

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

Copper Oxide for Cu
Catalog Number 80-1230

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-008
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SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

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

Formula: CuO
CAS No.: 1317-38-0
OSHA PEL: TWA=0.1 mg/m³ (Copper fumes)
ACGIH TLV: TWA=0.2 mg/m³ (Copper fumes)
OTHER LIMITS: N/A

Sodium Sulfate

Formula: Na₂SO₄
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

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A
Specific Gravity (H₂O=1): 6.40 (CuO); 2.68 (Na₂SO₄)
Vapor Pressure (mm Hg and Temperature): N/A
Melting Point: 1326° C (2419° F) (CuO); 884° C (1623° F) (Na₂SO₄)
Vapor Density (Air=1): N/A
Evaporation Rate (-1): N/A
Solubility in Water: Negligible (less than 0.1%) (CuO); Appreciable (More than 10%) (Na₂SO₄)
Water Reactive: No

Appearance and Odor: Black crystalline powder or granules (CuO); White crystals or powder (Na₂SO₄).
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 (Na₂SO₄).

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY: Stable Unstable

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

Incompatibility (Materials to Avoid): Aluminum, magnesium, mineral acids, strong acids, strong bases.

Hazardous Decomposition Products: Oxides of sulfur 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 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: None identified.

Signs and Symptoms of Exposure: No information found.

Medical Conditions Generally Aggravated by Exposure: Wilson's disease.

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. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: If swallowed, and the person is conscious, immediately induce vomiting. 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: No Chronic: No Flammability: No Pressure: No Reactivity: No
Extremely Hazardous Substance: No
CERCLA Hazardous Substance: No
SARA 313 Toxic Chemicals: Yes
TSCA Inventory: No

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (Specify Type): Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 15 ppm, a high efficiency particulate respirator is recommended. Above this level, a self-contained breathing apparatus is advised.

Protective Gloves: Wear rubber gloves.

Eye Protection: Wear chemical safety goggles.

VENTILATION TO BE USED: Use adequate general or local exhaust ventilation meet TLV requirements.

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 self-contained breathing apparatus and full protective clothing. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

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: Material 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)

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