EQ - Low emitting products - wet applied - DiBt/AgBB/SCAQMD

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4.1 Option 1.

Third Party Verified?	PREPARER: Self-Prepared	SCREENING DATE: 2023-10-05
☐ Yes	VERIFIER:	PUBLISHED DATE: 2023-10-05
☒ No	VERIFICATION #:	EXPIRY DATE: 2026-10-05

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 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

%: 68.0000 - 70.0000

MATERIAL TYPE: Geologically Derived
Material

RESIDUALS AND IMPURITIES NOTES: Lime Putty is primarily Calcium hydroxide and water but may contain small amounts of Calcium carbonate , Magnesium Hydroxide and trace amounts of clay

OTHER MATERIAL NOTES: All substances in this material are below the reportable threshold.

ID: 652133-48-7

HAZARD SCREENING DATE: 2023-10-05 8:58:08

SUBSTANCE ROLE: Diluent

WARNINGS

No warnings found on HPD Priority Hazard Lists

NOTIFICATION

EU - REACH Exemptions

Exempted from REACH Annex IV listing due to intrinsic safety

SUBSTANCE NOTES:

ID: 1305-62-0

HAZARD SCREENING DATE: 2023-10-05 8:58:08

SUBSTANCE ROLE: Binder

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
SKI	GHS - Australia	H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]
MAM	GHS - Japan	H370 - Causes damage to organs [Specific target organs/systemic toxicity following single exposure - Category 1]
SKI	GHS - New Zealand	Skin corrosion category 1C
EYE	GHS - New Zealand	Serious eye damage category 1
EYE	GHS - Japan	H318 - Causes serious eye damage [Serious eye damage / eye irritation - Category 1]
SKI	GHS - Japan	H315 - Causes skin irritation [Skin corrosion / irritation - Category 2]
EYE	GHS - Australia	H318 - Causes serious eye damage [Serious eye damage/eye irritation - Category 1]

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List Antimicrobials
RESTRICTED LIST	Cradle to Cradle Products Innovation Institute (C2CP II)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products

SUBSTANCE NOTES: Lime putty is primarily Calcium hydroxide and water but may contain small amounts of Calcium carbonate , Magnesium Hydroxide and trace amounts of clay

WATER	%: 14.0000 - 15.0000	
PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Other: Water
RESIDUALS AND IMPURITIES NOTES: Water may contain trace elements but well below the threshold		
OTHER MATERIAL NOTES: All substances in this material are below the reportable threshold.		

ID: 1371582-34-1

SUBSTANCE NOTES:

%: 8.0000 - 10.0000

RESIDUALS AND IMPURITIES NOTES: Pure refined kaolin clay can contain <1% Quartz

OTHER MATERIAL NOTES:

ID: 12198-85-5

SUBSTANCE NOTES:

%: 6.0000 - 8.0000

ppm Yes

RESIDUALS AND IMPURITIES NOTES: Crushed marble with high purity (99 %. CaCO3). May also be represented by CASRN 471-34-1 (BM-3 | NO). Supplier has confirmed that MgCO3 , Fe2O3 and SiO2 are all present at less than 1000 ppm

OTHER MATERIAL NOTES: Marble is predominately Calcium Carbonate but small impurities of Magnesium carbonate (dolomite) may occur along with trace amounts of iron oxide and clay. All substances in this material are below the reportable threshold.

CALCIUM CARBONATE

ID: 471-34-1

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2023-10-05 8:58:09

%: 100.0000 - 100.0000 GreenScreen: BM-3 RC: PreC NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE LIST NAME AND SOURCE WARNINGS

EYE GHS - New Zealand Eye irritation category 2

ADDITIONAL LISTINGS LIST NAME AND SOURCE NOTIFICATION

None found No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Crushed marble powder is made from the marble waste from the slab industry which is crushed and graded for use in Terazzo and other mineral plaster products

UNDISCLOSED

?: 1.0000 - 2.0000

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities are known or expected to be present at or above the ContentInventory Threshold indicated that have a GS score of BM-1, LT-1, LT-P1 or NoGS based on information provided in supplier disclosure letters, supplier SDS, and as predicted by process chemistry (Pharos CML).

OTHER MATERIAL NOTES: All substances in this material are below the reportable threshold.

