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

CLASSIFICATION: 09 29 00.00 FINISHES: GYPSUM BOARD

PRODUCT DESCRIPTION: GOLD BOND® BRAND EXP® SHAFTLINER 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 A TYPE X CORE. THE GLASS MAT IS FOLDED AROUND THE LONG EDGES TO REINFORCE AND PROTECT THE CORE. USE IT TO CONSTRUCT LIGHTWEIGHT FIRE BARRIERS FOR CAVITY SHAFTWALLS (1-4 HR) AND AREA SEPARATION FIRE WALLS (2 HR). FOR EASE OF INSTALLATION, THE LONG EDGES OF EXP® SHAFTLINER ARE DOUBLE BEVELED. THIS HPD COVERS 1” GOLD BOND® BRAND EXP® SHAFTLINER GYPSUM BOARD.

Section 1: Summary

CONTENT INVENTORY

<table>
<thead>
<tr>
<th>Threshold per material</th>
<th>Residuals and impurities considered in</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 ppm</td>
<td>2 of 2 materials</td>
</tr>
<tr>
<td>1,000 ppm</td>
<td>see Section 2: Material Notes</td>
</tr>
<tr>
<td>Per GHS SDS</td>
<td>see Section 5: General Notes</td>
</tr>
<tr>
<td>Per OSHA MSDS</td>
<td></td>
</tr>
</tbody>
</table>

Based on the selected Content Inventory Threshold:

- Characterized....................................................
  - Are the Percent Weight and Role provided for all substances? Yes No
- Screened........................................................................
  - Are all substances screened using Priority Hazard Lists with results disclosed? Yes No
- Identified......................................................................
  - Are all substances disclosed by Name (Specific or Generic) and Identifier? Yes 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.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>SUBSTANCE</th>
<th>RESIDUAL OR IMPURITY</th>
<th>GREENSCREEN SCORE</th>
<th>HAZARD TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GYPSUM CORE</td>
<td>GYPSUM LT-UNK GLASS / MINERAL FIBER LT-UNK</td>
<td>CAN STARCH LT-UNK SILoxANES AND SILICONES, DI-ME, POLYMERS WITH 3-MERCAPTOPROPYL SILSESQUIOXANES LT-UNK SODIUM POLYPHTHALENESULFONATE LT-P</td>
<td>CAN KAOLIN CLAY LT-UNK CAN UNDISCLOSED LT-UNK UNDISCLOSED LT-UNK MICA LT-UNK POTASSIUM METHYLSILANETRIOLATE NoGS POLYACRYLIC ACID, SODIUM SALT LT-UNK UNDISCLOSED LT-P</td>
<td>RES SILICA, AMORPHOUS LT-P QUARTZ LT-3 CAN</td>
</tr>
</tbody>
</table>

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 2.0, 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. Therefore, this HPD is consistent with the LEED v4 MR credit Building Product Disclosure and Optimization: Material Ingredient Reporting (Option 1).

CERTIFICATIONS AND COMPLIANCE

Other: UL Evaluation Report (UL ER R3501-02)

See Section 3 for additional listings.

VERIFIER: SCREENING DATE: May 1, 2017 EXPIRY DATE*: May 1, 2020

RELEASE DATE: May 15, 2017

* or within 3 months of significant change in product contents
Section 2: Content in Descending Order of Quantity

This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; "Not Found" does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: www.hpd-collaborative.org and www.greenscreenchemicals.org.

<table>
<thead>
<tr>
<th>Material</th>
<th>%:</th>
<th>GS:</th>
<th>RC:</th>
<th>NANO:</th>
<th>ROLE:</th>
<th>AGENCY(IES) WITH WARNINGS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP GYPSUM CORE</td>
<td>95.5000 - 97.0000</td>
<td>LT-UNK</td>
<td>PreC</td>
<td>NO</td>
<td>Substrate</td>
<td></td>
</tr>
<tr>
<td>GYPSUM</td>
<td>98.8000 - 99.2000</td>
<td>LT-UNK</td>
<td>PreC</td>
<td>NO</td>
<td>Substrate</td>
<td>None Found</td>
</tr>
<tr>
<td>GLASS / MINERAL FIBER</td>
<td>0.3000 - 0.4000</td>
<td>LT-UNK</td>
<td>None</td>
<td>NO</td>
<td>Core Strength, Fire Resistance</td>
<td>None Found</td>
</tr>
<tr>
<td>STARCH</td>
<td>0.3000 - 0.4000</td>
<td>LT-UNK</td>
<td>None</td>
<td>NO</td>
<td>Improves Binding, Core Strength</td>
<td>None Found</td>
</tr>
</tbody>
</table>

