



# Material Safety Data Sheet

DEXcell™ BRAND Roof Board

MSDS No: GB-1010

Page 1 of 7

Date: January 22, 2014

Supersedes Date: NEW

## 1. PRODUCT AND COMPANY INFORMATION

### Manufacturer Information:

National Gypsum Company  
2001 Rexford Road  
Charlotte, NC 28211

### For Emergency Product Information Call:

Director Quality Services  
(704) 551-5820 - 24 Hour Emergency Response  
Website: [www.nationalgypsum.com](http://www.nationalgypsum.com)

Product Name: **DEXcell™ Glass Mat Roof Board**  
**DEXcell™ FA Glass Mat Roof Board**

Use: As a coverboard and/or thermal barrier in commercial roofing applications.

Generic Descriptions: DEXcell BRAND Glass Mat Roof Boards consist of a moisture, mold and fire resistant gypsum core encased in a coated, moisture and mold resistant fiberglass mat. Available in 1/4", 1/2" and 5/8" thickness.

## 2. HAZARDS IDENTIFICATION

Appearance and Odor: A gypsum core wrapped with coated material. Composite material provides mildew protection. Surface finish will vary with product. No odor.

**Contains no asbestos.** HMIS Hazard Class No. 1, 0, 0.

### Emergency Overview

DEXcell Roof Board does not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding or machining which results in the generation of airborne particulate. This product contains quartz (crystalline silica) as a naturally occurring contaminant. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure exceeding the prescribed limits.  
(See Section 11 - Toxicological Information)

### OSHA Regulatory Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

**2. HAZARDS IDENTIFICATION (CONTINUED)****Potential Health Effects**

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Inhalation: Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, general irritation of the nose, throat, and upper respiratory tract, and impaired pulmonary function. Chronic exposures may result in lung disease (silicosis and/or lung cancer). (See Section 11 - Toxicological Information)

Exposures to respirable crystalline silica have not been documented during normal use of this product. However, good housekeeping practices and industrial hygiene monitoring is recommended when the potential for significant exposure exists.

Skin Contact: Continued and prolonged contact may result in dry skin. Contact with dust or glass fibers may produce itching, rash and/or redness. Repeated or prolonged exposure may result in dermatitis.

Eye Contact: Direct contact may cause mechanical irritation.

Ingestion: No known adverse effects. May result in obstruction or temporary irritation of the digestive tract.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Component</u>	<u>CAS-Number</u>	<u>Weight Percent</u>
Calcium Sulfate Dihydrate (Gypsum)	10101-41-4	>91
Crystalline Silica (Quartz)	14808-60-7	varies
Vermiculite	1318-00-9	<2
Fiberglas, synthetic, vitreous, continuous	65997-17-3	<1%
Proprietary Additives*	NA	<5

\* Note: No single proprietary ingredient is in excess of 1% (0.1% for carcinogens) of the mixture.

**4. FIRST AID MEASURES**

- **Inhalation:** Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
- **Skin:** Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
- **Eye:** Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
- **Ingestion:** Gypsum is non-hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

**5. FIRE FIGHTING MEASURES****Flammable Properties**

- Not flammable or combustible
- NFPA Hazard Class No: 1/0/0

**Extinguishing media**

- Dry chemical, foam, water, fog or spray

**Protection of firefighters**

- Standard protective equipment and precautions

**Fire and Explosion Hazards**

- None

**Hazardous Combustion Products**

- None
- Above 1450°C, material can decompose and release sulfur dioxide (SO<sub>2</sub>) and oxides of carbon.

**6. ACCIDENTAL RELEASE MEASURES**

Not applicable, as product is an article composite.

General recommendations:

- Wear appropriate Personal Protective Equipment. (See Section 8)
- Maintain proper ventilation.
- Pick-up larger pieces to avoid a tripping hazard. Return large pieces of damaged/scraped material for recycling. Sweep or vacuum remaining material into a waste container for disposal. Use a light water spray to minimize dust generation.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

**7. HANDLING AND STORAGE**

- Avoid contact with eyes, skin and clothing.
- Wear recommended personal protective equipment when handling. (See Section 8)
- Avoid breathing dust.
- Minimize generation of dust.
- Utilize proper lifting techniques when moving product and employ mechanical/ergonomic assistance when possible (i.e. move with forklifts, hold in place with lifts) to minimize the risk of back injury.
- Store material in a cool, dry, ventilated area.
- Store panels flat to minimize damage and warping.
- Do not stack panels too high when storing to minimize the risk of falling.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

