

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

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 9 of 9 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

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]

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.

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: 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?	PREPARER: Self-Prepared	SCREENING DATE: 2023-01-17
☐ Yes	VERIFIER:	PUBLISHED DATE: 2023-01-17
☒ No	VERIFICATION #:	EXPIRY DATE: 2026-01-17

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 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Geologically Derived 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.			

PLASTER OF PARIS

ID: 26499-65-0

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-01-17 10:57:18		
%: 40.0000 - 70.0000	GreenScreen: NoGS	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	
None found			No listings found on Additional Hazard Lists	
SUBSTANCE NOTES: Primary binder for the panels Living Building Challenge (LBC) Red List Approved				

CLAY

ID: 1302-87-0

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-01-17 10:57:18		
?: Impurity/Residual	GreenScreen: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Impurity/Residual
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: When the gypsum is mined it is in strata within layers of marl clay and it is not possible in the manufacturing process to remove all traces of clay.				
Living Building Challenge (LBC) Red List Approved				

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		
OTHER MATERIAL NOTES: 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: 2023-01-17 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 category 2		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
POSITIVE LIST	US Environmental Protection Agency (US EPA)	US EPA - DfE SCIL Green Circle - Verified Low Concern		
SUBSTANCE NOTES: Pre-consumer Marble waste from the marble slab industry that is crushed and graded Living Building Challenge (LBC) Red List Approved				

LIGHTWEIGHT GLASS
AGGREGATE

%: 5.0000 - 15.0000

PRODUCT THRESHOLD: 1000 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Geologically Derived Material
RESIDUALS AND IMPURITIES NOTES: Lightweight foamed glass aggregate is made from recycled plate glass that is combined with a foaming agent and formed into a lightweight spherical aggregate there may be minor mineral impurities in the glass. 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.		

SODA LIME BOROSILICATE GLASS				ID: 65997-17-3
HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING 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 warnings found on HPD Priority Hazard Lists	
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
EXEMPT	European Union / European Commission (EU EC)		EU - REACH Exemptions Exempted from REACH Annex V listing due to intrinsic safety	
SUBSTANCE NOTES: Source of glass is window plate glass which is recycled from older buildings Living Building Challenge (LBC) Red List Approved				

MICA		%: 0.0000 - 5.0000	
PRODUCT THRESHOLD: 1000 ppm		RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Geologically Derived Material
RESIDUALS AND IMPURITIES NOTES: Mica are a group of silicate minerals whose outstanding physical characteristic is that individual mica 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: All substances in this material are below the reportable threshold as they are inert mineral materials. Chemically, micas can be given the general formula X2Y4–6Z8O20(OH, F)4, in which X is K, Na, or Ca or less commonly Ba, Rb, or Cs; Y is Al, Mg, or Fe or less commonly Mn, Cr, Ti, Li, etc.; Z is chiefly Si or Al, but also may include Fe3+ or Ti.			

MICA		ID: 1318-94-1		
HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2023-01-17 10:57:20		
%: 0.0000 - 5.0000	GreenScreen: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Filler
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:				

ACRYLIC POLYMER		%: 2.0000 - 4.0000	
PRODUCT THRESHOLD: 1000 ppm		RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Polymeric Material
RESIDUALS AND IMPURITIES NOTES: Based on the manufacturers PDS and 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.			

ACRYLIC POLYMER				ID: 9063-87-0
HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING 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 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: Living Building Challenge (LBC) Red List Approved				

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

GLASS FIBERS				ID: 308066-84-4		
HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2023-01-17 10:57:20			
%: 1.0000 - 3.0000		GreenScreen: NoGS		RC: Both	NANO: No	SUBSTANCE ROLE: Structure component
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: Continuous fibre glass reinforcing matt for panel strength and reinforcement						

HYDRATED LIME		%: 0.2500 - 1.0000	
PRODUCT THRESHOLD: 1000 ppm	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.			
OTHER MATERIAL NOTES: All substances in this material are below the reportable threshold.			

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-01-17 10:57:20

%: 0.5000 - 2.0000

GreenScreen: LT-P1

RC: None

NANO: No

SUBSTANCE ROLE: Buffer

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	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
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes 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
RESIDUALS AND IMPURITIES NOTES: we are using a food grade citric acid and it is meant to have 99.9%purity. 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.			

CITRIC ACID				ID: 77-92-9	
HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 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 Agents - 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 ppm		RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Other Biological Material
RESIDUALS AND IMPURITIES NOTES: Methyl cellulose is manufactured from wood cellulose and contains little or no impurities			
OTHER MATERIAL NOTES: All substances in this material are below the reportable threshold.			

HAZARD DATA SOURCE: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2023-01-17 10:57:21

%: 0.0500 - 0.1000

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: Living Building Challenge (LBC) Red List Approved

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	ISSUE DATE: 2022-11-25	CERTIFIER OR LAB: Eurofins
APPLICABLE FACILITIES: Eurofins Product testing A/S	EXPIRY DATE: 2027-11-25	
CERTIFICATE URL:		
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	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

