



A Division of
MSES Consultants, Inc.

Material Safety Data Sheet

Catalog Number: SKU 800

Revision date: 17-Feb-2004

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY INFORMATION

Catalog Number: SKU 800

Product name: Antifreeze Solution

Synonyms: None

Supplier: MSES Corrosion Products Division
P.O. Drawer 190
Clarksburg, WV 26302-0190

Technical Information telephone number: 1-877-624-9700 (1-304-624-9700)

Emergency telephone number: MSES CORROSION PRODUCTS DIV: 1-877-842-3325 (1-304-842-3325)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA Exposure Limits:
GLYCEROL	56-81-5	55%	10 mg/m ³ TWA	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
WATER	7732-18-5	43%	N/A	N/A
CUPRIC SULFATE, Pentahydrate	7758-99-8	2%	1 mg/m ³ TWA	OSHA-PEL 1 mg/m ³ (Dust/Mists as Cu)(TWA)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: May cause irritation to the eyes, skin and respiratory system., Combustible material

Category of Danger:
Irritant

Principle routes of exposure: Skin

Inhalation: Irritating to respiratory system

Ingestion: Irritating to mouth, throat and stomach

Skin contact: Irritating to skin.

Eye contact: Contact with eyes may cause irritation

ANSI Classification Irritant - eye, skin, respiratory

Statements of hazard May Cause Eye, Skin and Respiratory Tract irritation.

COMBUSTIBLE MATERIAL AND VAPOR.

Statement of Spill or Leak - ANSI Label Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment.

Statement of First Aid In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Precautions - ANSI Label Keep away from heat and flame. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Avoid breathing vapors. Avoid prolonged or repeated contact with the skin, eyes or respiratory tract. Wash thoroughly after exposure.

4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation: Move to fresh air. Call a physician immediately.

Skin contact: Rinse immediately with plenty of water for at least 15 minutes Call a physician immediately

Ingestion: Do not induce vomiting without medical advice.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician

Protection of first-aid providers: No information available

Medical conditions aggravated by exposure: None known

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

Specific hazards:

Use dry chemical, CO₂, water spray or "alcohol" foam
Contact with strong oxidizing agents such as chromium trioxide, potassium chlorate or potassium permanganate may be an explosion hazard. Can react violently with acetic anhydride, (aniline + nitrobenzen), Ca(OCl)₂, CrO₃, Cr₂O₃, (F₂ + PbO), (HClO₄ + PbO), KMnO₄, K₂O₂, AgClO₄, Na₂O₂, NaH. combustible material

Unusual hazards:

None known

Special protective equipment for firefighters:

Wear self contained breathing apparatus for fire fighting if necessary.

Specific methods:

Water mist may be used to cool closed containers.

Flash point:

199 °C (closed cup)

Autoignition temperature:

412 °C at 1 atm.

NFPA rating:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Use personal protective equipment. Remove all sources of ignition.
Environmental precautions:	Do not flush into surface water or sanitary sewer system.
Methods for cleaning up:	Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Storage:	ROOM TEMPERATURE
Handling:	Use only in area provided with appropriate exhaust ventilation.
Safe handling advice:	Wear personal protective equipment. Remove and wash contaminated clothing before reuse.
Technical measures/storage conditions:	Keep away from heat and sources of ignition. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a cool, well-ventilated place.
Incompatible products:	Oxidising and spontaneously flammable products

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: Breathing apparatus only if aerosol is formed.

Hand protection: Pvc or other plastic material gloves

Skin and body protection: Impervious clothing

Eye protection: Goggles

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor	Clear and blue; slight odor
Physical state:	Liquid
Formula:	Not Applicable
Molecular weight:	Not Applicable
Melting point/range:	May start to solidify at -0.1°C (31.8°F) based on data for: Water.
Boiling point/range:	The lowest known value is 99.9°C (211.8°F) (Water).
Density:	1.000 to 1.100 g/cm ³ at 20 °C
Vapor pressure:	Not available
Evaporation rate:	Not available
Vapor density:	Not available
Solubility (in water):	Completely miscible
Flash point:	Not available
Autoignition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Polymerization:	None under normal processing.

Hazardous decomposition products:

Thermal decomposition can lead to release of irritating gases and vapours such as carbon dioxide, carbon monoxide, copper fumes and sulfur dioxide.

Materials to avoid:

Polymerizes at approximately 300F. Incompatible with acetic anhydride, potassium permanganate, strong acids, caustics, aliphatic amines, isocyanates, oxidizers.

Conditions to avoid:

Exposure to air or moisture over prolonged periods.

