

HPD UNIQUE IDENTIFIER: 1628441600

CLASSIFICATION: 07 81 16 Cementitious Fire Protection

PRODUCT DESCRIPTION: Monokote® Z-106/HY® is Portland cement based cementitious fireproofing designed to meet specific commercial and industrial fire protection requirements on structural steel members, floor/ceiling and roof/ceiling assemblies. Monokote Z-106/HY is hard, moisture resistant and suitable for interior areas where resistance to moisture and abrasion is needed. Formulated for use with Grace’s patented Injection System, Monokote Z-106/HY offers high-yield and improved application characteristics while providing resistance to repeated physical contact and/or high humidity.

Section 1: Summary

Nested Method / Material Threshold

CONTENT INVENTORY

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

NESTED MATERIAL | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE

MONOKOTE Z-106/HY [PORTLAND CEMENT LT-P1] CAN | END | MAM CALCIUM SULFATE LT-UNK | MAM CELLULOSIC FIBER NoGS EXPANDED POLYSTYRENE LT-UNK FULLERS EARTH LT-1] CAN | MAM | EYE CHOPPED GLASS FIBER LT-UNK QUARTZ BM-1] CAN | MAM | GEN HYDROLYZED KERATIN LT-UNK CALCIUM HYDROXIDE LT-P1] SKI | MAM | EYE]

Number of Greenscreen BM-4/BM3 contents ... 0

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

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 100 parts per million (ppm) in the finished product, along with the role and percent weight.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

Material (g/l): 0 g/l Regulatory (g/l): 0 g/l

Does the product contain exempt VOCs: No

Are colorants available that do not increase the VOC content of the base paint when tinted: N/A

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC emissions: CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario

VOC content: EPA Method 24 - Volatile Matter Content (EPA 24)

LCA: Environmental Product Declaration (EPD) by ASTM

Material Ingredient Reporting: ILFI Declare - Red List Free

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: 2024-06-03
☐ Yes	VERIFIER:	PUBLISHED DATE: 2024-06-03
☒ No	VERIFICATION #:	EXPIRY DATE: 2027-06-03

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

MONOKOTE Z-106/HY		%: 100.0000 - 100.0000	
MATERIAL THRESHOLD: 100 ppm	RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes	MATERIAL TYPE: Geologically Derived Material	
RESIDUALS AND IMPURITIES NOTES: Residuals or impurities with the potential to be present at or above the Content Inventory Threshold indicated that return a GS score of BM-1, LT-1, LT-P1 or NoGS have been disclosed, based on information provided in supplier documentation and as predicted by process chemistry (Pharos CML).			
OTHER MATERIAL NOTES: Percent by weight of substances reported as range to account for potential formulation variations between batches and manufacturing facilities.			

PORTLAND CEMENT			ID: 65997-15-1	
HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-06-03 11:27:12		
%: 65.0000 - 75.0000	GreenScreen: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Binder
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification		
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor		
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]		
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
None found		No listings found on Additional Hazard Lists		
SUBSTANCE NOTES:				

CALCIUM SULFATE				ID: 7778-18-9
HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-06-03 11:27:12		
%: 15.0000 - 20.0000	GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Binder
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
MAM	GHS - Japan	H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]		

ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists
SUBSTANCE NOTES:		

CELLULOSIC FIBER

ID: 65996-61-4

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-06-03 11:27:12		
%: 3.0000 - 6.0000	GreenScreen: NoGS	RC: PostC	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 IV listing due to intrinsic safety	
SUBSTANCE NOTES: Post-consumer recycled cellulose contributes to 5% total recycled content for Monokote product.				

EXPANDED POLYSTYRENE

ID: 9003-53-6

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-06-03 11:27:13		
%: 3.0000 - 5.0000	GreenScreen: LT-UNK	RC: PostC	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	
RESTRICTED LIST	Perkins+Will (P+W)		P&W - Precautionary List	
			Precautionary list of substances recommended for avoidance	
SUBSTANCE NOTES: Post-consumer recycled EPS contributes to 5% total recycled content for Monokote product.				

FULLERS EARTH

ID: 12174-11-7

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-06-03 11:27:13		
%: 2.0000 - 5.0000	GreenScreen: LT-1	RC: None	NANO: No	SUBSTANCE ROLE: Viscosity modifier

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	CA EPA - Prop 65	Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
CAN	MAK	Carcinogen Group 2 - Considered to be carcinogenic for man
CAN	GHS - New Zealand	Carcinogenicity category 2
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
EYE	GHS - Japan	H319 - Causes serious eye irritation [Serious eye damage / eye irritation - Category 2A]
CAN	GHS - Australia	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists
SUBSTANCE NOTES:		

CHOPPED GLASS FIBER

ID: 65997-17-3

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-06-03 11:27:13		
%: 1.0000 - 3.0000	GreenScreen: LT-UNK	RC: None	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		
EXEMPT	European Union / European Commission (EU EC)		EU - REACH Exemptions		
			Exempted from REACH Annex V listing due to intrinsic safety		
SUBSTANCE NOTES:					

