

MATERIAL SAFETY DATA SHEET

PREMIER CHEMICALS

MSDS No.: 2633

Phone: PREMIER CHEMICALS: 1-800-227-4287
CHEMTREC, 24-Hr Emergency Assistance: 1-800-424-9300

Date Prepared: 3/05

This Revision:

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material / Product Name(s): BRUCIMAG®, ¾”
CAS Number: 1309-42-8
Chemical Family: Mineral
General Use: A specifically selected and sized brucite ore.
Manufacturer / Supplier: PREMIER CHEMICALS
7251 Engle Road
Suite 415
Middleburg Heights, OH 44130

SECTION 2. INGREDIENTS / COMPOSITION

| Ingredient name: | CAS Number: | Percent: | IARC/NTP/OSHA: | Exposure Limits: |
|---|--------------------|-----------------|-----------------------|--|
| Brucite (MgOH ₂) (Magnesium Hydroxide) | 1309-42-8 | 100 | No | Nuisance Particulate OSHA PEL:TWA 15mg/m ³ ;respirable: 5mg/m ³ . ACGIH TLV:TWA Total dust:10mg/m ³ ; respirable dust: 5mg/m ³ . |
| Quartz* (SiO ₂) | 14808-60-7 | 0-1 | Yes | ACGIH TLV:TWA respirable quartz 0.05mg/m ³ . |

Typical Chemical Analysis, Wt.%

| | |
|-------------------------------|------|
| LOI (H ₂ O) | 33.0 |
| Insol | 2.3 |
| R ₂ O ₃ | 1.1 |
| CaO | 2.6 |
| MgO | 61.0 |

The oxides shown in the typical chemical analysis do not exist in the raw brucite as free, uncombined oxides, but exist in complex mineralogical forms.

***Quartz.** Product may contain a trace of quartz, a polymorph of crystalline silica, which is classified by IARC as a “Known Human Carcinogen - Group 1”. NTP lists respirable crystalline silica amongst substances which may “reasonably be anticipated to be carcinogens”.

SECTION 3. HAZARDS IDENTIFICATION

HMIS

| | |
|---------------------|---------------------|
| HEALTH HAZARD | 1 - SLIGHT |
| FLAMMABILITY HAZARD | 0 - MINIMAL |
| REACTIVITY HAZARD | 0 - MINIMAL |
| PERSONAL PROTECTION | B - Glasses, Gloves |

EMERGENCY OVERVIEW:

A gray, granular (-¾ inch) material. Not a fire or spill hazard. Low toxicity. Dust is classified as a “nuisance particulate not otherwise regulated”.

Target Organs: Chronic overexposure may cause lung damage.

Primary route(s) of entry: Inhalation

Acute effects: Particulate may cause eye and upper respiratory irritation.

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HAZARD IDENTIFICATION continued from page 1

Chronic effects: Product dust is classified as a "nuisance particulate, not otherwise regulated" as specified by ACGIH and OSHA. The excessive, long-term inhalation of mineral dusts may contribute to the development of industrial bronchitis, reduced breathing capacity, and may lead to the increased susceptibility to lung disease.

Signs & symptoms of overexposure:

Eye contact: Particulate is a physical eye irritant.

Skin contact: Low toxicity by skin contact.

Inhalation: Low toxicity by inhalation route.

Ingestion: An unlikely route of exposure. If ingested in sufficient quantity, may cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea.

SECTION 4. FIRST AID MEASURES

Eye contact: Flush eyes, including under the eyelids, with large amounts of water. If irritation persists, seek medical attention.

Skin contact: Wash affected areas with mild soap and water.

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

Ingestion: Ingestion is an unlikely route of exposure. If ingested in sufficient quantity and victim is conscious, give 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

SECTION 5. FIRE FIGHTING MEASURES

NFPA code: Flammability: 0, Health: 0, Reactivity: 0, Special: 0.

Flash point: Not Combustible

Unusual Fire Hazard / Extinguishing Media: None

Hazardous Decomposition Products: None

Firefighting Instructions: Firefighters should wear NIOSH-approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill procedures: Carefully, clean up and place material into a suitable container, being careful to avoid creating excessive dust from dried product. If conditions warrant, clean up personnel should wear approved respiratory protection, gloves, and goggles to prevent irritation from contact and/or inhalation.

SECTION 7. HANDLING AND STORAGE

Storage: No special storage instructions. Minimize dust generation during material handling and transfer.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls: Provide sufficient ventilation, in both volume and air flow patterns to control mist/dust concentrations below allowable exposure limits.

Personal protective equipment: The use of eye protection, gloves and long sleeve clothing is recommended.

Respiration protection: Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910.134 for level of exposure incurred.

Hygienic Practices: Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating or drinking.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: The product is a gray, free flowing mixture of coarse and small particles; odorless.

