

**SAFETY DATA SHEET
FOR
THORN SMITH LABORATORIES**

SECTION 1 - IDENTIFICATION

Trade Name: **Copper Oxide** for Cu
Catalog Number: 80-1230 (Vials) / 80-1231 (100g)
Product Description: Analyzed Quantitative Unknowns
Manufacturer: Auric Enterprises, Inc.
d/b/a Thorn Smith Laboratories
Address: 7755 Narrow Gauge Road
Beulah, MI 49617
Phone Number: 231-882-4672
SDS Number: TSL-008

SECTION 2 – HAZARDS IDENTIFICATION

Classification of Substance or Mixture: Not a hazardous substance or mixture as packaged in 10g student vials or 100g containers.

GHS Label Elements, including precautionary statements: Not a hazardous substance or mixture as packaged in 10g student vials or 100g containers.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Potential Acute Health Effects: Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).

Potential Chronic Health Effects: CARCENOGENIC EFFECTS: N/A
MUTAGENIC EFFECTS: N/A
TERATOGENIC EFFECTS: N/A
DEVELOPMENTAL TOXICITY: N/A

SECTION 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Cupric Oxide

Formula:	CuO
Formula Weight:	79.55 g/mol
CAS No.:	1317-38-0
Common Synonyms:	Cupric Oxide, Copper (II) Oxide
OSHA PEL:	TWA-0.1 mg/m ³ (Copper fumes)
ACGIH TLV:	TWA=0.2mg/m ³ (Copper fumes)

Sodium Sulfate:

Formula:	Na ₂ SO ₄
CAS No.:	7757-82-6
OSHA PEL:	N/E
ACGIH TLV:	N/E
OTHER LIMITS:	N/A

SECTION 4 – FIRST AID MEASURES

Eye Contact: Check for and remove contact lenses. Flush with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention.

Skin Contact: Remove any contaminated clothing. Wipe off excess from skin.

Flush skin with water. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, 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 rinse mouth with plenty of water. DO NOT induce vomiting. 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.

Special Hazards arising from substance or mixture: Copper Oxides

Fire/Explosion Hazards: No Data Available.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Utilize recommended protective clothing and equipment. Sweep up or shovel spills in a manner that does not disperse dust into the air. Dispose of in accordance to all applicable federal, state and local regulations.

SECTION 7 – HANDLING AND STORAGE

Storage Temperatures: Store at ambient temperatures.

Shelf Life: Unlimited in tightly closed container in a dry and well-ventilated place.

Special Sensitivity: Keep away from incompatible materials.

Precautions to be taken in handling and storage: Do not breathe dust. Avoid contact with skin and eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection (Specify Type): For nuisance exposures use N95 type respirator. If airborne Concentration is high, use an appropriate NIOSH approved cartridge respirator.

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.

☒ Local Exhaust ☒ Mechanical (General) ☐ Special

☐ Other (Specify)

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. Do not let product enter drains.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Powder

Color: Gray to Black

Odor: Odorless

Boiling Point: N/A

Melting Point/Freezing Point: 1326°C (2419°F) CuO; 884°C (1623°F) Na₂SO₄

Flash Point: N/A

Solubility in Water: Negligible (less than 0.1%) CuO; Appreciable (More than 10%) Na₂SO₄

Specific Gravity: 6.40g/cm³ (water=1) CuO; 2.68 Na₂SO₄

SECTION 10 – STABILITY AND REACTIVITY

STABILITY: ☒ Stable ☐ Unstable

Conditions to Avoid: Humidity

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 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity (CuO)

LD50 Oral – Rat – >2500 mg/kg
(OECD Test Guideline 423)

Inhalation: No Data

LD50 Dermal – Rat – >2000 mg/kg
(OECD Test Guideline 402)

No Data Available

Skin corrosion/irritation (CuO)

Skin – Rabbit

Results: No skin irritation
(OECD Test Guideline 404)

Serious Eye Damage/Eye Irritation (CuO)

Eyes – Rabbit

Results: Mild eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization (CuO)

Maximisation Test (GPMT) – Guinea pig
Does not cause skin sensitization
(OECD Test Guideline 406)

Germ Cell Mutagenicity (CuO)

Not Date Available

Carcinogenicity (CuO, Na₂SO₄)

No components of this product are listed by IARC, ACGIH, NTP, OSHA, or CA Prop 65.

SECTION 12 – ECOLOGICAL INFORMATION

Other Adverse Effects: Very toxic to aquatic life with long lasting effects. (CuO)

SECTION 13 – DISPOSAL CONSIDERATIONS

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

SECTION 14 – TRANSPORTATION INFORMATION

Domestic (D.O.T.)

Proper Shipping Name: Chemicals, n.o.s.

International (T.M.O.)

Proper Shipping Name: Chemicals, n.o.s.

Air (I.C.A.O.)

Proper Shipping Name: Chemicals, n.o.s.

SECTION 15 – REGULATORY INFORMATION

Regulatory information pertains to Cupric Oxide component only, this product is a mixture of Cupric Oxide and Sodium Sulfate.

TSCA Listed: Yes

DSL Listed: Yes

Regulation (EC) No 1272/2008 (CLP): Eye damage/irritation, category 2A, Specific target organ toxicity - single exposure, category 3, Hazardous to the aquatic environment - acute hazard, category 1, Hazardous to the aquatic environment - chronic hazard, category 1.

WHMIS 2015 Classification: Serious eye damage/eye irritation, Specific target organ toxicity - single exposure.

HMIS Ratings: Health: 1 Flammability: 0 Physical: 0
NFPA Ratings: Health: 1 Flammability: 0 Instability: 0

Chemical Safety Assessment: A chemical safety assessment has not been carried out.

SECTION 16 – OTHER INFORMATION

Date Prepared:	October 2, 1989
Date of Last Revision:	November 11, 2020

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