

**MATERIAL SAFETY DATA SHEET**

**PREMIER CHEMICALS**

**MSDS No.: 2715**

**Date Prepared: 3/05**

**Phone: PREMIER CHEMICALS: 1-800-227-4287**

**This Revision: 12/06**

**CHEMTREC, 24-Hr Emergency Assistance: 1-800-424-9300**

**SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Material / Product Name(s): AmphoMag™**

**CAS Number:** Mixture

**Chemical Family:** Inorganic

**General Use:** A magnesium oxide-magnesium sulfate mixture used as acid-base neutralizer for spill clean-up.

**Manufacturer / Supplier:** PREMIER CHEMICALS

300 Barr Harbor

Suite 250

West Conshohocken, PA 19428-2998

**SECTION 2. INGREDIENTS / COMPOSITION**

<b>Ingredient name:</b>	<b>CAS Number:</b>	<b>Percent:</b>	<b>IARC/NTP/OSHA:</b>	<b>Exposure Limits:</b>
Magnesium Oxide	1309-48-4	65-70	No	Nuisance Particulate OSHA PEL:TWA 15mg/m <sup>3</sup> ; respirable: 5mg/m <sup>3</sup> . ACGIH TLV:TWA Total dust:10mg/m <sup>3</sup> ; respirable dust: 5mg/m <sup>3</sup> .
Magnesium Sulfate monohydrate	14168-73-1	30-35	No	Nuisance Particulate

**Typical Chemical Analysis, Wt. % (As Received Basis)**

LOI (1000°C)	5.34
SiO <sub>2</sub>	0.78
Fe <sub>2</sub> O <sub>3</sub>	0.44
Al <sub>2</sub> O <sub>3</sub>	0.22
CaO	3.62
SO <sub>3</sub>	22.0
MgO	67.5

The oxides shown in the typical chemical analysis do not exist in the magnesium oxide as free, uncombined oxides, but are combined in complex mineralogical phases.

Product does not contain any substance of a reportable concentration which is listed as a suspected or confirmed human carcinogen by IARC, NTP, or OSHA.

**SECTION 3. HAZARDS IDENTIFICATION**

**HMIS**

<b>HEALTH HAZARD</b>	<b>1 - SLIGHT</b>
<b>FLAMMABILITY HAZARD</b>	<b>0 - MINIMAL</b>
<b>REACTIVITY HAZARD</b>	<b>1 - SLIGHT</b>
<b>PERSONAL PROTECTION</b>	<b>B - Glasses, Gloves</b>

**EMERGENCY OVERVIEW:**

White powder. Not a fire or spill hazard. Very low toxicity. Material when exposed to water can react and generate some heat. Dust is classified as a "nuisance particulate not otherwise regulated".

**Target Organs:** Not toxic in normal industrial use.

**Primary route(s) of entry:** Inhalation (low toxicity)

**Acute effects:** Excessive exposure to airborne particulate may cause eye and upper respiratory irritation.

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### HAZARD IDENTIFICATION continued from page 1

**Chronic effects:** Not toxic in normal industrial use. 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:** Chronic overexposure by inhalation of airborne particulate may irritate upper respiratory system as well as the throat.

**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:** Product on initial contact with water will generate some heat. Excess water will dissipate any heat.

**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 spilled 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:** Store in dry, protected storage. Product is stable under normal conditions of storage. 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.

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**EXPOSURE CONTROLS AND PERSONAL PROTECTION continued from page 2**

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

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** The product is dry, white powder; odorless.

**Boiling Point:** Not Applicable

**Apparent Specific Gravity (g/cc):** 0.64-1.1

**Melting Point:** >3800°F (>2100°C)

**Apparent Density (lbs./cu.ft.):** 40-65

**Water Solubility:** 31-35

**% Volatile by volume:** 0

**pH (10% aqueous slurry):** 10-11

**Evaporation rate:** Not Applicable

**SECTION 10. STABILITY AND REACTIVITY**

**Hazardous Polymerization:** Will not occur

**Chemical Incompatibilities:** Magnesium oxide component is soluble in aqueous acids generating heat and steam; violent reaction or ignition with interhalogens (e.g., bromine pentafluoride; chlorine trifluoride). Incandescent reaction with phosphorus pentachloride.

**Hazardous Decomposition Products:** None

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Magnesium Oxide** CAS #1309-48-4 Toxic and Hazard Review: low toxicity - a nutrient and/or dietary supplement food additive. THERAP CAT: antacid. (Sax) an experimental tumorigen. Inhalation of fume (not MgO dust particular) produced upon decomposition of magnesium compounds can produce a febrile reaction and leukocytosis in humans.

TOXICITY DATA: ihl-hmn TCl<sub>0</sub>:400mg/m<sup>3</sup>; itr-ham TDLo:480 mg/kg/30w-I:ETA.

**Magnesium Sulfate, monohydrate** CAS #14168-73-1. No LD<sub>50</sub> or LC<sub>50</sub> found for oral, dermal, or inhalation routes of administration. Sax reports that magnesium sulfate heptahydrate (epsom salt) is moderately toxic by several routes. Parenteral use or use in presence of renal insufficiency may lead to magnesium intoxication. An anticonvulsant and purgative.

**Balance of Ingredients:** No LD<sub>50</sub> or LC<sub>50</sub> found for oral, dermal, or inhalation routes of administration.

**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:**

Section 302: NO (Extremely Hazardous Substances)

Section 304: NO (Emergency Release)

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## REGULATORY INFORMATION continued from page 3

### SARA TITLE III, continued:

Section 311: YES (No acute or chronic effects upon exposure to product)

Section 312: YES (Tier I/II)

Section 313: NO (Toxic Chemicals, Toxic Chemical Release Reporting, Form R)

**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.

## 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
mg/m <sup>3</sup> :	Milligrams per cubic meter
NFPA:	National Fire Protection Association
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration
PEL:	Permissible 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:	Community Right-to-Know, MSDSs or List of Chemicals
Section 312:	Community Right-to-Know, 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:

- Sax, N. Irving: Dangerous Properties of Industrial Materials, Ninth Edition, Van Nostrand Reinhold Co., Inc., 1996.
- Kirk, R. and Othmer, D., Encyclopedia of Chemical Technology, Third Edition, Wiley-Interscience, New York, NY 1982.
- Clansky, K.B., Suspect Chemicals Sourcebook, 1992-2<sup>nd</sup> 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 42<sup>nd</sup> St, New York, NY 10036.

Prepared/revised: Mark A. Shand March 29, 2005

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