SAFETY DATA SHEET
FOR
THORN SMITH LABORATORIES

SECTION 1 - IDENTIFICATION

<table>
<thead>
<tr>
<th>Trade Name:</th>
<th>Magnesium Sulfate for MgO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Number:</td>
<td>80-1355</td>
</tr>
<tr>
<td>Product Description:</td>
<td>Analyzed Quantitative Unknowns</td>
</tr>
<tr>
<td>Manufacturer:</td>
<td>Auric Enterprises, Inc. d/b/a Thorn Smith Laboratories</td>
</tr>
<tr>
<td>Address:</td>
<td>7755 Narrow Gauge Road</td>
</tr>
<tr>
<td></td>
<td>Beulah, MI 49617</td>
</tr>
<tr>
<td>Phone Number:</td>
<td>231-882-4672</td>
</tr>
<tr>
<td>SDS Number:</td>
<td>TSL-022</td>
</tr>
</tbody>
</table>

SECTION 2 – HAZARDS IDENTIFICATION

Acute: Eye, skin irritant. Inhalation may cause irritation to the upper respiratory tract and mucous membranes. In cases of extreme ingestion, may cause hyper-magnesemia, such as electrolyte imbalance, central nervous depression and neurological and cardiac impairment (are rare in the absence of intestinal or renal disease since magnesium is poorly absorbed from the gastrointestinal tract and readily excreted by the kidneys).

Chonic: Elevated blood pressure and accelerated respiration rate, increased incidence of digestive disorders. In cases of extreme ingestion, may cause hyper-magnesemia, such as electrolyte imbalance, central nervous depression and neurological and cardiac impairment (are rare in the absence of intestinal or renal disease since magnesium is poorly absorbed from the gastrointestinal tract and readily excreted by the kidneys). Magnesium preparations may cause phosphorous depletion syndrome. Use of magnesium-containing antacids has caused renal failure due to precipitation of magnesium ammonium phosphate in the kidney.

SECTION 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Magnesium Sulphate Anhydrous</th>
<th>MgSO₄</th>
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<tbody>
<tr>
<td>Formula:</td>
<td></td>
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<tr>
<td>CAS No.:</td>
<td>7487-88-9</td>
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<tr>
<td>Formula Weight:</td>
<td>120.36</td>
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<tr>
<td>Common Synonyms:</td>
<td>Sulfuric acid magnesium salt</td>
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</table>

<table>
<thead>
<tr>
<th>Sodium Chloride</th>
<th>NaCl</th>
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<tbody>
<tr>
<td>Formula:</td>
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<td>CAS No.:</td>
<td>7647-14-5</td>
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<td>Formula Weight:</td>
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<tr>
<td>Common Synonyms:</td>
<td>Common salt, Halite</td>
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SECTION 4 – FIRST AID MEASURES
Eye Contact: Do not rub eye(s). Flush with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. If irritation persists, seek medical attention.

Skin Contact: Remove any contaminated clothing. Wipe off excess from skin. Immediately wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Inhalation: If a person breathes in large amounts, move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.

Ingestion: If swallowed, and if person is conscious, immediately give large amounts of water. Get medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

Flammability: Non-Flammable
Flash Points: Not Applicable
Auto-Ignition: Not Applicable
Flammable Limits: N/A
Extinguishing Media: Use extinguishing media appropriate to the surrounding fire.

Fire Fighting Procedure: Firefighters should wear self-contained breathing apparatus and protective clothing to prevent inhalation or contact with skin and eyes.

Fire/Explosion Hazards: Toxic gases produced: iron fumes, hydrogen chloride.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Utilize suitable protective clothing and equipment. Carefully sweep up and place in suitable clean, dry containers for reclamation or later disposal. Do not flush spilled material into sewer. Dispose in accordance to all applicable local, state and federal environmental regulations.

SECTION 7 – HANDLING AND STORAGE

Storage Temperatures: Store at ambient temperatures.
Shelf Life: Unlimited in tightly closed container. Suitable for any general chemical storage area.
Special Sensitivity: Hygroscopic

Precautions to be taken in handling and storage: Store in accordance with all local, state, and federal environmental regulations.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection (Specify Type): None where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.

