



Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064 (800) 955-1177
Emergency Number: (600) 255-3924

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Catalog Numbers: S25193, S25193A, S25193B, S25193C
Product Identity: Benedict's Qualitative Solution

Chemical Family: Not Applicable
Synonyms: Not Applicable
Recommended Use: Laboratory chemicals

Manufacturer's Name: AquaPhoenix Scientific, Inc., 9 Bamhart Dr., Hanover, PA 17331, (866) 632-1291
Emergency Contact Number (24hr): Chemical (800) 255-3924

Issue Date: 07/09/11
Revision Date:

Section 2 – Hazard Identification

Emergency Overview: Cautious. Avoid ingestion or contact with skin, eyes, and clothing. If ingested, dilute with water and induce vomiting. Get medical attention.

Appearance: Clear, blue liquid **Odor:** Odorless

Target Organs: Eyes, gastrointestinal system and skin

Potential Health Effects/ Routes of Exposure:

Eyes: May cause irritation, redness, pain, and tearing.

Skin: May cause irritation.

Ingestion: May cause copper poisoning, headache, liver and kidney damage, diarrhea, vomiting, and nausea.

Inhalation: May cause irritation.

Chronic Effect / Carcinogenicity: None (IARC, NTP, OSHA)

Aggravated Medical Conditions No information available

These chemicals are considered hazardous by OSHA.

See section 11 for toxicological information. See section 12 for potential environmental effects.

Section 3 – Composition, Information on Ingredients

Copper Sulfate, CAS# 7758-99-8, <2% w/w
Sodium Carbonate, CAS# 497-19-8, <11% w/w
Sodium Citrate, CAS# 6132-04-3, <18% w/w
Water, purified, CAS# 7732-18-5, >69% w/w

Section 4 – First Aid

Eyes: Immediately flush eyes with water for at least 15 minutes. Immediately get medical assistance.

Skin: Flush with water for 15 minutes. Get medical assistance if irritation develops.

Ingestion: Dilute with water or milk immediately. Get medical assistance.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Notes to Physician Treat symptomatically.

Section 5 – Fire Fighting Measures

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Flash Point: Not Applicable **Autoignition Temperature:** No information available.

Explosion Limits Upper: No data available **Lower:** No data available

Extinguishing Media: Use appropriate means to extinguish surrounding fire.

Unsuitable Extinguishing Media: No information available

Fire & Explosion Hazards: Not considered to be a fire or explosion hazard.

Fire Fighting Instructions / Equipment: Use normal procedures. Use protective clothing. Use NIOSH-approved breathing equipment.

Hazardous Combustion Products: No information available

Sensitivity to mechanical impact No information available.

Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical: No information available

NFPA Rating: (estimated) Health: 2; Flammable: 0; Reactivity: 1

Section 6 – Accidental Release Measures

Personal Precautions: Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions: Do not flush into sewer.

Methods for Containment and Clean Absorb with suitable inert material and containerize for disposal. Always obey local regulations.

Section 7 – Handling and Storage

Handling: Wash hands after handling. Avoid contact with skin and eyes.

Storage: Keep container tightly closed in a cool, dry area. Protect from freezing and physical damage.

Section 8 – Exposure Controls, Personal Protection

Copper Sulfate, CAS# 7758-99-8, ACGIH TLV: NA, OSHA PEL: NA

Sodium Carbonate, CAS# 497-19-8, ACGIH TLV: NA, OSHA PEL: NA

Sodium Citrate, CAS# 6132-04-3, ACGIH TLV: NA, OSHA PEL: NA

Water, purified, CAS# 7732-18-5, ACGIH TLV: NA, OSHA PEL: NA

Engineering Measures/ General Hygiene: Normal ventilation is adequate. Ensure eyewash and safety showers are available.

Personal Protection Equipment: Skin Protection: Chemical resistant gloves.

Eye/Face Protection: Safety Glasses or goggles. **Respiratory Protection:** Normal ventilation is adequate

Section 9 – Physical and Chemical Properties

Appearance/Physical State: Clear, blue liquid

Odor: Odorless

Boiling Point: Approx 100C

Melting Point: Approx 0C

Vapor Density: No information Available

Evaporation Rate: No information Available

pH: Approx 10.6

Flammability: No information Available

Solubility: Infinite

Relative Density: No information Available

Molecular Weight: Not available

Section 10 – Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.

Incompatible Materials: Hydroxylamine, phosphates, alkalis, sulfuric acid, hydrazine, finely powdered metals, active metals.

Conditions to Avoid: No Information Available.

Hazardous Decomposition Products: Highly toxic fumes of Sulfur oxides.

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Hazardous Polymerization: Does not occur
Hazardous Reactions: None under normal processing.

Section 11 – Toxicological Information

Routes of Exposure/Symptoms/Corrosiveness – See Section 2
LD50 or/1-rat: 300mg/kg (Copper Sulfate) 4090mg/kg (Sodium Carbonate) LC50 inhalation-rat: NA

Irritation: No Information Available
Toxicologically Synergistic: No Information Available
Chronic Exposure
Carcinogenicity No Information Available
Sensitization No information available.
Mutagenic Effects No information available.
Reproductive Effects No information available.
Developmental Effects (Immediate/Delayed) No information available.
Teratogenicity No information available.
Other Adverse Effects No Information Available.
Endocrine Disruptor Information No information available

Section 12 – Ecological Information

Ecotoxicity: Copper has high chronic and acute toxicity to aquatic life.
Persistence and Degradability: Highly persistent in the aquatic environment (Half-life: >200days). May leach into groundwater from soil.
Mobility: No Information Available
Bioaccumulation/ Accumulation: Expected to bioaccumulate significantly.

Section 13 – Disposal Considerations

Waste Disposal/Waste Disposal of Packaging: Do not flush to sewer. Containerize for disposal. Comply with all local, state, and federal regulations.

Section 14 – Transport Information

DOT - Not Regulated

Section 15 – Regulatory Information (not meant to be all inclusive)

OSHA Status: These chemicals are considered hazardous by OSHA.
Canada DSL: These chemicals are on the Canada DSL list.
TSCA: These chemicals are listed on the TSCA Inventory
SARA Title III Section 313: Not Applicable
RCRA Status: Not Applicable
CERCLA Reportable Quantity: Cupric Sulfate Pentahydrate – 10lb
WHMIS: Not Applicable
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR

Section 16 – Additional Information

Disclaimer: The information on this MSDS applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to determine the suitability and completeness of this information for his own particular use. No warranty is implied regarding the accuracy of the data or the results to be obtained from the products use.