Armural / Armuralia
by Armourcoat Ltd

Health Product Declaration v2.3
created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 29730
CLASSIFICATION: 09 25 23 Lime Based Plastering
PRODUCT DESCRIPTION: Armural /Armuralia Polished plaster P50, P500, P700 are ready-mixed marble stucco (marmorino) paste that are trowel applied to create either smooth or textured finishes which resemble natural stone in their appearance, hardness and feel to the touch. These products are made from a combination of slaked lime, crushed and milled marble powder and special additives, formulated to give outstanding workability and surface polish. Armuralia is a natural mineral material and is hard due to the quality and fineness of the slaked lime and marble used in its manufacture. Armuralia can be tinted to create a large range of colours. The raw material ingredients of all materials are the same and there are small variations in the composition and the size, grading and granulometry of the crushed marble aggregate.

Section 1: Summary — Nested 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
- ( ) Other

Residuals/Impurities Evaluation
Completed in 7 of 7 Materials

Explanation(s) provided for Residuals/Impurities?
(•) Yes ( ) No

For all contents above the threshold, the manufacturer has:

Characterized (•) Yes ( ) No
Provided weight and role.

Screened (•) Yes ( ) No
Provided screening results using HPDC-approved methods.

Identified ( ) Yes (•) No
Provided name and CAS RN or other 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.

NESTED MATERIAL | MATERIAL OR SUBSTANCE | *RESIDUAL OR IMPURITY*
GREENSCREEN SCORE | HAZARD TYPE

CRUSHED MARBLE POWDER [CALCIUM CARBONATE BM-3]
CALCIUM HYDROXIDE [CALCIUM HYDROXIDE LT-P1] WATER [WATER (PRIMARY CASRN IS 7732-18-5) BM-4] UNDISCLOSED [UNDISCLOSED NoGS] UNDISCLOSED [UNDISCLOSED LT-UNK]
UNDISCLOSED [UNDISCLOSED NoGS] UNDISCLOSED [UNDISCLOSED NoGS]

Number of Greenscreen BM-4/BM3 contents ... 2

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 2.2 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: Yes

CERTIFICATIONS AND COMPLIANCE *See Section 3 for additional listings.*

VOC emissions: Eurofins Indoor Air Comfort - certified product
VOC content: ISO 11890-2

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4.1 Option 1.

Third Party Verified?
- ( ) Yes
- (•) No

PREPARER: Self-Prepared
VERIFIER:
VERIFICATION #:

SCREENING DATE: 2021-08-27
PUBLISHED DATE: 2022-08-26
EXPIRY DATE: 2024-08-27

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

CRUSHED MARBLE POWDER

%: 40.0000 - 60.0000

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Geologically Derived Material

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: **2021-08-27 6:07:15**

%: **40.0000 - 60.0000** GreenScreen: **BM-3** RC: **PreC** NANO: **No** SUBSTANCE ROLE: **Filler**

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

ADDITIONAL LISTINGS	AGENCY	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

CALCIUM HYDROXIDE

%: 15.0000 - 40.0000

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

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.

CALCIUM HYDROXIDE

ID: 1305-62-0

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-08-27 7:22:23**

%: **15.0000 - 40.0000** GreenScreen: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Binder**

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

ADDITIONAL LISTINGS	AGENCY	NOTIFICATION
None found		No listings found on Additional Hazard Lists

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

%: **15.0000 - 35.0000**

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.

WATER (PRIMARY CASRN IS 7732-18-5)

ID: 652133-48-7

HAZARD DATA SOURCE: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-08-27 7:27:47**

%: **15.0000 - 35.0000** GreenScreen: **BM-4** RC: **None** NANO: **No** SUBSTANCE ROLE: **Diluent**

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

ADDITIONAL LISTINGS	AGENCY	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES:

UNDISCLOSED

%: **1.0000 - 3.0000**

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: **2021-08-27 6:07:17**

%: **1.0000 - 3.0000** GreenScreen: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Binder**

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

ADDITIONAL LISTINGS	AGENCY	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Supplier has shared substance name and CASRN under the terms of a non-disclosure agreement ; substance to remain proprietary to supplier. Substance has been screened against HPD Priority Lists using the HPD Builder

UNDISCLOSED %: **0.1000 - 0.5000**

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes MATERIAL TYPE: Other: Bioligical 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: **2021-08-27 6:07:17**

%: **0.1000 - 0.5000** GreenScreen: **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

ADDITIONAL LISTINGS	AGENCY	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: **2021-08-27 7:06:54**

%: **0.1000 - 0.5000** GreenScreen: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Dispersant**

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

ADDITIONAL LISTINGS	AGENCY	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.

UNDISCLOSED %: **0.0400 - 0.1500**

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

MATERIAL TYPE: Other: Plant based additive

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: **2021-08-27 6:07:17**

%: **0.0400 - 0.1500** GreenScreen: **NoGS** 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

ADDITIONAL LISTINGS	AGENCY	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)

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 - certified product**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Eurofins Product Testing A/S
Smedeskovvej 38 8464 Galten Denmark
CustomerSupport@eurofins.com
www.eurofins.com/VOC-testing
CERTIFICATE URL:

ISSUE DATE: 2022-03-09
EXPIRY DATE:

CERTIFIER OR LAB: Eurofins A/S

CERTIFICATION AND COMPLIANCE NOTES:

VOC CONTENT — **ISO 11890-2**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Eurofins Product Testing A/S
CERTIFICATE URL:

ISSUE DATE: 2018-05-08
EXPIRY DATE:

CERTIFIER OR LAB: Eurofins Product Testing A/S

CERTIFICATION AND COMPLIANCE NOTES: VOC content <1g/l Limit of Detection 1g/l

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.

KEYCOAT
MANUFACTURER (OR GENERIC): **Armourcoat Ltd**

HPD URL: No HPD available
ACCESSORY TYPE:
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Keycoat is used as a preparatory layer for Armuralia / Armural

PIGMENT DISPERSION
MANUFACTURER (OR GENERIC): **Chromaflo**

HPD URL: No HPD available
ACCESSORY TYPE: Maintenance Product
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Range of high strength low VOC pigments for water based paints and coatings

Section 5: General Notes

Armural/ Armuralia may be tinted to a very wide range of colours using the Armourcoat Low VOC pigments
provides a hard and durable polished surface for interior and exterior use* (limitations apply)
natural mineral, environmentally friendly material
wide colour range for interior use
good workability in a wide range of site conditions
up to 54% recycled content.
good water vapour permeability
non Newtonian thixotropic paste viscosity 70,000cP +/- 20000cP
specific density 1.75 kg/L +/- 0.1 kg/L
dry solids content 73 % +/- 3%

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Armourcoat Ltd**
ADDRESS: **Armourcoat Ltd**
Unit 2& 3 Morewood Close
Sevenoaks Kent TN132HU, 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
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation
GLO Global warming
LAN Land toxicity
MAM Mammalian/systemic/organ toxicity
MUL Multiple
NEU Neurotoxicity
NF Not found on Priority Hazard Lists
OZO Ozone depletion
PBT Persistent, bioaccumulative, and toxic
PHY Physical hazard (flammable or reactive)
REP Reproductive
RES Respiratory sensitization
SKI Skin sensitization/irritation/corrosivity
UNK Unknown

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 (due to insufficient data)
LT-P1 List Translator Possible 1 (Possible Benchmark-1)
LT-1 List Translator 1 (Likely Benchmark-1)
LT-UNK List Translator Benchmark Unknown
NoGS No GreenScreen.

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

HPD and for compliance with the HPD standard noted.