



Safety Data Sheet (SDS)

Revision / Review Date: 4/17/15

1. Chemical Product and Company Identification

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| Product Name: | Magox Premium Grade |
| Distributed By: | HB Chemical 1665 Enterprise Parkway Twinsburg Oh 44087 Phone - 330-920-8023 |
| MSDS Prepared By (w Suppliers Input): | HB Chemical |
| Chemical Name / Family: | Magnesium Oxide |
| CAS No: | 1309-48-4 |
| Product Use: | Chemical intermediate. |
| OSHA Status | Not Hazardous |

For emergency health, safety, and environmental information, calls 330-920-8023

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

2. Hazard(s) Identification

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| <u>Classification OSHA regulatory Status:</u> | Product dust is classified as a "nuisance particulate, not otherwise regulated" as specified by ACGHI and OSHA. The excessive long-term inhalation of mineral dust may contribute to the development of industrial bronchitis, reduced breathing capacity and may lead to the increased susceptibility to lung diseases. The chemical is not considered hazardous by the 2012 OSHA hazard Communication standard (29 CFR 1910.122). |
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| <u>Emergency overview:</u> | Not a dangerous substance or mixture according to the Globally Harmonized System. The product contains no substances which at their given concentration, are considered to be hazardous to health. |
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Medical Conditions Generally Aggravated by Exposure:

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| <u>Eye Contact:</u> | Causes mild irritation to the eyes. |
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| <u>Skin Contact:</u> | Low toxicity by skin contact. |
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| <u>Inhalation:</u> | Chronic overexposure by inhalation of airborne particulate may irritate upper respiratory system as well as the throat. |
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| <u>Ingestion:</u> | An unlikely route of exposure. If ingested in sufficient quantity may cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea. |
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Hazard not otherwise classified (HNO C)

Other information:

Unknown Acute Toxicity 100% of the mixture consists of ingredients of unknown toxicity.

3. Composition / Information on Ingredients

Common Name

Magnesium Oxide

Synonyms

Light burned magnesium Oxide, Caustic Calcined Magnesia, MgO, Magnesium Oxide.

| Chemical Name | CAS No. | Weight-% | Trade Secret |
|-----------------|-----------|----------|--------------|
| Magnesium Oxide | 1309-48-4 | 100 | |

4. First Aid Measures

Inhalation:

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Eyes:

Rinse thoroughly with plenty of water, also under the eyelid. Get medical attention immediately if irritation persists.

Skin:

Wash skin with a soap and water.

Ingestion:

Not an expected route of exposure. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Symptoms:

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians:

Treat symptomatically.

5. Fire-Fighting Measures

Unsuitable Extinguishing Media:

Water reacts with magnesium oxide producing magnesium hydroxide and heat. Do not allow water to get inside containers: reaction with water will cause product to swell, generate heat, and burst its containers. If contact is unavoidable, use sufficient water to safely absorb the heat that may be generated. Wetted product is not a health or environmental hazard.

Special hazards arising from the chemical.:

No information available.

Explosion data:

Sensitivity to Mechanical Impact/Static Discharge:

None.

Protective equipment and precaution for firefighters:

As in any fire, wear self-contained breathing apparatus

pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

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| <u>Personal precautions:</u> | Ensure adequate ventilation, especially in confined areas. |
| <u>Environmental precautions:</u> | See section 12 for additional ecological information. |
| <u>Methods for containment:</u> | Prevent further leakage or spillage if safe to do so. |
| <u>Methods for cleaning up:</u> | 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. |

7. Handling and Storage:

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| <u>Precautions for safe handling:</u> | Use personal protective equipment as required. |
| <u>Storage Conditions:</u> | Keep container tightly closed in a dry and well ventilated place. Avoid generation of dust. Do not allow contact with water. |
| <u>Incompatible Materials:</u> | Interhalogens, bromine pentafluoride, chlorine trifluoride. Contact with aluminum metal may release hydrogen gas. Incandescent reaction with phosphorus pentachloride. Water will react with magnesium oxide to form magnesium hydroxide and release heat and steam. |

8. Exposure Controls / Personal Protection

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| <u>Exposure Controls:</u> | This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
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| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|------------------------------|--|---|----------------------------------|
| Magnesium Oxide 1309-48-4 | TWA: 10 mg/m ³ inhalable fraction | TWA: 15 mg/m ³ fume, total particulate (vacated) TWA: 10 mg/m ³ fume and total particulate | IDLH: 750 mg/m ³ fume |

NIOSH IDLH Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910. 134 for level of exposure incurred.