Gold Bond® eXP® Shaftliner Fire-Shield® Gypsum Panels Health Product Declaration Page 2 of 8 created via: HPDC Online Builder www.hpd-collaborative.org
**SILANOXANES AND SILICONES, DI-ME, POLYMERS WITH 3-MERCAPTOPROPYL SILSESQUIOXANES**

ID: 108775-26-4

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1000 - 0.2000</td>
<td>LT-UNK</td>
<td>None</td>
<td>NO</td>
<td>Moisture Resistance</td>
</tr>
</tbody>
</table>

**HAZARDS:**

None Found

AGENCY(IES) WITH WARNINGS:

No warnings found on HPD Priority lists

**SUBSTANCE NOTES:** Silicone

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**SODIUM POLYNAPTHALENESULFONATE**

ID: 9084-06-4

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0300 - 0.0400</td>
<td>LT-P1</td>
<td>None</td>
<td>NO</td>
<td>Dispersant; Reduces process water demand and energy consumption</td>
</tr>
</tbody>
</table>

**HAZARDS:**

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.

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**COATED FIBERGLASS MAT**

Inventory Threshold: 1000 ppm

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0000 - 4.5000</td>
<td>LT-UNK</td>
<td>None</td>
<td>NO</td>
<td>Substrate</td>
</tr>
</tbody>
</table>

Material 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). 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

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.0000 - 50.0000</td>
<td>LT-UNK</td>
<td>None</td>
<td>NO</td>
<td>Filler</td>
</tr>
</tbody>
</table>

**HAZARDS:**

None Found

AGENCY(IES) WITH WARNINGS:

No warnings found on HPD Priority lists

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

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**GLASS / MINERAL FIBER**

ID: 65997-17-3

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.0000 - 25.0000</td>
<td>LT-UNK</td>
<td>None</td>
<td>NO</td>
<td>Substrate</td>
</tr>
<tr>
<td>Substance</td>
<td>ID</td>
<td>Percentage</td>
<td>Grade</td>
<td>Release Category</td>
</tr>
<tr>
<td>-----------</td>
<td>----</td>
<td>------------</td>
<td>-------</td>
<td>------------------</td>
</tr>
<tr>
<td><strong>KAOLIN CLAY</strong></td>
<td>1332-58-7</td>
<td>20.0000 - 25.0000</td>
<td>LT-UNK</td>
<td>None</td>
</tr>
<tr>
<td><strong>UNDISCLOSED</strong></td>
<td></td>
<td>1.0000 - 5.0000</td>
<td>LT-UNK</td>
<td>None</td>
</tr>
<tr>
<td><strong>MICA</strong></td>
<td>12001-26-2</td>
<td>0.1000 - 1.0000</td>
<td>LT-UNK</td>
<td>None</td>
</tr>
</tbody>
</table>

### HAZARDS:

<table>
<thead>
<tr>
<th>Agency(ies) with WARNINGS:</th>
<th>R40 - Limited Evidence of Carcinogenic Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CANCER</strong></td>
<td>H351 - Suspected of causing cancer</td>
</tr>
</tbody>
</table>

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

**HAZARDS:**
- MAK: Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification.
- 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.
<table>
<thead>
<tr>
<th>Substance</th>
<th>ID</th>
<th>Role</th>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>HAZARDS</th>
<th>AGENCY(IES) WITH WARNINGS</th>
<th>Subs Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Methylsilanetriolate</td>
<td>31795-24-1</td>
<td>Water Repellent</td>
<td>0.1000 - 1.0000</td>
<td>NoGS</td>
<td>None</td>
<td>No</td>
<td>None Found</td>
<td>No warnings found on HPD Priority lists</td>
<td>Identified on the US EPA Safer Chemical Ingredient List.</td>
</tr>
<tr>
<td>Polyacrylic Acid, Sodium Salt</td>
<td>9003-04-7</td>
<td>Dispersant</td>
<td>0.1000 - 1.0000</td>
<td>LT-UNK</td>
<td>None</td>
<td>No</td>
<td>None Found</td>
<td>No warnings found on HPD Priority lists</td>
<td></td>
</tr>
<tr>
<td>Undisclosed</td>
<td>LT-P1</td>
<td>Binder</td>
<td>0.1000 - 1.0000</td>
<td>LT-P1</td>
<td>None</td>
<td>No</td>
<td>Respiratory AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
<td>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.</td>
</tr>
<tr>
<td>Silica, Amorphous</td>
<td>7631-86-9</td>
<td>Impurity/Residual</td>
<td>Impurity/Residual</td>
<td>LT-P1</td>
<td>None</td>
<td>No</td>
<td>None Found</td>
<td>No warnings found on HPD Priority lists</td>
<td>Potential Impurity/Residual of Glass/Mineral Fiber (Pharos CML).</td>
</tr>
</tbody>
</table>
HAZARDS:

