# Armourcoat Stone cast panels by Armourcoat Ltd

#### HPD UNIQUE IDENTIFIER: 31070

CLASSIFICATION: 06 26 00 Board Paneling

PRODUCT DESCRIPTION: Armourcoat Stone cast panels can be made in a wide variety of colours and finishes to accurately emulate carved stone , cast concrete and wood shuttered concrete. A combination of a gypsum binder mixed with a variety of natural aggregates such as crushed marble , limestone , sand , mother of pearl , mica and earth pigments offers a huge array of decorative surface solutions. A broad range of modular panel designs can be achieved ranging from concrete panels with shutter holes to complex geometric designs and more organic and sculptural forms. The panels can be designed so that the pattern or design flows naturally from one panel to another. It is also possible to integrate joint lines within the design so that the surface does not read as a series of adjoining panels. One of the key advantages of this modularity is that relatively few moulds are required to complete large wall areas.

# Section 1: Summary

## **CONTENT INVENTORY**

- Inventory Reporting Format © Nested Materials Method
- C Basic Method
- Threshold Disclosed Per
- O Material
- O Product

Threshold Level C 100 ppm C 1,000 ppm C Per GHS SDS C Other Residuals/Impurities Evaluation Completed in 9 of 9 Materials Explanation(s) provided for Residuals/Impurities? © Yes © No

# **Nested Method / Product Threshold**

For all contents above the threshold, the manufacturer has		
Characterized	O Yes O No	
Provided weight and role.		
Screened	O Yes O No	
Provided screening results using HPDC	C-approved	
methods.		
Identified	○ Yes ⊙ No	
Provided name and CAS RN or other id	dentifier.	

# 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

GYPSUM HEMI-HYDRATE [ PLASTER OF PARIS NoGS *CLAY* NoGS ] CRUSHED MARBLE [ CALCIUM CARBONATE BM-3 | EYE ] LIGHTWEIGHT GLASS AGGREGATE [ SODA LIME BOROSILICATE GLASS LT-UNK ] MICA [ MICA NoGS ] ACRYLIC POLYMER [ ACRYLIC POLYMER NOGS ] GLASS FIBRE MATT [ GLASS FIBERS NoGS ] HYDRATED LIME [ CALCIUM HYDROXIDE LT-P1 | SKI | MAM | EYE ] UNDISCLOSED [ CITRIC ACID LT-UNK | SKI | EYE ] METHYL CELLULOSE [ HYDROXYPROPYL METHYLCELLULOSE LT-UNK ]

## VOLATILE ORGANIC COMPOUND (VOC) CONTENT VOC Content data is not applicable for this product category.

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

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.

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

VOC emissions: Eurofins Indoor Air Comfort - certified product

#### CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1. Pre-checked for LEED v4.1 Option 1.

Third Party Verified?

O Yes

No

PREPARER: Self-Prepared VERIFIER: VERIFICATION #: SCREENING DATE: 2023-01-17 PUBLISHED DATE: 2023-01-17 EXPIRY DATE: 2026-01-17

created via: HPDC Online Builder

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

GYPSUM HEMI-HYDRATE	%: 40.0000 - 70.0000	
PRODUCT THRESHOLD: 1000	RESIDUALS AND IMPURITIES EVALUATION COMPLETED:	MATERIAL TYPE: Geologically Derived
ppm	Yes	Material

RESIDUALS AND IMPURITIES NOTES: Residuals and Impurities were considered based manufacturers Product data sheet. Gypsum plaster will have small amounts of clay impurities that affect the colour of the gypsum mineral and small amounts of retarder and Lime. All of these ingredients have been reported.

OTHER MATERIAL NOTES: The quantity of Gypsum binder and the aggregates used are varied to create the specific aesthetic required. the percentage weight of the gypsum binder is varied due to the varying densities and particle size of the aggregates. All substances in this material are below the reportable threshold.