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| <u>Appropriate engineering controls:</u> | Provide sufficient ventilation, in both volume and air flow patterns to control mist/dust concentrations below allowable exposure limits. Showers, Eyewash station. |
| <u>Respiratory Protection:</u> | Provide workers with NIOSH approved respirator in accordance with 29 CFR 1910.134 for level of exposure incurred. |

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| <u>Eye Protection:</u> | Avoid contact with eyes. The use of eye protection is recommended. |
| <u>Skin and Body Protection:</u> | The use of eye protection, Gloves and long sleeve clothing is recommended. |
| <u>General Hygiene considerations:</u> | Wash hands thoroughly after handling. |

9. Physical and Chemical Properties

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| <u>Physical state</u> | Solid |
| <u>Appearance</u> | Fine Powder |
| <u>Odor</u> | Odorless |
| <u>Color</u> | White |
| <u>Odor threshold</u> | No information available |

| <u>Property</u> | <u>Values</u> |
|--------------------------------------|--------------------------|
| <u>pH</u> | 10-11 |
| <u>Melting point/freezing point</u> | >2100 °C >3800 °F |
| <u>Boiling point / boiling range</u> | No information available |
| <u>Flash point</u> | No information available |
| <u>Evaporation rate</u> | Not Applicable |
| <u>Flammability (solid, gas)</u> | No information available |
| <u>Flammability Limit in Air</u> | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| <u>Vapor pressure</u> | No information available |
| <u>Vapor density</u> | No information available |
| <u>Specific Gravity</u> | 3.56 |
| <u>Water solubility</u> | Slight <1% |
| <u>Solubility in other solvents</u> | No information available |
| <u>Partition coefficient</u> | No information available |
| <u>Autoignition temperature</u> | No information available |
| <u>Decomposition temperature</u> | No information available |
| <u>Kinematic viscosity</u> | No information available |
| <u>Dynamic viscosity</u> | No information available |
| <u>Explosive properties</u> | No information available |
| <u>Oxidizing properties</u> | No information available |

Other Information

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| Softening point | No information available |
| Molecular weight | No information available |
| VOC Content (%) | No information available |
| Density | No information available |
| Bulk density | 20-35 lb. / ft ³ |

10. Stability and Reactivity

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| <u>Reactivity:</u> | No data available. |
| <u>Stability:</u> | Stable under recommended storage conditions. |
| <u>Possibility of Hazardous Reactions:</u> | None under normal processing. |
| <u>Hazardous Polymerization:</u> | Hazardous polymerization does not occur. |
| <u>Incompatibility (Materials to Avoid):</u> | Interhalogens, bromine pentafluoride, chlorine trifluoride. Contact with aluminum metal may release hydrogen gas. Incandescent reaction with phosphorus pentachloride. Water will react with magnesium oxide to form magnesium hydroxide and release heat and steam. |
| <u>Conditions to Avoid:</u> | Extremes of temperature and direct sunlight. |
| <u>Hazardous Decomposition Products:</u> | Heat and steam |

11. Toxicological Information

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| <u>Information on likely routes of exposure</u> | |
| <u>Product Information:</u> | Magnesium Oxide CAS# 1309-48-4 |
| <u>Inhalation:</u> | Inhalation of fume (not MgO dust particulate) produced upon decomposition of magnesium compounds can produce a febrile reaction and leukocytosis in humans. |
| <u>Eye contact:</u> | No data available. |
| <u>Skin Contact:</u> | No data available. |
| <u>Ingestion:</u> | No data available. |
| <u>Information on toxicological effects</u> | |
| <u>Symptoms</u> | No information available. |
| <u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u> | |
| <u>Sensitization</u> | No information available. |
| <u>Germ cell mutagenicity</u> | No information available. |
| <u>Carcinogenicity</u> | No information available. |
| <u>Reproductive toxicity</u> | No information available. |
| <u>STOT - single exposure</u> | No information available. |
| <u>STOT - repeated exposure</u> | No information available. |
| <u>Aspiration hazards</u> | No information available. |
| <u>Numerical measures of toxicity- Product Information</u> | |
| <u>Unknown Acute Toxicity:</u> | 100% of the mixture consists of ingredient(s) of unknown Toxicity. |

12. Ecological Information

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| <u>Ecotoxicity:</u> | No data available on any adverse effects of this material on the Environment. 100% of the mixture consists of component(s) of unknown hazards to the aquatic environment. |
| <u>Persistence and degradability:</u> | No information available. |
| <u>Bioaccumulation:</u> | No information available. |
| <u>Other adverse effects:</u> | No information available. |

13. Disposal Considerations

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| <u>Disposal of Wastes:</u> | This product does not exhibit any characteristics of a hazardous waste. The product is suitable for landfill disposal once the free water component is evaporated or absorbed by a suitable absorbent (earth). Follow all applicable federal, state and local regulations for safe disposal. |
| <u>Contaminated packaging:</u> | Do not reuse container. |

14. Transport Information

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| <u>D.O.T. Shipping Name</u> | Not regulated |
| <u>Air - ICAO (international Civil Aviation Organization)</u> | Not regulated |
| <u>Sea - IMDG (International Maritime Dangerous Goods)</u> | Not regulated |

15. Regulatory Information

International Inventories

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|---------------|----------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

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)

SARA 311/312 Hazard Categories

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| Acute health hazard | No |
| Chronic Health Hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive toxins.

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|------------------------------|------------|---------------|--------------|
| Magnesium Oxide 1309-48-4 | X | X | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. Other Information

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|-------------|------------------|----------------|--------------------|------------------------------------|
| <u>NFPA</u> | Health hazards 1 | Flammability 0 | Instability 0 | Physical and Chemical Properties - |
| <u>HMIS</u> | Health hazards 0 | Flammability 0 | Physical hazards 0 | Personal protection X |

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.