11. TOXICOLOGICAL INFORMATION

Product Information**Acute toxicity**

Components
GLYCEROL

RTECS Number:
MA8050000

Selected LD50s and LC50s

Inhalation LC50 Rat : >570 mg/m³/1 H
Oral LD50 Rat : 12600 mg/kg
Oral LD50 Mouse : 4090 mg/kg
Dermal LD50 Rabbit : >10 gm/kg

Chronic toxicity:

Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.

Local effects:

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

Specific effects:

May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.

Primary irritation:

A primary irritant

Carcinogenic effects:

No data is available on the product itself.

Mutagenic effects:

No data is available on the product itself.

Reproductive toxicity:

No data is available on the product itself.

Product Information**Acute toxicity**

Components
CUPRIC SULFATE

RTECS Number:
GL8800000

Selected LD50s and LC50s

Oral LD50 Rat : 300 mg/kg

Chronic toxicity:

Chronic Effects on Humans are Not Available

Local effects:

May be hazardous in case of skin contact (irritant). Hazardous in case of inhalation. Hazardous in case of ingestion

Specific effects:

May cause itching, scaling, reddening, or occasionally, blistering on contact with skin.

Primary irritation:

A primary irritant

Carcinogenic effects:

The material is not known to cause cancer in animals or humans

Mutagenic effects:

No data is available on the product itself.

Reproductive toxicity: No data is available on the product itself.

Components	NIOSH – Health Effects	NIOSH – Target Organs
Glycerol		Respiratory system, skin, eyes, kidneys
Copper Sulfate		Respiratory system, skin, eyes, kidneys

12. ECOLOGICAL INFORMATION

Mobility:	No data available
Bioaccumulation:	No data available
Ecotoxicity effects:	No data available
Aquatic toxicity:	May cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

EPA Waste Number	Not Available
Treatment	Material does not have an EPA Waste Number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal (TSD) to assure compliance with all current locals, state, and Federal Regulations.

14. TRANSPORT INFORMATION

DOT Classification	Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CUPRIC SULFATE) Hazard Class: 9 UN number: UN3077 Packing Group: III RQ: 10 lbs. (4.536 kg)
TDG Classification	Not Available
IMO/IMDG Classification	Not Available
ICAO/IATA Classification	Not Available

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA 8(b) inventory: CUPRIC SULFATE
SARA 302/304/311/312 extremely hazardous substances:
No products were found.
SARA 302/304 emergency planning and notification: No
products were found.
SARA 302/304/311/312 hazardous chemicals: CUPRIC
SULFATE SARA 311/312 MSDS distribution - chemical
inventory - hazard identification: CUPRIC SULFATE:
Immediate (Acute) Health Hazard, Delayed (Chronic) Health
Hazard
SARA 313 toxic chemical notification and release reporting:
No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No
products were found.
Clean air act (CAA) 112 regulated flammable substances:
No products were found.
Clean air act (CAA) 112 regulated toxic substances: No
products were found.

WHMIS (Canada)

Class D-1B: Material causing immediate and serious toxic
effects (TOXIC).
No products were found.
This product has been classified in accordance with the
hazard criteria of the Controlled Product Regulations and
the MSDS contains all required information.

International Regulations

EINECS
DSCL (EEC)

Not available.
R22- Harmful if swallowed.
R3 6/37/3 8- Irritating to eyes, respiratory system and skin.
Australia (NICNAS): CUPRIC SULFATE

International Lists

Japan (MITI): CUPRIC SULFATE
Philippines (RA6969): CUPRIC SULFATE China: No
products were found.

State Regulations

No products were found.
California prop. 65: No products were found.

MP Biomedicals, Inc

www.mpbio.com**SARA 313 Notification:**

The above is your notification as to the SARA 313 listing for this product(s) pursuant to Section 313 of Title III of the Superfund Ammendments and Reauthorization Act of 1986 and 40 CFR Part 372.

If you are unsure if you are subject to the reporting requirements of Section 313, or need more information, please call the EPA Emergency Planning and Community Right-To-Know Information Hotline: (800) 535-0202 or (202) 479-2499 (in Washington, DC or Alaska).

State Notification:

The above information is your notice as to the Right-to-Know listings of the stated product(s). Individual states will list chemicals for a variety of reasons including, but not limited to, the compounds toxicity; carcinogenic, tumorigenic and/or reproductive hazards; and the compounds environmental impact if accidentally released.

16. OTHER INFORMATION**Section 16. Other Information**

**National Fire
Protection Association
(U.S.A.)**

1	Fire Hazard
1	Health Hazard
1	Reactivity

Changed Since Last +

**Revision
Notice to Reader**

The statements contained herein are based upon technical data that Corrosion Products Division of MSES Consultants, Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. CORROSION PRODUCTS DIVISION OF MSES CONSULTANTS, INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.