AZARD DATA SOURCE:	Pharos Chemical and Materials Library	HAZARD SO	REENING DATE:	2023-01-17 10:57:18	
6: <b>40.0000 - 70.0000</b>	GreenScreen: NoGS	RC: None	NANO: No	SUBSTANCE ROLE	Binder
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS		
None found			No war	nings found on HPD Prior	ity Hazard List
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION		
None found			No	listings found on Additior	al Hazard List
	rimary binder for the panels e (LBC) Red List Approved				ID: <b>1302-87</b>
Living Building Challeng		HAZARD SO	REENING DATE:	2023-01-17 10:57:18	ID: <b>1302-87</b>
Living Building Challeng	e (LBC) Red List Approved	HAZARD SC RC: None	REENING DATE: NANO: <b>No</b>	2023-01-17 10:57:18 SUBSTANCE ROLE: Imp	
Living Building Challeng	e (LBC) Red List Approved Pharos Chemical and Materials Library				
Living Building Challeng	e (LBC) Red List Approved Pharos Chemical and Materials Library GreenScreen: NoGS		NANO: <b>No</b> WARNINGS		ourity/Residua
Living Building Challeng LAY AZARD DATA SOURCE: 6: Impurity/Residual HAZARD TYPE	e (LBC) Red List Approved Pharos Chemical and Materials Library GreenScreen: NoGS		NANO: <b>No</b> WARNINGS	SUBSTANCE ROLE: Imp	ourity/Residua

CRUSHED MARBLE	%: 0.0000 - 50.0000	
PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Geologically Derived Material

RESIDUALS AND IMPURITIES NOTES: No Residuals or Impurities are expected to be present at or above Content Inventory Threshold that return a GreenScreen score of BM-1, LT-1, LT-P1 or NoGS

CALCIUM CARBONATE					ID: <b>471-3</b> 4
HAZARD DATA SOURCE:	Pharos Chemical and Materials Library	HAZARD S	CREENING DATE:	2023-01-17 10:57	:19
%: 0.0000 - 50.0000	GreenScreen: BM-3	RC: PreC	NANO: No	SUBSTANCE	ROLE: Filler
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS		
EYE	GHS - New Zealand		Eye irritation cat	egory 2	
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION		
POSITIVE LIST	US Environmental Protection Ag EPA)	jency (US	US EPA - DfE SC	CIL	
			Green Circle - Ve	erified Low Concern	n
	e-consumer Marble waste from the marble (LBC) Red List Approved	slab industr	y that is crushed ar	nd graded	
IGHTWEIGHT GLASS GGREGATE RODUCT THRESHOLD: 100 pm	%: 5.0000 - 15.0000 00 RESIDUALS AND IMPURITIES E Yes	VALUATION (		ATERIAL TYPE: Ge	ologically Derived
gent and formed into a light xpected to be present at or	ES NOTES: Lightweight foamed glass aggr tweight spherical aggregate there may be above Content Inventory Threshold that r All substances in this material are below th	minor minera return a Green	al impurities in the g nScreen score of B	glass. No Residuals	or Impurities are
SODA LIME BOROSILICA	TE GLASS				ID: 65997-17
HAZARD DATA SOURCE:	Pharos Chemical and Materials Library	HAZARD S	CREENING DATE:	2023-01-17 10:57	:20
%: 5.0000 - 15.0000	GreenScreen: LT-UNK	RC: PreC	NANO: No	SUBSTANCE	ROLE: Filler
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS		
None found			No warr	nings found on HPE	Priority Hazard List
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION		
EXEMPT	European Union / European Cor	nmission	EU - REACH Exe	emptions	
	(EU EC)		Exempted from I safety	REACH Annex V lis	ting due to intrinsic
	urce of glass is window plate glass which (LBC) Red List Approved	is recycled fr	om older buildings		

