Gold Bond® eXP® Sheathing Fire-Shield® Gypsum Panels by National Gypsum Company

Health Product Declaration v2.1

CLASSIFICATION: 06 16 43.00 WOOD, PLASTICS, AND COMPOSITES (FRAMING): GYPSUM SHEATHING

created via: HPDC Online Builder

PRODUCT DESCRIPTION: Gold Bond® BRAND eXP® Sheathing consists of a moisture- and mold-resistant gypsum core encased in a coated, specially designed PURPLE® fiberglass mat on the face, back and sides. It is available in either a Regular or Type X core. The glass mat is folded around the long edges to reinforce and protect the core, and it provides superior weather resistance. Use it for attachment to the outside of wall and soffit framing as a substrate for exterior cladding. For speed of installation, GridMarX® guide marks are printed on the glass mat surface. This HPD covers 1/2" Gold Bond® BRAND eXP® Sheathing Gypsum Panel and 5/8" Gold Bond® BRAND eXP® Sheathing Fire-Shield® Type X Gypsum Panel products.

Section 1: Summary

Nested Method / Material Threshold

CONTENT INVENTORY

nventory Reporting Format	Threshold level	Residuals/Impurities	Are All Substances Above the Thres	hold Indicated:
Nested Materials Method Basic Method	€ 1,000 ppm€ 1,000 ppm	Residuals/Impurities Considered in 2 of 2 Materials	Characterized Percent Weight and Role Provided?	• Yes • No
Threshold Disclosed Per ☐ Material ☐ Product	Per GHS SDSPer OSHA MSDSOther	Explanation(s) provided for Residuals/Impurities? Yes No	Screened Using Priority Hazard Lists with Results Disclosed?	• Yes • No
			Identified Name and Identifier Provided?	C Yes C No

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.

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

EXP GYPSUM CORE [GYPSUM LT-UNK GLASS / MINERAL FIBER LT-UNK | CAN STARCH LT-UNK SILOXANES AND SILICONES, DI-ME, POLYMERS WITH 3-MERCAPTOPROPYL SILSESQUIOXANES LT-UNK SODIUM POLYNAPTHALENESULFONATE LT-P1 | PBT] COATED FIBERGLASS MAT (EXTERIOR) [LIMESTONE; CALCIUM CARBONATE LT-UNK GLASS / MINERAL FIBER LT-UNK | CAN KAOLIN CLAY LT-UNK | CAN UNDISCLOSED LT-P1 | RES UNDISCLOSED LT-UNK POTASSIUM METHYLSILANETRIOLATE NoGS POLYACRYLIC ACID, SODIUM SALT LT-UNK UNDISCLOSED LT-UNK MICA LT-UNK QUARTZ LT-1 | CAN SILICA, AMORPHOUS LT-P1]

Number of Greenscreen BM-4/BM3 contents...... 0 Contents highest concern GreenScreen Benchmark or List translator Score..... LT-1 Nanomaterial..... No

INVENTORY AND SCREENING NOTES:

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.1, 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 percent weight for each substance. Therefore, this HPD is consistent with the LEED v4 MR credit Building Product Disclosure and Optimization: Material Ingredient Reporting (Option 1).

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

Other: ICC-ES Evaluation Report (ESR-2743)

Multi-attribute: Type III Environmental Product Declaration

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1

Third Party Verified? PREPARER: Self-Prepared

> VERIFIER: VERIFICATION #:

C Yes

No

SCREENING DATE: 2017-05-01 PUBLISHED DATE: 2017-09-06 EXPIRY DATE: 2020-05-01

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 2.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-standard

EXP GYPSUM CORE %: 94.5000 - 97.0000 HPD URL:

MATERIAL THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

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 or LT-P1 based on batch testing, supplier SDS, and as predicted by process chemistry (Pharos CML).

OTHER MATERIAL NOTES: Gold Bond® eXP® Sheathing is manufactured with an enhanced moisture and mold resistant core.