QUARTZ

ID: 14808-60-7

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-06-03 11:27:13		
%: 0.0000 - 1.0000	GreenScreen: BM-1	RC: None	NANO: No	SUBSTANCE ROLE: Impurity/Residual	

HAZARD TYPE	LIST NAME AND SOURCE	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	US NIH - Report on Carcinogens	Known to be a human Carcinogen
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
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
GEN	GHS - Japan	H341 - Suspected of causing genetic defects [Germ cell mutagenicity - Category 2]
MAM	GHS - Australia	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organ toxicity - repeated exposure - Category 1]
MAM	GHS - New Zealand	Specific target organ toxicity - repeated exposure category 1
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: Potential impurity of various geological materials. GreenScreen Benchmark® assessment score of BM-1 was provided by the HPD Builder Tool.

HYDROLYZED KERATIN

ID: 69430-36-0

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-06-03 11:27:13		
%: 0.1000 - 0.5000	GreenScreen: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Processing regulator	
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:

CALCIUM HYDROXIDE

ID: 1305-62-0

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2024-06-03 11:27:14

%: 0.0100 - 0.0500 GreenScreen: LT-P1 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]
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 (C2CPII)	C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022 Cosmetics & Personal Care Products

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	CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario	
CERTIFYING PARTY: Self-declared APPLICABLE FACILITIES: Santa Ana, California, USA; Ajax, Ontario, Canada CERTIFICATE URL: https://tinyurl.com/4rhm5y4c CERTIFICATION AND COMPLIANCE NOTES: Product: Monokote Z-106/HY. Test Report #: 1001596074-5063134. Product was monitored for emissions of TVOC, individual VOCs, formaldehyde and other aldehydes over 96-hour test period. Product Compliance for Classroom: Yes. Product Compliance for Office: Yes.	ISSUE DATE: 2022-07-13 00:00:00 EXPIRY DATE:	CERTIFIER OR LAB: UL Environment
VOC CONTENT	EPA Method 24 - Volatile Matter Content (EPA 24)	
CERTIFYING PARTY: Self-declared APPLICABLE FACILITIES: Santa Ana, California, USA; Ajax, Ontario, Canada CERTIFICATE URL: https://tinyurl.com/4rhm5y4c CERTIFICATION AND COMPLIANCE NOTES: Sample: Z-106/HY. Methods: ASTM D2369:2003 (EPA-24); ASTM-D3960. Results: Data confirms there are no VOCs detected by both the EPA and the ASTM Standard Methods.	ISSUE DATE: 2013-07-03 00:00:00 EXPIRY DATE:	CERTIFIER OR LAB: VTEC Laboratories, Inc.
LCA	Environmental Product Declaration (EPD) by ASTM	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: Santa Ana, California, USA; Ajax, Ontario, Canada CERTIFICATE URL: https://tinyurl.com/4c6c7f5h CERTIFICATION AND COMPLIANCE NOTES: Declaration Number: EPD 060. Product Group and Name: Spray-applied Fire-Resistive Material (SFRM), UN CPC 54650 (includes Z-106/HY). Reference PCR: ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services. Declared Unit: 1,000 kg of SFRM. Scope: Cradle-to-Gate.	ISSUE DATE: 2022-04-15 00:00:00 EXPIRY DATE: 2027-04-22 00:00:00	CERTIFIER OR LAB: ASTM International
MATERIAL INGREDIENT REPORTING	ILFI Declare - Red List Free	
CERTIFYING PARTY: Self-declared APPLICABLE FACILITIES: Santa Ana, California, USA; Ajax, Ontario, Canada CERTIFICATE URL: https://tinyurl.com/yc5kt5fz CERTIFICATION AND COMPLIANCE NOTES: Declare ID: WRG-0004. Product: Monokote Z-106/HY.	ISSUE DATE: 2023-05-01 00:00:00 EXPIRY DATE: 2024-05-01 00:00:00	CERTIFIER OR LAB: International Living Future Institute

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.

No accessories are required for this product.

Section 5: General Notes

Monokote Z-106/HY can be used for interior, exposed applications where abrasion, high humidity and damage resistance are desired such as:

- Special use areas in commercial buildings
- Light manufacturing areas and facilities
- Gymnasiums and pool areas
- Transportation terminals
- Correctional facilities

- Convention centers
- Mechanical rooms
- Parking garages
- Elevator shafts
- Stairwells

MANUFACTURER INFORMATION

MANUFACTURER: **GCP Applied Technologies**
ADDRESS: **2325 Lakeview Parkway**
Suite 450
Alpharetta, GA 30009
COUNTRY: **USA**

WEBSITE: **<https://gcpat.com/en>**
CONTACT NAME: **John Dalton**
TITLE: **Technical Service Manager - Fire Protection Products**
PHONE: **781.258.6463**
EMAIL: **John.A.Dalton@gcpat.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-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 HPD and

