

**MATERIAL SAFETY DATA SHEET  
FOR  
THORN SMITH LABORATORIES  
ANALYZED QUANTITATIVE UNKNOWN**

---

Soluble Sulfate for SO<sub>3</sub>  
Catalog Number 80-1675

---

Manufacturer: Auric Enterprises, Inc.  
d/b/a Thorn Smith Laboratories  
Address: 7755 Narrow Gauge Road  
Beulah, MI 49617  
Phone Number: 231-882-4672  
MSDS Number: TSL-006  
Date Prepared: October 2, 1989  
Date Updated: March 21, 2008

---

**SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION**

---

COMPONENTS - Chemical Name & Common Names  
(Hazardous Components 1% or greater; Carcinogens 0.1% or greater)

Sodium Sulfate

Formula: Na<sub>2</sub>SO<sub>4</sub>  
Common Synonyms: Sulfuric Acid, Disodium Salt; Disodium Sulfate  
Chemical Family: Inorganic Sodium Compounds  
CAS No.: 7757-82-6  
OSHA PEL: According to our sources, exposure threshold levels have not been established (N/E).  
ACGIH TLV: N/E  
OTHER LIMITS: N/A

Sodium Chloride

Formula: NaCl  
CAS No.: 7647-14-5  
OSHA PEL: N/E  
ACGIH TLV: N/E

---

**SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS**

---

Boiling Point: 1413° C (2575° F) (NaCl); N/A (Na<sub>2</sub>SO<sub>4</sub>)  
Specific Gravity (H<sub>2</sub>O=1): 2.68 (Na<sub>2</sub>SO<sub>4</sub>); 2.16 (NaCl)  
Vapor Pressure (mm Hg and Temperature): <1 (NaCl)

Melting Point: 884° C (1623° F) (Na<sub>2</sub>SO<sub>4</sub>); 801° C (1474° F)

Vapor Density (Air-1): N/A

Evaporation Rate (-1): N/A

Solubility in Water: Appreciable (More than 10%) (Na<sub>2</sub>SO<sub>4</sub>)

Water Reactive: No

Appearance and Odor: White crystals or powder (Na<sub>2</sub>SO<sub>4</sub>); white crystalline solid (NaCl). Odorless.

---

### SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

---

Flash Point and Method Used: N/A

Auto-Ignition Temperature: N/A

Flammability Limits in Air (% by volume): N/A

LEL: N/A UEL: N/A

Extinguisher Media: Use extinguishing media appropriate for surrounding fire.

Special Fire Fighting Procedures: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode.

Unusual Fire and Explosion Hazards: Toxic gases produced: sulfur dioxide, hydrogen chloride.

---

### SECTION 4 - REACTIVITY HAZARD DATA

---

STABILITY:  Stable  Unstable

Conditions to Avoid: Moisture. Stable under ordinary conditions of use and storage.

Incompatibility (Materials to Avoid): Aluminum, magnesium, mineral acids, strong acids, strong bases lithium, inter-halogens, iron cement.

Hazardous Decomposition Products: Oxides of sulfur and hydrogen chloride may form when heated to decomposition.

HAZARDOUS POLYMERIZATION:  May Occur  Will Not Occur

---

### SECTION 5 - HEALTH HAZARD DATA

---

PRIMARY ROUTES OF ENTRY:

Inhalation  Ingestion  Skin Contact  Eye Contact  Not Hazardous

CARCINOGEN LISTED IN:

NTP  OSHA  IARC Monograph  Not Listed

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

Sodium Sulfate: LD50 (oral-mouse) 5989 mg/kg.

HEALTH HAZARDS - Acute:

Inhalation: May cause irritation to upper respiratory tract.

Ingestion: May cause gastrointestinal irritation.

Skin Contact: May cause irritation.

Eye Contact: May cause irritation.

HEALTH HAZARDS - Chronic: Elevated blood pressure and accelerated respiration rate.

Signs and Symptoms of Exposure: No information found.

Medical Conditions Generally Aggravated by Exposure: High Blood Pressure (NaCl).

EMERGENCY FIRST AID PROCEDURES - Seek medical assistance for further treatment, observation, and support if necessary.

Inhalation: If a person breathes in large amounts, move the exposed person to fresh air. Get medical attention.

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

Eye Contact: Immediately flush with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

### **SARA/TITLE III HAZARD CATEGORIES AND LISTS**

Acute: Yes Chronic: Yes Flammability: No Pressure: No Reactivity: No

Extremely Hazardous Substance: No

CERCLA Hazardous Substance: No

SARA 313 Toxic Chemicals: No (NaCl). Yes (Na<sub>2</sub>SO<sub>4</sub>) Generic class removed from CFR 7-9-91.

TSCA Inventory: Yes

---

### **SECTION 6 - CONTROL AND PROTECTIVE MEASURES**

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

Protective Gloves: Wear rubber gloves.

Eye Protection: Wear chemical safety goggles.

VENTILATION TO BE USED: Use adequate general or local exhaust ventilation to keep dust levels as low as possible.

Local Exhaust  Mechanical (General)  Special

Other(Specify)

Other Protective Clothing and Equipment: Wear clean body-covering clothing.

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 7 - PRECAUTIONS FOR SAFE HANDLING & LEAK/USE PROCEDURES**

Steps to be taken if material is spilled or released: Wear suitable protective clothing. Carefully sweep up and remove.

Waste Disposal Methods: Dispose in accordance with all applicable local, state, federal environmental regulations.

Precautions to be taken in handling and storage: Keep in a tightly closed container. Suitable for any general chemical storage area. Isolate from incompatible materials. Protect against physical damage. Store in accordance with all applicable local, state, and federal environmental regulations.

Other precautions and/or special hazards: Sodium Sulfate is hygroscopic.

NFPA Rating: No information available.

HMIS Rating: No information available.

---

## SECTION 8 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

---

### Domestic (D.O.T.)

Proper Shipping Name: Chemical, n.o.s. (Non-regulated)

### International (T.M.O.)

Proper Shipping Name: Chemical, n.o.s. (Non-regulated)

### AIR (I.C.A.O.)

Proper Shipping Name: Chemical, n.o.s. (Non-regulated)

The information published in this Material Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and assume no liability resulting from its use. We reserve the right to revise Material Safety Data Sheets periodically as new information becomes available.