GYPSUM ID: 13397-24-5

%: 98.8000 - 99.2000	GS: LT-UNK	RC: PreC	nano: No	ROLE: Substrate
HAZARDS:	AGENCY(IES) WITH WARNINGS:			
None Found	No warnings found on HPD P	riority lists		

SUBSTANCE NOTES: May also include CASRN 10101-41-4 (LT-UNK; No warnings found on HPD Priority lists). Five National Gypsum plants produce gypsum board exclusively with Pre-Consumer (Post-Industrial) byproduct gypsum [Shippingport, PA; Apollo Beach, FL; Mt. Holly, NC; Westwego, LA; Shoals, IN]. Ten National Gypsum plants produce gypsum board exclusively with natural rock gypsum [Burlington, NJ; Fort Dodge, IA; Long Beach, CA; Medicine Lodge, KS; National City, MI; Phoenix, AZ; Portsmouth, NH; Richmond, CA; Rotan, TX; Savannah, GA]. Two National Gypsum plants produce gypsum board with a blend of Pre-Consumer (Post-Industrial) byproduct gypsum and natural rock gypsum [Baltimore, MD; Waukegan, IL].

GLASS / MINERAL FIBER ID: 65997-17-3

%: 0.3000 - 0.4000	GS: LT-UNK	RC: None	nano: No	ROLE: Core Strength, Fire Resistance
HAZARDS:	AGENCY(IES) WITH WARM	NINGS:		
CANCER	EU - R-phrases	EU - R-phrases		R40 - Limited Evidence of Carcinogenic Effects
CANCER	EU - GHS (H-State	ments)		H351 - Suspected of causing cancer

 ${\tt SUBSTANCE\ NOTES:}\ \textbf{Identified\ on\ the\ US\ EPA\ Safer\ Chemical\ Ingredient\ List.}$

STARCH ID: 9005-25-8

%: 0.3000 - 0.4000	gs: LT-UNK	RC: None	nano: No	ROLE: Improves Binding, Core Strength
HAZARDS:	AGENCY(IES) WITH W/	ARNINGS:		

None Found No warnings found on HPD Priority lists

SILOXANES AND SILICONES, DI-ME, POLYMERS WITH 3-MERCAPTOPROPYL SILSESQUIOXANES

ID: 108775-26-4

%: 0.1000 - 0.2000	GS: LT-UNK	RC: None	nano: No	ROLE: Moisture Resistance
HAZARDS:	AGENCY(IES) WITH WARNINGS:			
None Found	No warnings found on HPD Priority lists			
SUBSTANCE NOTES: Silicone				

SODIUM POLYNAPTHALENESULFONATE

ID: 9084-06-4

%: 0.0300 - 0.0400	GS: LT-P1	RC: None	NANO: No	ROLE: Dispersant; Reduces process water demand and energy consumption
HAZARDS:	AGENCY(IES) WITH	WARNINGS:		
PBT	EC - CEPA DSL			Persistent, Bioaccumulative and inherently Toxic (PBiTH) to humans

SUBSTANCE NOTES: This substance falls below the Content Inventory Threshold indicated; however, we have included this substance in an effort to provide full transparency for this product. Efforts are being made to find a suitable replacement for this dispersant that has fewer hazards.

COATED FIBERGLASS MAT (EXTERIOR)

%: 3.0000 - 5.5000

HPD URL:

MATERIAL THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

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 or LT-P1 have been disclosed, based on information provided in supplier disclosure letters, supplier SDS, and as predicted by process chemistry (Pharos CML).

OTHER MATERIAL NOTES: Gold Bond® eXP® Sheathing is manufactured with enhanced moisture and mold resistant facers, which provide superior weather resistance capabilities. Percent by weight of substances reported as a range in order to further protect the proprietary nature of this formulation.

LIMESTONE; CALCIUM CARBONATE

ID: **1317-65-3**

%: 45.0000 - 50.0000	GS: LT-UNK	RC: None	nano: No	ROLE: Filler
HAZARDS:	AGENCY(IES) WITH WARNINGS:			
None Found	No warnings found on HF	PD Priority lists		

SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List.

