



Inland Environmental Resources

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MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: AMALGAM-60 (Magnesium Hydroxide Slurry)
CHEMICAL NAME: Magnesium Hydroxide
CHEMICAL FORMULA: Mg(OH)₂
SYNONYMS: Magnesium Hydrate
PRODUCT USE: Industrial Chemical Process/Acid Neutralization/Waste Treatment

MANUFACTURER:

Inland Environmental Resources, Inc.
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Spokane, WA 99228

Emergency: INFOTRAC
Emergency: (800) 535-5053

DATE OF PREPARATION: January 29, 2013

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Components	%(wt./wt.)	CAS#	LD ₅₀ /species	LC ₅₀ /species	Exposure Limits	
					OSHA- PEL	ACGIH-TLV
Magnesium Hydroxide	50 – 65	1309-42-8	Not Available	Not Available	15 mg/m ³ (Nuisance Particulate)	10 mg/m ³ (Nuisance Particulate)
Water	35 – 50	7732-18-5	Not Available	Not Available	None Reported	None Reported
Magnesium Oxide <u>Fume</u> *	Unknown	1309-48-4	Not Available	Not Available	15 mg/m ³ (Total Particulate)	10 mg/m ³ (Total Particulate)

* Magnesium Oxide Fume may be generated if product is heated to volatilization.

SECTION 3 – HAZARDS IDENTIFICATION

OVERVIEW: Product may present a nuisance dust hazard if allowed to dry out.

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 fume may cause metal fume fever, however no evidence of metal fume fever resulting from industrial exposure to magnesium 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 advice.

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 advice.

SECTION 5 – FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY:	Not Flammable
EXTINGUISHING AGENTS:	As for surrounding fire
FLASHPOINT AND METHOD:	Not applicable
UPPER FLAMMABLE 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
NFPA Ratings: Health: 1, Flammability: 0, Reactivity: 0	

SECTION 6 – ACIDENTAL RELEASE MEASURES

LEAK AND SPILL PROCEDURES:

No specific spill hazard. Pick-up spills without creating dust from dried product. Place material into container, and cover. Hold in sealed container for disposal.

SECTION 7 – HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT:

Product may present a nuisance dust hazard if allowed to dry out. Avoid inhalation of dust. Clean area frequently to avoid dust build-up. Wear applicable personal protective equipment as indicated in Section 8 – Exposure Control and Personal Protection.

STORAGE REQUIREMENTS:

Store in an agitated tank to prevent settling of solids. Do not allow product to freeze.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING CONTROLS:

Wherever possible, use engineering controls to minimize inhalation of dust. Engineering controls may include process enclosure and/or local exhaust ventilation.

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 $100\text{mg}/\text{m}^3$, wear positive pressure or pressure demand supplied air respiratory protection or SCBA.

EYE/SKIN PROTECTION: Wear safety goggles, unless full face-piece respiratory protection is worn. The use of gloves and long-sleeve clothing is recommended.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	White to light brown liquid (slurry)	MELTING POINT:	Decomposes to MgO @ 350°C
ODOR :	Odorless	SPECIFIC GRAVITY:	1.4 – 1.5 g/mL
PHYSICAL STATE:	Aqueous Slurry	EVAPOURATION RATE:	Same as water
pH:	10.5 – 11.2 (as neat slurry)	PARTITION COEFF.:	Not applicable
VAPOR PRESSURE:	Not applicable	ODOR THRESHOLD:	Not applicable
VAPOR DENSITY:	Not applicable	VISCOSITY:	500 – 1000 cP
BOILING POINT:	100°C (water)	WATER SOLUBILITY (@ 20°C):	0.0009 g/100ml

SECTION 10 – STABILITY AND REACTIVITY

- CHEMICAL STABILITY:** Stable under normal conditions.
- CONDITIONS TO AVOID:** Avoid excessive temperatures, which will cause product to produce steam and/or decompose to magnesium oxide.
- INCOMPATIBLE SUBSTANCES:** Strong acids, aluminum powder, maleic anhydride, phosphorus, potassium.
- HAZARDOUS DECOMPOSITION PRODUCTS:**
Product may present a nuisance dust hazard if allowed to dry out. Product will decompose to magnesium oxide in temperatures in excess of 350°C. Magnesium fume may be generated if heated to volatilization. Steam may be generated upon heating.
- 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 hydroxide (CAS#1309-42-8) 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 – TRANSPORT INFORMATION

SPECIAL SHIPPING INFORMATION:

No special requirements

CANADIAN TGD: Not regulated. No PIN number assigned.

U.S. DOT: Not regulated by DOT. No UN number assigned.

SECTION 15 – 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):	1309-42-8
Canada	- Domestic Substance List (DSL):	1309-42-8
Europe	- European Inventory Of Existing Commercial Chemical Substances (EINECS):	215-170-3
Japan	- Existing And New Chemical Substances (ENCS):	1-386
Korea	- Existing And Evaluated Chemical Substances (KECL):	KE-22716
USA	- Toxic Substance Control Act (TSCA) Inventory List 8(b):	1309-42-8

WHMIS: WHMIS CLASSIFICATION: Does not meet criteria

This product is not listed on the WHMIS Ingredient Disclosure List.

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS contains all of the information required by the CPR.

CERCLA: Not listed as a hazardous substance

SARA TITLE III:

Section 302:	Product is not listed as an Extremely Hazardous Substance (EHS).
Section 304:	Emergency Release Notification not required.
Section 311/312:	Hazard Category: Acute (nuisance dust if allowed to dry out). MSDS, chemical inventory, Tier I/II reporting are applicable.
Section 313:	Product is not subject to Form R reporting.

SECTION 16 – OTHER INFORMATION

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy, correctness, or suitability of this information for application to the purchasers intended use. The conditions or methods of handling, storage, use and disposal of the product are beyond our control. We, therefore, do not assume the responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.