Component	Exposure Limits	
	OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Calcium Sulfate Dihydrate (Gypsum)	15 <sup>(T)</sup> 5 <sup>(R)</sup>	10 <sup>(T)</sup>
Crystalline Silica (Quartz)	0.1 <sup>(R)</sup>	0.025 <sup>(R)</sup>
Vermiculite	15 <sup>(T)</sup> 5 <sup>(R)</sup>	10 <sup>(T)</sup> 3 <sup>(R)</sup>
Fiberglass, synthetic, vitreous, continuous	15 <sup>(T)</sup> 5 <sup>(R)</sup>	1 f/cc <sup>(R)</sup>
Proprietary Additives	NA	NA

T- Total Dust

R- Respirable Dust

**Engineering Controls**

- Work/Hygiene Practices: The score and snap method of cutting is recommended. Sawing, drilling or machining will produce dust.
- Ventilation: Provide local and general exhaust ventilation to maintain a dust level below the PEL/TLV.
- Utilize wet methods, when appropriate, to reduce generation of dust.

**Personal Protective Equipment**

- Respiratory Protection: A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.
- Eye Protection: Safety glasses or goggles.
- Skin: Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance:** Coated gypsum boards with white/gray core**Odor:** None**Physical State:** Solid**Ph:** ~7**Solubility (H<sub>2</sub>O):** 2.1 g/L @ 20°C**Boiling, Freezing, Melting Point:** Not Applicable**Decomposition Temperature:** 1450°C**Vapor pressure:** Not Applicable**Vapor density:** Not Applicable**Volatile organic compounds (VOC) content:** Not Applicable**Flammability:** Not Applicable**Flash Point:** Not Applicable**Upper/Lower explosive limits:** Not applicable**Auto-ignition temperature:** Not Applicable**Partition coefficient: n-octanol/water:** Not applicable**Evaporation rate:** Not Applicable**Molecular weight:** 172.2 grams**Molecular formula:** CaSO<sub>4</sub>·2H<sub>2</sub>O**Specific Gravity:** 2.31 g/cc**Bulk Density:** ~55 lb/ft<sup>3</sup>

**10. STABILITY AND REACTIVITY**

**Chemical stability:** Stable in dry environments.

**Conditions to avoid:** Contact with strong acids may result in generation of carbon dioxide.

**Incompatibility:** None

**Hazardous decomposition:** Above 1450°C gypsum will decompose to calcium oxide (CaO), with releases of sulfur dioxide (SO<sub>2</sub>) and various oxides of carbon.

**Hazardous polymerization:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

Data presented is for the major component of this product: Gypsum (calcium sulfate dihydrate)

**Human Data**

There is no information on toxicokinetics, metabolism and distribution.

There have been reports of irritation to mucus membranes of the eyes and respiratory tract upon acute exposure to dusts in excess of the recommended limits.

Chronic exposure to crystalline silica (a naturally occurring contaminant in gypsum) in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen. Industrial hygiene monitoring to date has not identified any detectable respirable crystalline silica in dust sampling conducted during gypsum panel installation utilizing recommended procedures.

**Animal Data**

The acute oral toxicity study [OECD TG 420, Fixed dose procedure] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD<sub>50</sub> value was more than 2,000-mg/kg b.w. for female rats (Sprague-Dawley).

Calcium sulfate, dihydrate was not irritating to the skin of rabbits at 1, 24, 48 and 72 hours after removal of test patches [OECD TG 404]. There is no indication of skin sensitization in guinea pigs [OECD TG 406].

*In vivo* and *In vitro* studies for mutagenicity were negative.

Reproduction/Developmental Toxicity Screening Tests were negative.

**12. ECOLOGICAL INFORMATION**

This product does not present an ecological hazard to the environment.

**Ecotoxicological Information**

Toxicity studies performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect.

**Environmental Fate**

Gypsum is a naturally occurring mineral. Biodegradation and/or bioaccumulation potential is not applicable.

**13. DISPOSAL CONSIDERATIONS**

- Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.
- Recycle if possible.

**14. TRANSPORT INFORMATION**

- This product is not a DOT hazardous material
- Shipping Name: Same as product name
- ICAO/IATA/IMO: Not applicable

**15. REGULATORY INFORMATION**

All ingredients are included on the TSCA inventory.

**Federal Regulations**

**SARA Title III:** Not listed under Sections 302, 304, and 313

**CERCLA:** Not listed

**RCRA:** Not listed

**OSHA:** Dust and potential respirable crystalline silica generated during product use may be hazardous.

**State Regulations**

California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer.

Industrial hygiene monitoring during recommended use of this product failed to identify any respirable crystalline silica.

**Canada WHMIS**

All components of this product are included in the Canadian Domestic Substances List (DSL).

Crystalline silica: WHMIS Classification D2A

**16. OTHER INFORMATION****MSDS Revision Summary**

Effective Date Change: 01/22/14

Format Changes:

**Key/Legend**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

**16. OTHER INFORMATION (CONTINUED)**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This material safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and with the Workplace Hazardous Materials Information System (WHMIS).

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