

MSDS

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Magnesium Oxide

CHEMICAL NAME: Magnesium Oxide

CHEMICAL FORMULA: MgO

SYNONYMS: Magnesia, Calcined Magnesia, Calcined Magnesite, Fused Magnesia

PRODUCT USE: Industrial Chemical Process/Animal Feed Supplement/Refractory Material

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Magnesium Oxide (1309-48-4), 90%-99.9%

SECTION 3 - HAZARDS IDENTIFICATION

ROUTES OF ENTRY: × Skin Contact Skin Absorption × Eye Contact × Inhalation
× Ingestion

EYES/SKIN: May cause irritation of eyes, skin or nasal passages.

INHALATION: May cause irritation of the upper respiratory passages. Inhalation of magnesium oxide fume may cause metal fume fever, however no evidence of metal fume fever resulting from industrial exposure to magnesium oxide fume has been found. Symptoms of metal fume fever include; cough, tightness of chest, sweating, headache, fever, muscle aches, nausea, vomiting and tiredness.

INGESTION: No significant effects are expected to occur.

EFFECTS OF ACUTE EXPOSURE: See inhalation effects above.

EFFECTS OF CHRONIC EXPOSURE: None Reported

SECTION 4 - FIRST AID MEASURES

INHALATION: If symptoms of exposure are experienced (see Hazards Identification), remove victim to fresh air. Obtain medical attention.

INGESTION: Rinse mouth with and/or drink water if conscious. Obtain medical attention.

EYES: If irritation occurs, immediately flush eyes with water for at least 10 minutes. Obtain medical attention.

SKIN: Not expected to cause a problem. However, if irritation occurs, flush affected area with water. If irritation Persists, obtain medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY:	Not Flammable
EXTINGUISHING AGENTS:	As for surrounding fire*
FLASHPOINT AND METHOD:	Not applicable
UPPER FAMMABLE LIMIT:	Not applicable
LOWER FLAMMABLE LIMIT:	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
HAZARDOUS COMBUSTION PRODUCTS:	Not applicable
SENSITIVITY TO MECHANICAL IMPACT:	No special sensitivity
SENSITIVITY TO STATIC DISCHARGE:	Not sensitive
FIREFIGHTING PROCEDURES:	As for surrounding fire*

* Water reacts exothermically with magnesium oxide to produce magnesium hydroxide and heat/steam. Avoid water contact in closed or restricted storage vessels as heat, swelling, and rupture of storage vessel may occur.

SECTION 6 - ACIDENTAL RELEASE MEASURES

LEAK AND SPILL PROCEDURES:

Pick-up spills without creating dust. Place material into a dry container and cover. Hold in sealed container for disposal. Use personal protective equipment as required (See Section 8 - Exposure Controls and Personal Protection).

SECTION 7 - HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT:

Avoid inhalation of dust. Clean area frequently to avoid dust build-up. Wear applicable personal protective equipment as indicated in Section 8 - Exposure Controls and Personal Protection.

STORAGE REQUIREMENTS:

Store in a dry area in sealed containers. Keep away from incompatible materials such as interhalogens and strong acids. Avoid contact with water - product reacts exothermically with water to form magnesium hydroxide and heat/steam. Water contact in closed or restricted storage vessels may cause heat, swelling, and possible rupture of storage vessel.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS:

Engineering controls may include process enclosure and/or local exhaust ventilation to maintain dust concentrations below allowable exposure limits. Local exhaust ventilation with or without process enclosure is important where large quantities are handled, as in bagging operations.

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION: If adequate engineering controls are not available, wear respirator approved by NIOSH/MSHA for dusts/mists, as applicable. If magnesium oxide fume is likely to be produced then ensure that a NIOSH/MSHA respirator approved for fumes is used. In conditions of oxygen deficiency, or where airborne concentrations exceed 100mg/m³, wear positive pressure or pressure demand supplied air respiratory protection or SCBA.

EYE/SKIN PROTECTION: Wear safety goggles in high dust concentrations, unless full face-piece respiratory protection is worn. Wear coveralls.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White to light brown powder/granules

ODOUR : Odourless

PHYSICAL STATE: Solid

pH: 10.3 (Sat. aq. sol'n)

VAPOUR PRESSURE: Not applicable

VAPOUR DENSITY: Not applicable

BOILING POINT: Approx. 3600°C

MELTING POINT: Approx. 2800°C

SPECIFIC GRAVITY: 3.58 g/cc

EVAPOURATION RATE: Not applicable

PARTITION COEFF.: Not applicable

ODOUR THRESHOLD: Not applicable

VISCOSITY: Not applicable

WATER SOLUBILITY (@20°C): 0.0006 g/100ml

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY:

Stable under normal conditions.

CONDITIONS TO AVOID:

Avoid contact with water - product reacts exothermically with water to form magnesium hydroxide and heat/steam.

INCOMPATIBLE SUBSTANCES:

Strong Acids, Interhalogens (eg. Bromine pentafluoride, chlorine tri-fluoride), phosphorous pentachloride.

HAZARDOUS DECOMPOSITION PRODUCTS:

Magnesium fume may be generated if heated to volatilization. Heat and Steam may be generated upon contact with water.

HAZARDOUS POLYMERIZATION:

Does not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

LD50/LC50: No Data Available

IRRITANCY: May cause irritancy of eyes, skin or nasal passages

SENSITIZER: No Data Available

CARCINOGEN: Magnesium oxide (CAS#1309-48-4) is not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP or OSHA

TERATOGEN: No Data Available

REPRODUCTIVE TOXIN: No Data Available

MUTAGEN: No Data Available

SYNERGISTIC PRODUCTS: None Known

SECTION 12 - ECOLOGICAL INFORMATION

No Data Available

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

This product does not meet the criteria of a hazardous waste. Dispose in accordance with all applicable Federal, Provincial/State, and local Environment Regulations.

SECTION 14 - REGULATORY INFORMATION

INVENTORY/REGULATORY LISTS:

Magnesium Oxide is reported on the following national inventory and/or regulatory lists:

Australia - Australian Inventory Of Chemical Substances (AICS): 1309-48-4

Canada - Domestic Substance List (DSL): 1309-48-4

- Europe - European Inventory Of Existing Commercial
Chemical Substances (EINECS): 215-171-9
- Japan - Existing And New Chemical Substances (ENCS): 1-465
- Korea - Existing And Evaluated Chemical Substances (KECL): KE-22728
- Phillipines -Inventory of Chemicals and Chemical Substances (PICCS): Magnesium Oxide
- USA - Toxic Substance Control Act (TSCA) Inventory List 8(b): 1309-48-4

SECTION 15 - OTHER INFORMATION

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