<table>
<thead>
<tr>
<th>CANCER</th>
<th>US CDC - Occupational Carcinogens</th>
<th>Occupational Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANCER</td>
<td>IARC</td>
<td>Group 1: Agent is carcinogenic to humans - inhaled from occupational sources</td>
</tr>
<tr>
<td>CANCER</td>
<td>US NIH - Report on Carcinogens</td>
<td>Known to be Human Carcinogen (respirable size - occupational setting)</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
<td>Carcinogen Group 1 - Substances that cause cancer in man</td>
</tr>
<tr>
<td>CANCER</td>
<td>CA EPA - Prop 65</td>
<td>Carcinogen - specific to chemical form or exposure route</td>
</tr>
</tbody>
</table>

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).

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

UL Evaluation Report (UL ER R3501-02)

<table>
<thead>
<tr>
<th>ISSUE DATE:</th>
<th>EXPIRY DATE:</th>
<th>CERTIFIER OR LAB:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-06-12</td>
<td>0000-00-00</td>
<td>UL</td>
</tr>
</tbody>
</table>

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: All
CERTIFICATION AND COMPLIANCE NOTES: UL ER R3501-02. SUBJECT: One, Two, Three, and Four-Hour Fire-Resistive Interior Partition Systems; One and Two-Hour Ceiling Assemblies; Two-Hour Horizontal Membrane and Duct Protection Assemblies. The assemblies consist of steel studs and tracks faced with Gold Bond Fire-Shield Shaftliner gypsum board on one side and Gold Bond gypsum board on the other side. SCOPE OF EVALUATION - Compliance with the following codes: 2006, 2009, 2012, 2015 International Building Code (IBC); 2006, 2009, 2012, 2015 International Residential Code (IRC). The products were evaluated for the following properties: Fire-resistance-rated construction; Structural; Physical Properties; Surface Burning Characteristics; Noncombustibility.

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.

GOLD BOND® FIRE-SHIELD® GYPSUM BOARDS
HPD URL: http://designcenter.nationalgypsum.com/sustainability/category/health-product-declaration-hpd

GOLD BOND® FIRE-SHIELD® C GYPSUM BOARDS
HPD URL: http://designcenter.nationalgypsum.com/sustainability/category/health-product-declaration-hpd

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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
Charlotte, NC 28211
USA
WEBSITE: www.nationalgypsum.com
PHONE: 704-365-7494
EMAIL: WarrenB@nationalgypsum.com

KEY

OSHA MSDS  Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS  Globally Harmonized System of Classification and Labelling of Chemicals Safety Data Sheet

Hazard Types

AUQ Aquatic toxicity
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation

GLO Global warming
MAM Mammalian/systemic/organ toxicity
MUL Multiple hazards
NEU Neurotoxicity
OZO Ozone depletion
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
BM-1 Benchmark 1 (avoid - chemical of high concern)
BM-U Benchmark Unspecified (insufficient 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)
UNK 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

Nano Composed of nanoscale particles or nanotechnology

Declaration Level

Self-declared Manufacturer’s self-declaration (First Party)
Independent Lab Manufacturer’s self-declaration using results from an independent lab
Second Party Verification by trade association or other interested party
Third Party Verification by independent certifier
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 does not provide an assessment of health impacts throughout the product life cycle. It does not provide an assessment of exposure or risk associated with product handling or use. It also does not address potential health impacts of: (i) substances used or created during the manufacturing process unless they remain in the final product, or (ii) substances created after the product is delivered for end use (e.g., if the product burns, degrades, or otherwise changes chemical composition).

The HPD Open Standard was created and is maintained and evolved by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry. The HPD Collaborative is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

A disclosure completed in compliance with the HPD Open Standard is referred to as a “Health Product Declaration,” or “HPD.” 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 Open Standard noted.