GLASS / MINERAL FIBER ID: 65997-17-3

%: 20.0000 - 25.0000	GS: LT-UNK	RC: None	nano: No	ROLE: Substrate
HAZARDS:	AGENCY(IES) WITH WARNINGS	3:		
CANCER	EU - R-phrases		R40 - Limited Evider	nce of Carcinogenic Effects
CANCER	EU - GHS (H-Statemen	ts)	H351 - Suspected o	f causing cancer

SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List.

KAOLIN CLAY D: 1332-58-7

%: 20.0000 - 25.0000	GS: LT-UNK	RC: None	nano: No	ROLE: Filler
HAZARDS:	AGENCY(IES) WITH WARNINGS:			
CANCER	MAK		Carcinogen Group 3B - Evic sufficient for classification	dence of carcinogenic effects but not

SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List.

UNDISCLOSED

%: 2.0000 - 7.0000	GS: LT-P1	RC: None	nano: No	ROLE: Binder
HAZARDS:	AGENCY(IES) WITH WARNINGS:			
RESPIRATORY	AOEC - Asthmagens		Asthmagen (Rs) - sensitiz	zer-induced

SUBSTANCE NOTES: Supplier has disclosed substance name and CASRN under a Non-Disclosure Agreement; substance to remain proprietary to supplier. Substance has been screened against the HPD Priority lists with results disclosed. Supplier has confirmed the upper limit for residuals of concern related to this binder component, which fall below the Content Inventory Threshold indicated for this material.

UNDISCLOSED

%: 1.0000 - 5.0000	GS: LT-UNK	RC: None	NANO: No	ROLE: Binder	
HAZARDS:	AGENCY(IES) WITH WARNINGS:				
None Found	No warnings found on HPD Priority lists				

SUBSTANCE NOTES: Supplier has disclosed substance name and CASRN under a Non-Disclosure Agreement; substance to remain proprietary to supplier. Substance has been screened against the HPD Priority lists with results disclosed.

POTASSIUM METHYLSILANETRIOLATE

ID: 31795-24-1

%: 0.1000 - 1.0000 GS: NoGS RC: None NANO: No ROLE: Water Repellent

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Synonyms: Methylsilanetriol, potassium salt; Silanetriol, 1-methyl-, potassium salt (1:?); Silanetriol, methyl-, potassium salt

POLYACRYLIC ACID, SODIUM SALT

ID: 9003-04-7

%: 0.1000 - 1.0000	GS: LT-UNK	RC: None	nano: No	ROLE: Dispersant	
HAZARDS:	AGENCY(IES) WITH WARNINGS				
None Found	No warnings found on H	No warnings found on HPD Priority lists			
SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List.					

UNDISCLOSED

%: 0.1000 - 1.0000	GS: LT-UNK	RC: None	NANO: No	ROLE: Binder	
HAZARDS:	AGENCY(IES) WITH WARNINGS	:			
None Found	No warnings found on H	IPD Priority lists			

SUBSTANCE NOTES: Supplier has disclosed substance name and CASRN under a Non-Disclosure Agreement; substance to remain proprietary to supplier. Substance has been screened against the HPD Priority lists with results disclosed.

MICA

%: 0.1000 - 1.0000

GS: LT-UNK

RC: None

NANO: No

ROLE: Filler

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES: Synonyms: Muscovite; Phlogopite; Silicate, mica

QUARTZ ID: 14808-60-7

%: Impurity/Residual	GS: LT-1	RC: None	NANO: No	ROLE: Impurity/Residual	
HAZARDS:	AGENCY(IES) WITH	I WARNINGS:			
CANCER	US CDC - Occ	US CDC - Occupational Carcinogens Occupational Carcinogen		tional Carcinogen	
CANCER	IARC			: Agent is carcinogenic to humans - inhaled from ional sources	
CANCER	US NIH - Repo	US NIH - Report on Carcinogens		Known to be Human Carcinogen (respirable size - occupation setting)	
CANCER	MAK		Carcino	gen Group 1 - Substances that cause cancer in man	
CANCER	CA EPA - Prop	o 65	Carcino	gen - specific to chemical form or exposure route	

SUBSTANCE NOTES: Quartz is one of several compounds with warnings restricted to respirable forms (Pharos CML). Exposures to respirable crystalline silica are not expected during the recommended use of this product. Awaiting full GreenScreen Assessment for form specific hazards for this compound (http://ow.ly/Z5ken).

