

Material Safety Data Sheet

Magnesium Oxide, 98%, Powder

ACC# 96228

Section 1 - Chemical Product and Company Identification

MSDS Name: Magnesium Oxide, 98%, Powder

Catalog Numbers: AC263830000, AC263830025, AC263835000

Synonyms: Magnesia; Calcined Magnesium; Calcined Brucite

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

| CAS# | Chemical Name | Percent | EINECS/ELINCS |
|-----------|-----------------|---------|---------------|
| 1309-48-4 | Magnesium oxide | 98 | 215-171-9 |

Hazard Symbols: None listed.

Risk Phrases: None listed.

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white to gray white solid. **Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Inhalation of fumes may cause metal-fume fever. Hygroscopic (absorbs moisture from the air). May cause central nervous system depression.

Target Organs: Central nervous system.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression.

Inhalation: May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Antidote: The use of Calcium gluconate to precipitate the oxalate should be determined by only qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam. Do NOT get water inside containers.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Wash area with soap and water. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse. Keep from contact with moist air and steam.

Storage: Store in a cool, dry place. Keep away from water. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|-----------------|-----------------------------------|-----------------------|----------------------------------|
| Magnesium oxide | 10 mg/m3 TWA (inhalable fraction) | 750 mg/m3 IDLH (fume) | 15 mg/m3 TWA (total particulate) |

OSHA Vacated PELs: Magnesium oxide: 10 mg/m3 TWA (total particulate)

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white to gray white

Odor: Odorless

pH: 10 (sat. solution)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 3600 deg C

Freezing/Melting Point: 2500-2800C

Decomposition Temperature: Not available.

Solubility: Slightly soluble in water

Specific Gravity/Density: 3.65-3.75

Molecular Formula: MgO

Molecular Weight: 40.3044

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, moisture, exposure to air.

Incompatibilities with Other Materials: Strong oxidizing agents; reacts violently with phosphorous pentachloride, chlorine trichloride, or bromine pentafluoride. Will absorb CO2 from air.

Hazardous Decomposition Products: None.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 1309-48-4: OM3850000

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 1309-48-4:

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: See RTECS.

Other Studies: No data available.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

| | US DOT | IATA | RID/ADR | IMO | Canada TDG |
|-----------------------|---------------------------|------|---------|-----|---------------------------|
| Shipping Name: | No information available. | | | | No information available. |
| Hazard Class: | | | | | |
| UN Number: | | | | | |
| Packing Group: | | | | | |

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 1309-48-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 1309-48-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 1309-48-4: 1

Canada - DSL/NDSL

CAS# 1309-48-4 is listed on Canada's DSL List.

Canada - WHMIS

WHMIS: Not available.

Canadian Ingredient Disclosure List

CAS# 1309-48-4 is listed on the Canadian Ingredient Disclosure List.

Exposure Limits

CAS# 1309-48-4: OEL-ARAB Republic of Egypt:TWA 10 mg/m3 OEL-AUSTRALIA:TWA 10 mg/m3 JANUARY 1993 OEL-BELGIUM:TWA 10 mg/m3 JANUARY 1993 OEL-DENMARK:TWA 6 mg/m3 OEL-FRANCE:TWA 10 mg/m3 JANUARY 1993 OEL-GERMANY:TWA 6 mg/m3 OEL-GERMANY:TWA 6 mg/m3 JANUARY 1993 OEL-HUNGARY:TWA 5 mg/m3;STEL 10 mg/m3 OEL-THE NETHERLANDS:TWA 10 mg/m3 JANUARY 1993 OEL-THE PHILIPPINES:TWA 15 mg/m3 JANUARY 1993 OEL-POLAND:TWA 1

5 mg/m³ OEL-RUSSIA:STEL 5 mg/m³ OEL-SWITZERLAND:TWA 6 mg/m³ OEL-SWI
TZERLAND:TWA 6 mg/m³;STEL 12 mg/m³ JANUAR 1993 OEL-TURKEY:TWA 15 mg/
m³ OEL-UNITED KINGDOM:TWA 10 mg/m³ JANUARY 1993 OEL-UNITED KINGDOM:
TWA 10 mg/m³ (total dust) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA c
heck ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 5/14/1998

Revision #3 Date: 3/18/2003

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