MICA	%: 0.0000 - 5.0000			
PRODUCT THRESHOLD: 100 ppm	0 RESIDUALS AND IMPURITIES EV Yes	ALUATION COMPLETED:	MATERIAL TYPE: Geologically Derived Material	
RESIDUALS AND IMPURITIES NOTES: Mica are a group of silicate minerals whose outstanding physical characteristic is that individual mic crystals can easily be split into extremely thin reflective plates. No Residuals or Impurities are expected to be present at or above Content Inventory Threshold that return a GreenScreen score of BM-1, LT-1, LT-P1 or NoGS				
OTHER MATERIAL NOTES: A Chemically, micas can be give X2Y4–6Z8O20(OH, F)4, in which X is K, Na, or Ca or less comm Y is Al, Mg, or Fe or less comm Z is chiefly Si or Al, but also n	nonly Ba, Rb, or Cs; monly Mn, Cr, Ti, Li, etc.;	he reportable threshold as t	hey are inert mineral materials.	
МІСА			ID: 1318-94-1	
	Pharos Chemical and Materials Library	HAZARD SCREENING DA		
	Pharos Chemical and Materials Library GreenScreen: NoGS	HAZARD SCREENING DA	TE: 2023-01-17 10:57:20	
HAZARD DATA SOURCE:			TE: 2023-01-17 10:57:20	
HAZARD DATA SOURCE: 1 %: 0.0000 - 5.0000	GreenScreen: NoGS	RC: None NANO: NANO: WARNINGS	TE: 2023-01-17 10:57:20	
HAZARD DATA SOURCE: 1 %: 0.0000 - 5.0000 HAZARD TYPE	GreenScreen: NoGS	RC: None NANO: NANO: WARNINGS	TE: 2023-01-17 10:57:20 No SUBSTANCE ROLE: Filler warnings found on HPD Priority Hazard Lists	
HAZARD DATA SOURCE: 1 %: 0.0000 - 5.0000 HAZARD TYPE None found	GreenScreen: <b>NoGS</b>	RC: None NANO: No	TE: 2023-01-17 10:57:20 No SUBSTANCE ROLE: Filler warnings found on HPD Priority Hazard Lists	

ACRYLIC POLYMER	%: 2.0000 - 4.0000	
PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Polymeric Material
RESIDUALS AND IMPURITIES NOTES	S: Based on the manufacturers PDS and SDS ,No Residuals or Impu	urities are expected to be present at or

above Content Inventory Threshold that return a GreenScreen score of BM-1, LT-1, LT-P1 or NoGS.

HAZARD DATA SOURCE:	Pharos Chemical and Materials Library	HAZARD SO	CREENING DATE:	2023-01-17 10:57:19
%: 2.0000 - 4.0000	GreenScreen: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Binder
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
None found			No warr	nings found on HPD Priority Hazard Lis
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
None found			No	listings found on Additional Hazard Lis

GLASS FIBRE MATT	%: 1.0000 - 3.0000	
PRODUCT THRESHOLD: 1000	RESIDUALS AND IMPURITIES EVALUATION COMPLETED:	MATERIAL TYPE: Geologically Derived
ppm	Yes	Material

RESIDUALS AND IMPURITIES NOTES: The continuous strand glassfibre matt contains a small amount of binder but the manufacturer does not disclose the exact type and nature of the binder. Based on the manufacturers SDS No Residuals or Impurities are expected to be present at or above Content Inventory Threshold that return a GreenScreen score of BM-1, LT-1, LT-P1 or NoGS

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

DATE 0000 01 17 10 57 00
G DATE: 2023-01-17 10:57:20
No SUBSTANCE ROLE: Structure component
NGS
No warnings found on HPD Priority Hazard Lists
CATION
No listings found on Additional Hazard Lists

 
 HYDRATED LIME
 %: 0.2500 - 1.0000

 PRODUCT THRESHOLD: 1000
 RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes
 MATERIAL TYPE: Geologically Derived Material

RESIDUALS AND IMPURITIES NOTES: Hydrated lime will contain trace elements of calcium carbonate and clay. No Residuals or Impurities are expected to be present at or above Content Inventory Threshold that return a GreenScreen score of BM-1, LT-1, LT-P1 or NoGS.