UNDISCLOSED

ID: Undisclosed

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2023-10-05 8:58:09

%: 100.0000 - 100.0000 GreenScreen: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Binder

HAZARD TYPE LIST NAME AND SOURCE WARNINGS

None found No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS LIST NAME AND SOURCE NOTIFICATION

RESTRICTED LIST Cradle to Cradle Products Innovation Institute (C2CPH) C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022

Core Restrictions

SUBSTANCE NOTES: water based addition for pigment binding

UNDISCLOSED

?: 0.2000 - 0.5000

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Other: Biological material

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities are known or expected to be present at or above the Content Inventory Threshold indicated that have a GS score of BM-1, LT-1, LT-P1 or NoGS based on information provided in supplier disclosure letters, supplier SDS, and as predicted by process chemistry (Pharos CML).

OTHER MATERIAL NOTES: All substances in this material are below the reportable threshold.

UNDISCLOSED

ID: Undisclosed

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-10-05 8:58:09

%: 100.0000 - 100.0000

GreenScreen: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Viscosity modifier

HAZARD TYPE

LIST NAME AND SOURCE

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS

LIST NAME AND SOURCE

NOTIFICATION

None found

No listings found on Additional Hazard Lists

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

UNDISCLOSED

%: 0.1000 - 0.5000

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Polymeric Material

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities are known or expected to be present at or above the Content Inventory Threshold indicated that have a GS score of BM-1, LT-1, LT-P1 or NoGS based on information provided in supplier disclosure letters, supplier SDS, and as predicted by process chemistry (Pharos CML).

OTHER MATERIAL NOTES: All substances in this material are below the reportable threshold.

UNDISCLOSED

ID: Undisclosed

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-10-05 8:58:09

%: 100.0000 - 100.0000

GreenScreen: NoGS

RC: None

NANO: No

SUBSTANCE ROLE: Dispersant

HAZARD TYPE

LIST NAME AND SOURCE

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

ADDITIONAL LISTINGS

LIST NAME AND SOURCE

NOTIFICATION

None found

No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

Armourcoat Limewash

HPD v2.3 created via HPDC Builder Page 6 of 9

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	Eurofins Indoor Air Comfort GOLD - certified product	
CERTIFYING PARTY: Third Party	ISSUE DATE: 2023-04-14	CERTIFIER OR LAB: Eurofins
APPLICABLE FACILITIES: Eurofins Product Testing A/S	EXPIRY DATE: 2028-04-14	
Smedeskovvej 38 8464 Galten Denmark		
CERTIFICATE URL:		
CERTIFICATION AND COMPLIANCE NOTES:		

VOC CONTENT	Eurofins Confirmation LEEDv4 EQ - Low emitting products - wet applied - DiBt/AgBB/SCAQMD	
CERTIFYING PARTY: Third Party	ISSUE DATE: 2023-04-18	CERTIFIER OR LAB: Eurofins
APPLICABLE FACILITIES: Eurofins Product Testing A/S	EXPIRY DATE: 2028-04-18	
Smedeskovvej 38 8464 Galten Denmark		
CERTIFICATE URL:		
CERTIFICATION AND COMPLIANCE NOTES: SCAQMD Rule 1113 Pass February 2016 LEED v4.1 (VOC Content) Pass February 2021		

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.

K40 PRIMER
MANUFACTURER (OR GENERIC): Armourcoat Ltd

HPD URL: https://armourcoat.com/en/technical/hpd/Health_Product_Declaration_HPD_for_K40_Primer
ACCESSORY TYPE: Other
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: K40 primer for application to provide good adhesion to most substrates.

PIGMENT DISPERSION
MANUFACTURER (OR GENERIC): Chromaflo

HPD URL: No HPD available
ACCESSORY TYPE: Colorant System
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Low VOC waterborne pigments

Section 5: General Notes

Armourcoat Limewash may be tinted to a very wide range of colours using the Armourcoat Low VOC pigments
natural mineral, environmentally friendly material
wide colour range for interior use
good water vapour permeability
Viscosity 2,000cP +/- 500cP
Specific density 1.29 kg/L +/- 0.2 kg/L
Dry solids content 47 % +/- 2%

MANUFACTURER INFORMATION

MANUFACTURER: Armourcoat Ltd
ADDRESS: Armourcoat Ltd
 Unit 2& 3 Morewood Close
 Sevenoaks, Kent TN132HU
COUNTRY: UK

WEBSITE: www.armourcoat.co.uk
CONTACT NAME: Duncan Mackellar
TITLE: Mr
PHONE: +44 1732460668
EMAIL: technical@armourcoat.co.uk

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-P1 List Translator Possible 1 (Possible Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS No GreenScreen.
BM-U Benchmark Unspecified (due to insufficient data)	

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

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

