

MATERIAL SAFETY DATA SHEET**MAGNESIUM SULPHATE**

PRODUCT CODE NUMBER(S): 4860-1, 4920-1

PRODUCT IDENTIFICATION**Chemical Name and Synonyms:** *Magnesium sulphate, heptahydrate, Epsom salts; Magnesium sulphate, anhydrous***Chemical Family:** *Inorganic salt***Chemical Formula:** *MgSO₄, MgSO₄.7H₂O***Product Use:** *Laboratory reagent***Manufacturer's Name and Address:***Caledon Laboratories Ltd.
40 Armstrong Avenue
Georgetown, Ontario L7G 4R9***Telephone No:** *(905) 877-0101***Fax No:** *(905) 877-6666***Emergency Telephone No:** *CANUTEC (613) 996-6666***HAZARDOUS INGREDIENTS OF MATERIALS**

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Magnesium sulphate, heptahydrate</i>	<i>>98</i>	<i>Not established</i>	<i>10034-99-8</i>
<i>OR</i>			
<i>Magnesium sulphate, anhydrous</i>	<i>>95</i>	<i>Not established</i>	<i>7487-88-9</i>

PHYSICAL DATA**Physical State:** *Solid***Odour and Appearance:** *White needle-like crystals, odourless.***Odour Threshold (ppm):** *Not applicable***Vapour Pressure (mm Hg):** *< 0.1 mm @ 20°C***Vapour Density (Air = 1):** *< 0.01***Evaporation Rate:** *Not applicable***Boiling Point (degrees C):** *1124°C (decomposes)***Melting Point (degrees C):** *150°C (loses 6 H₂O); 200°C (loses remaining H₂O)***pH:** *5.0 to 8.0 (5% Solution)***Specific Gravity:** *1.68, heptahydrate; 2.65, anhydrous***Coefficient of Water/Oil distribution:** *Not available***SHIPPING DESCRIPTION****UN:** *Not regulated***T.D.G. Class:** *Not regulated***Pkg. Group:** *Not regulated***REACTIVITY DATA****Chemical Stability:** *Stable***Incompatibility with other substances:** *May react vigorously, violently or, in some instances, explosively, with strong oxidizing agents.***Reactivity:** *Avoid moisture and heat. Heat is evolved when water is added. Avoid incompatible materials, generation of dust.***Hazardous Decomposition Products:** *SO_x***FIRE AND EXPLOSION DATA****Flammability:** *Not combustible***Extinguishing Media:** *Use an extinguisher appropriate to the surrounding material which is burning. Use water as spray or fog to minimize dust, absorb heat, cool containers, and disperse vapours. Fight fire from upwind, from a safe distance. Firefighters should wear protective equipment, full face-piece positive-pressure self-contained breathing apparatus, and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.***Flash Point (Method Used):** *Not applicable***Autoignition Temperature:** *Not applicable***Upper Flammable Limit (% by volume):** *Not applicable***Lower Flammable Limit (% by volume):** *Not applicable***Hazardous Combustion Products:** *SO_x***Sensitivity to Impact:** *None identified***Sensitivity to Static discharge:** *None identified***TOXICOLOGICAL PROPERTIES AND HEALTH DATA****Toxicological Data:****LD₅₀:** *>4 g/kg***LC₅₀:** *Not available***Effects of Acute Exposure to Product:****Inhaled:** *Prolonged or repeated exposure may cause irritation with temporary coughing, sneezing.***In contact with skin:** *No adverse effects reported or expected.***In contact with eyes:** *Prolonged or repeated exposure may cause mild, temporary, mechanical irritation, with redness, tearing, itching and pain.***Ingested:** *Ingestion of large amounts has a laxative effect.***Effects of Chronic Exposure to Product:***No chronic health effects are expected from normal use. Severe overexposure may aggravate existing kidney disease.***Carcinogenicity:** *Not considered carcinogenic***Teratogenicity:** *None reported or expected***Reproductive Effects:** *None reported or expected***Mutagenicity:** *None reported or expected***Synergistic Products:** *None known***PREVENTIVE MEASURES****Engineering Controls:** *Local ventilation recommended*

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Respiratory Protection: *Dust mask. In case of large spill or in fire situation, use NIOSH/MSHA approved supplied-air-respirator or self-contained breathing apparatus.*

Eye Protection: *Chemical safety glasses*

Skin Protection: *Protective gloves. Clean body covering clothing sufficient to limit contact.*

Other Personal Protective Equipment: *Eyewash fountain and safety shower in work area.*

Leak and Spill Procedure: *Stop or contain leak. Ventilate area. Cleanup personnel must be thoroughly trained in the handling of hazardous materials, and must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes and contact with skin and eyes. Mix with inert absorbent and transfer carefully into container for removal by disposal company. Wet if necessary to prevent generation of dust. Wash site of spillage thoroughly with water and detergent.*

Waste Disposal: *Small amounts may be flushed carefully to sewer and be washed away with excessive water flow. For large amounts, pH should be adjusted to neutral (with care - hydrolysis and neutralization may generate heat) and collected for disposal following all local, provincial and federal regulations.*

Handling Procedures and Equipment: *Workers using this material must be thoroughly trained in its hazards and its safe use and must wear appropriate protective equipment and clothing. Use the smallest amount possible for the purpose, in a designated area with adequate ventilation. Use good housekeeping to prevent accumulations of dust. Avoid contact with skin and eyes. Avoid inhalation. Wash thoroughly after handling.*

Storage Requirements: *Store suitably labelled containers, in cool, dry, well-ventilated area, out of sunlight and away from incompatible materials. Keep containers tightly closed.*

REFERENCES USED

CCINFO disc

Budavari: *The Merck Index*, 12th ed., 1997

Sax, Lewis: *Hawley's Condensed Chemical Dictionary*, 11th ed., 1987

Sax: *Dangerous Properties of Industrial Materials*, 5th ed., 1979

Suppliers' Material Safety Data Sheets

ADDITIONAL INFORMATION

Date Issued: *March 10, 1989*

Revision: *January 2011*

MSDS: *4860-1, 4920-1*

Proposed WHMIS Designation: *Not a controlled product
Not required to be updated every 3 years (WHMIS 1992,
B-40, Section 29.2.*

*Prepared by: Caledon Laboratories Ltd. (905) 877-0101
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FIRST AID MEASURES

Specific Measures:

Eyes: *Flush eyes thoroughly with gently running water, holding eyelids open while flushing, for five to ten (5-10) minutes, or until no trace of chemical remains. Get medical advice if irritation develops.*

Skin: *Remove contaminated clothing. Brush or wipe off dry material. Wash skin with plenty of water until no evidence of chemical remains. If irritation develops get medical attention.*

Inhalation: *Remove to fresh air. Give oxygen and get medical attention for any breathing difficulty.*

Ingestion: *Rinse mouth thoroughly with water and give 2 to 4 glasses of water to drink to dilute. If victim feels unwell, or if a very large amount has been ingested, get medical attention.*