Boiling Point: Losses H₂O at 350°C

Specific Gravity (g/cc): 3.04

Melting Point: >3800°F (>2100°C)

Bulk Density (lbs./cu.ft.): 75-80

Water Solubility: Insoluble

% Volatile by volume: 0

pH (10% aqueous slurry): Insoluble

Evaporation rate: Not Applicable

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur

Chemical Incompatibilities: Brucite (magnesium hydroxide) is incompatible with maleic anhydride; is soluble in aqueous acids generating heat and steam.

Hazardous Decomposition Products: Heat and Steam

SECTION 11. TOXICOLOGICAL INFORMATION

Magnesium Hydroxide (Brucite) CAS #1309-42-8 Toxic Review: A general purpose food additive. No LD₅₀ or LC₅₀ found for oral, dermal, or inhalation routes of administration.

Quartz CAS #14808-60-7. Toxic and Hazard Review (Sax): Experimental poison by intratracheal and intravenous routes. An experimental carcinogen, tumorigen, and neoplastigen. Human systemic effects by inhalation: cough, dyspnea, liver effects. Listed by IARC as a "Known Human Carcinogen" Group 1. Listed by NTP.

TOXICITY DATA: No LD₅₀ in RTECS. ihl-hmn: TCl_o 16 mppcf / 8 hrs / 17.9Y-I: PUL; ihh:hmN LCL_o: 300 µg / m³ / 10 Y-I;LVR; Other species toxicity data (NIOSH RTECS): inv-rat LDLo: 90mg/kg; itr-rat LDLo: 20mg/kg; ivn-mus LDLo: 40mg/kg; inv-mus: 20mg/kg.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological / Chemical Fate Information:

No data available on any adverse effects of this material on the environment.

SECTION 13. DISPOSAL INFORMATION

Waste Management/Disposal: This product does not exhibit any characteristics of a hazardous waste. The product is suitable for landfill disposal. Follow all applicable federal, state and local regulations for safe disposal.

SECTION 14. TRANSPORT INFORMATION

US Department of Transportation: Not regulated by DOT as a hazardous material. No hazard class, no label or placard required, no UN or NA number assigned.

Canadian TDG Hazard Class & PIN: Not regulated.

SECTION 15. REGULATORY INFORMATION

SARA TITLE III: This product does not contain any substances reportable under Sections 302, 304 or 313. Sections 311 and 312 do apply. (Routine Reporting and Chemical Inventories)

TSCA: All substances in this product are listed in the Chemical Substance Inventory of the Toxic Substances Control Act.

CERCLA Hazardous Substance List, RQ:No

California Proposition 65: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive toxins.

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SECTION 16. OTHER INFORMATION

ACRONYMS AND REFERENCES USED IN PREPARATION OF MSDS':

| | |
|---------------------|--|
| ACGIH: | American Conference of Governmental Industrial Hygienists |
| CAS#: | CAS Registration Number is an assigned number to identify a material. CAS stands for Chemical Abstracts Service. |
| CERCLA: | Comprehensive Environmental Response, Compensation & Liability Act |
| EPCRA: | Emergency Planning and Community Right-to-Know Act of 1986 |
| HMIS™: | Hazardous Materials Identification System (National Paint & Coatings Association) |
| IARC: | International Agency for Research on Cancer |
| MSHA: | Mine Safety and Health Administration |
| mg/m ³ : | Milligrams per cubic meter |
| 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 (OSHA) |
| REL: | Recommended Exposure Limit (OSHA) |
| SARA: | Superfund Amendments and Reauthorization Act |
| TITLE III: | Emergency Planning and Community Right-to-Know Act |
| Section 302: | Extremely Hazardous Substances |
| Section 304: | Emergency Release |
| Section 311: | <i>Community Right-to-Know</i> , MSDSs or List of Chemicals |
| Section 312: | <i>Community Right-to-Know</i> , Inventory and Location, (Tier I/II) |
| Section 313: | Toxic Chemicals, Toxic Chemical Release Reporting, Form R |
| TLV: | Threshold Limit Values (ACGIH) |
| TWA: | Time Weighted Average |
| 29CFR1910.134: | OSHA Respiratory Protection Standard |

REFERENCES:

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Clansky, K.B., Suspect Chemicals Sourcebook, 1992-2nd Edition, Roytech Publications, Bethesda, Maryland.
Sax, N. Irving and Lewis, R.J. Hawley's Condensed Chemical Dictionary, Eleventh Ed., Van Nostrand Reinhold Co., Inc., NY
Manufacturers / Suppliers, Material Safety Data Sheets on Raw Materials Used
American National Standard for Hazardous Industrial Chemicals - Material Safety Data Sheets - Preparation, American National Standards Institute, Inc., 11 West 42nd St, New York, NY 10036.

Prepared/revised: J.E. ROWELL March 31, 2005

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