Protective Gloves: Wear protective gloves.

Eye Protection: Wear chemical safety glasses.

Ventilation To Be Used: Use adequate general or local exhaust ventilation to keep fume or dust levels as low as possible.

__X__ Local Exhaust  __X__ Mechanical (General)  _____ Special

Other Protective Clothing and Equipment: Wear clean body-covering clothing. Emergency showers and eye wash stations should be available.

Hygienic Work Practices: Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.
SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Powder
Color: White crystalline.
Odor: Odorless
Boiling Point: N/A (MgSO₄); 1413°C (2585°F) (NaCl)
Specific Gravity (water=1): 2.66 (MgSO₄); 2.16 (NaCl)
Melting Point: 1124°C (2055°F) (MgSO₄); 2575°C (1413°F) (NaCl)
Solubility in Water: 26% at 0°C
Water Reactive: No
Vapor Density (Air-1): <1 (NaCl)
Evaporation Rate (-1): N/A

SECTION 10 – STABILITY AND REACTIVITY

STABILITY: __X__ Stable _____ Unstable
Conditions to Avoid: Humidity. May burn but does not ignite readily.
Incompatibility (Materials to avoid): Strong oxidizers, excessive heat, sparks or open flame.
Hazardous Decomposition Products: Toxic oxides of sulfur (MgSO₄); Hydrogen chloride (NaCl)
HAZARDOUS POLYMERIZATION: _____ May Occur __X__ Will Not Occur

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Exposure: Eye Contact. Ingestion. Inhalation. Skin contact.

TOXICITY DATA:
Magnesium Sulfate:
428 mg/kg oral-man TDLO; 5000 mg/kg oral-mouse LDLO; 3000 mg/kg oral rabbit LDLO; 645 mg/kg subcutaneous-mouse LD50; 1750 mg/kg subcutaneous-rabbit LDLO; 1800 mg/kg subcutaneous-guinea pig LDLO; 1500 mg/kg subcutaneous-dog LDLO; 1000 mg/kg subcutaneous-cat LDLO, 80 mg/kg/2 months intermittent intravenous-woman LDLO; 48 mg/kg intravenous-mouse LDLO; 1200 mg/kg intraperitoneal-dog LDLO; 20 mg/kg intraspinal-woman TDLO; mutagenic data (RTECS); reproductive effects data (RETCS).

Sodium Sulfate:
LD50 (oral-rat) 3000 mg/kg; LD50 (ipr-mouse) 2602 mg/kg; LD50 (scu-mouse) 3150 mg/kg; KD50 (iv-mouse) 645 mg/kg.

Chronic Toxic Effects: Lung damage, elevated blood pressure and accelerated respiration rate.
Acute Toxic Effects: Inhalation of dust may cause irritation to upper respiratory tract. Ingestion may cause gastrointestinal irritation. May cause irritation to eyes and skin.
Extremely Hazardous Substance: No
CERCLA Hazardous Substance: No
SARA 313 Toxic Chemicals: No
TSCA Inventory: No

SECTION 12 – ECOLOGICAL INFORMATION

Not Known
SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local, state and federal environmental regulations.

SECTION 14 – TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>Domestic (D.O.T.)</th>
<th>Proper Shipping Name: Chemicals, n.o.s.</th>
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<tbody>
<tr>
<td>International (T.M.O.)</td>
<td>Proper Shipping Name: Chemicals, n.o.s.</td>
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<tr>
<td>Air (I.C.A.O.)</td>
<td>Proper Shipping Name: Chemicals, n.o.s.</td>
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</table>

SECTION 15 – REGULATORY INFORMATION

Non-regulated.

SARA TITLE III HAZARD CATEGORIES AND LISTS

<table>
<thead>
<tr>
<th>Acute: No</th>
<th>Chronic: Yes</th>
<th>Flammability: No</th>
<th>Pressure: No</th>
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<tbody>
<tr>
<td>Reactivity: No</td>
<td>TSCA Inventory: No (MgSO₄)</td>
<td>Yes (NaCl)</td>
<td></td>
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</tbody>
</table>

SECTION 16 – OTHER INFORMATION

No information found.

Date Prepared: September 7, 1989
Date of Last Revision: December 29, 2014

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