IAZARD DATA SOURCE:	Pharos Chemical and Materials Library	HAZARD SO	CREENING DATE:	2023-01-17 10:57:20
%: <b>0.5000 - 2.0000</b>	GreenScreen: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Buffer
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
SKI	GHS - Australia		H315 - Causes sk Category 2]	kin irritation [Skin corrosion/irritation
MAM	GHS - Japan			amage to organs [Specific target toxicity following single exposure -
SKI	GHS - New Zealand		Skin corrosion ca	tegory 1C
EYE	GHS - New Zealand		Serious eye dama	age category 1
EYE	GHS - Japan			erious eye damage [Serious eye tation - Category 1]
SKI	GHS - Japan		H315 - Causes sk Category 2]	kin irritation [Skin corrosion / irritation
EYE	GHS - Australia			erious eye damage [Serious eye ation - Category 1]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
RESTRICTED LIST	Cradle to Cradle Products Innov Institute (C2CPII)	ation		Product Standard Restricted RSL) - Effective July 1, 2022
			Cosmetics & Pers	sonal Care Products
RESTRICTED LIST	Green Science Policy Institute (G	iSPI)	GSPI - Six Classe	es of Problematic Chemicals
			Antimicrobials	

SUBSTANCE NOTES: Hydrated lime is added to ensure that the PH remains balanced. Living Building Challenge (LBC) Red List Approved

UNDISCLOSED	%: 0.0500 - 0.2000	
PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Other Biological Material
	ES: we are using a food grade citric acid and it is meant to have Content Inventory Threshold that return a GreenScreen score o	
OTHER MATERIAL NOTES: All sub	stances in this material are below the reportable threshold.	
		ID: 77-92-9
HAZARD DATA SOURCE: Phare	s Chemical and Materials Library HAZARD SCREENING DAT	E: 2023-01-17 10:57:21

%: 0.0800 - 0.1100	GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Processing regulator	
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS		
SKI	GHS - Australia		H315 - Causes skin irritation [Skin corrosion/irritation - Category 2]		
EYE	GHS - Australia		H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]		
EYE	GHS - New Zealand		Serious eye damage category 1		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION		
POSITIVE LIST	US Environmental Protection Agency (US EPA)		US EPA - DfE Safer Chemicals Ingredients list (SCIL)		
	,		Chelating Ag	ents - Green Circle (Verified Low Concern)	

SUBSTANCE NOTES: Citric acid is a set retarder for the gypsum and the addition level is varied within a small range Living Building Challenge (LBC) Red List Approved

# METHYL CELLULOSE

%: 0.0500 - 0.1000

 PRODUCT THRESHOLD: 1000
 RESIDUALS AND IMPURITIES EVALUATION COMPLETED:
 MATERIAL TYPE: Other Biological

 ppm
 Yes
 Material

RESIDUALS AND IMPURITIES NOTES: Methyl cellulose is manufactured from wood cellulose and contains little or no impurities

HYDROXYPROPYL METHYLCELLULOSE ID: 9004-65-3					
Pharos Chemical and Materials Library	HAZARD SCREENING DATE:		2023-01-17 10:57:21		
GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Viscosity modifier		
LIST NAME AND SOURCE		WARNINGS			
		No war	nings found on HPD Priority Hazard Lists		
LIST NAME AND SOURCE		NOTIFICATION			
		No	listings found on Additional Hazard Lists		
	Pharos Chemical and Materials Library GreenScreen: LT-UNK LIST NAME AND SOURCE	Pharos Chemical and Materials Library       HAZARD SO         GreenScreen: LT-UNK       RC: None         LIST NAME AND SOURCE       IST	Pharos Chemical and Materials Library       HAZARD SCREENING DATE:         GreenScreen: LT-UNK       RC: None       NANO: No         LIST NAME AND SOURCE       WARNINGS         LIST NAME AND SOURCE       No war		

SUBSTANCE NOTES: Living Building Challenge (LBC) Red List Approved

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 CERTIFICATE URL: ISSUE DATE: 2022-11-25 EXPIRY DATE: 2027-11-25 CERTIFIER OR LAB: Eurofins

CERTIFICATION AND COMPLIANCE NOTES: Indoor Air Comfort Gold

# 😑 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.

## BONDPLAST

MANUFACTURER (OR GENERIC): Armourcoat Ltd

HPD URL: https://hpdrepository.hpd-collaborative.org/Repository/HPDs/1035\_Bondplast.pdf

ACCESSORY TYPE: Adhesive

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Installation of Armourcoat Acoustic plaster system

Section 5: General Notes

## 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: +441732460668 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

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**

GreenScreen (GS)

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

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)

#### 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

#### Armourcoat Stone cast panels

HPD and for compliance with the HPD standard noted.