Impurity/Residual	GS: LT-P1	RC: None	nano: No	ROLE: Impurity/Residual	
HAZARDS:	AGENCY(IES) WITH WARNINGS:				
None Found	No warnings fou	nd on HPD Priority lists			



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.

OTHER ICC-ES Evaluation Report (ESR-2743)

CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All

06-01

ISSUE DATE:2016-

EXPIRY DATE:

CERTIFIER OR LAB: ICC

Evaluation Services 2018-06-01

CERTIFICATE URL:

http://designcenter.nationalgypsum.com/storage/components/pdf/ESR-

2743 2016.pdf

CERTIFICATION AND COMPLIANCE NOTES: ESR-2743. EVALUATION SUBJECT: GOLD BOND BRAND® e2XP® 1/2-INCH AND 5/8-INCH TYPE X, EXTENDED EXPOSURE GYPSUM SHEATHING. EVALUATION SCOPE - Compliance with the following codes: 2009 and 2006 International Building Code® (IBC); 2009 and 2006 International Residential Code® (IRC); 2013 Abu Dhabi International Building Code (ADIBC). Properties evaluated: Structural; Noncombustibility; Surface-burning characteristics; Fire-resistance-rated construction; Physical properties.

MULTI-ATTRIBUTE

Type III Environmental Product Declaration

CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All

ISSUE DATE:2016-09-

13

EXPIRY DATE: 2021-09-13 CERTIFIER OR LAB: ASTM International

CERTIFICATE URL:

designcenter.nationalgypsum.com/storage/components/pdf/GMGP_EPD-

certification and compliance notes: Industry average cradle-to-gate EPD for Glass Mat Gypsum Panels produced by Gypsum Association member companies for the USA and Canadian Markets. Declaration Number: EPD- 038. ASTM International, Product Category Rules for Preparing an Environmental Product Declaration for Glass Mat Gypsum Panels, August 2016. Declared unit: 1,000 square feet (1MSF) of Glass Mat Gypsum Panel with a nominal finished thickness of 1/2" and 5/8".

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.

STEEL FRAMING HPD URL: No HPD available

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Component of Steel Stud Curtain Wall, as referenced in ICC Evaluation Report (ESR-2743).

FASTENERS HPD URL: No HPD available

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

As referenced in ICC Evaluation Report (ESR-2743).



Section 5: General Notes

Residuals and Impurities have been considered as stated in the Material Notes for each disclosed material.

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: National Gypsum Company CONTACT NAME: Warren Barber

ADDRESS: 2001 Rexford Road TITLE: Manager - Technical Marketing

Charlotte NC 28211, USA PHONE: 704-365-7494

WEBSITE: www.nationalgypsum.com EMAIL: WarrenB@nationalgypsum.com

KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet

GHS SDS Globally Harmonized System of Classi cation and Labeling of Chemicals Safety Data Sheet

Hazard Types

AQU Aquatic toxicity **GLO** Global warming

CAN Cancer MAM Mammalian/systemic/organ toxicity

DEV Developmental toxicity **MUL** Multiple hazards **END** Endocrine activity **NEU** Neurotoxicity

EYE Eye irritation/corrosivity **OZO** Ozone depletion

GEN Gene mutation **PBT** Persistent Bioaccumulative Toxic **PHY** Physical Hazard (reactive) **REP** Reproductive toxicity **RES** Respiratory sensitization

SKI Skin sensitization/irritation/corrosivity

LAN Land Toxicity

NF Not found on Priority Hazard Lists

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 Unspeci ed (insu cient data to benchmark)

LT-P1 List Translator Possible Benchmark 1
LT-1 List Translator Likely Benchmark 1
LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)

NoGS Unknown (no data on List Translator Lists)

Recycled Types

PreC Preconsumer (Post-Industrial)

PostC Postconsumer

Both Both Preconsumer and Postconsumer **Unk** Inclusion of recycled content is unknown

None Does not include recycled content

Other Terms

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 produc

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.