

MATERIAL SAFETY DATA SHEET

Section 1 - Chemical Product and Company Identification

MSDS Name: Copper Sulfate
89202
Catalog Numbers: 23257715, 23257716, 23257717, 25008, 257715, 257716, 257717
Synonyms:
Company Identification: Fisher Diagnostics
8365 Valley Pike
Middletown, VA 22645-0307
For information in the US, call: 800-528-0494
Emergency Number US: 800-524-0294
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 99-76-3
Chemical Name: Methylparaben
%: <1.0
EINECS#: 202-785-7
Hazard Symbols:
Risk Phrases:

CAS#: 7664-93-9
Chemical Name: Sulfuric acid
%: <1.0
EINECS#: 231-639-5
Hazard Symbols: C
Risk Phrases: 35

CAS#: 7732-18-5
Chemical Name: Deionized Water
%: Balance
EINECS#: 231-791-2
Hazard Symbols:
Risk Phrases:

CAS#: 7758-99-8
Chemical Name: Copper (ii) sulfate
%: 8.3
EINECS#: unlisted
Hazard Symbols:
Risk Phrases:

Text for R-phrases: see Section 16

Hazard Symbols: None listed

Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! May cause allergic skin reaction. May cause digestive tract irritation. May be absorbed through intact skin. Harmful if swallowed. May cause liver and kidney damage. May cause severe eye and skin irritation with possible burns. May cause blood abnormalities. May cause severe respiratory tract irritation with possible burns. Target Organs: Blood, kidneys, liver.

Potential Health Effects

- Eye:** Contact with eyes may cause severe irritation, and possible eye burns. May cause conjunctivitis, ulceration and turbidity of the cornea.
- Skin:** May be absorbed through the skin in harmful amounts. May cause severe irritation and possible burns. If absorbed, may cause symptoms similar to those for ingestion. May cause allergic contact dermatitis.
- Ingestion:** Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract. Exposure may cause anemia and other blood abnormalities.
- Inhalation:** May cause severe irritation of the respiratory tract with possible burns.
- Chronic:** No information found.

Section 4 - First Aid Measures

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.
- Skin:** Get medical aid immediately. Rinse area with large amounts of water for at least 15 minutes.
- Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Section 5 - Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
- Extinguishing Media:** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
- Autoignition Temperature:** Not available
- Flash Point:** Not available
- Explosion Limits:** Not available
- Lower:**
- Explosion Limits:** Not available
- Upper:**
- NFPA Rating:** health: 2; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Methylparaben listed	none listed	none listed	none
Sulfuric acid TWA	0.2 mg/m3 (thoracic fraction)	1 mg/m3 TWA 15 1 mg/m3 IDLH	1 mg/m3
Deionized Water listed	none listed	none listed	none
Copper (ii) sulfate listed	none listed	1 mg/m3 TWA (as Cu, except Copper fume) (listed under Copper compounds, n.o.s.).	none

OSHA Vacated PELs: Methylparaben: None listed Sulfuric acid: 1 mg/m3 TWA Deionized Water: None listed Copper (ii) sulfate: None listed

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if

exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: Not available

Odor: odorless

pH: Not available

Vapor Pressure: 7.3 mm Hg @25C

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: Not available

Specific Gravity/Density: 1.053

Molecular Formula:

Molecular Weight:

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials.

Avoid:

Incompatibilities with Other Materials Hydroxylamine, acetylene, acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), alcohols and glycols (e.g. butyl alcohol, ethanol, methanol, ethylene glycol), aldehydes (e.g. acetaldehyde, acrolein, chloral, formaldehyde), amides, amines (aliphatic and aromatic, e.g. dimethyl amine, propylamine, pyridine, triethylamine), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), carbamates (e.g. carbanolate, carbofuran), caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), cyanides (e.g. potassium cyanide, sodium cyanide), dithiocarbamates (e.g. ferbam, maneb, metham, thiram), esters (e.g. butyl acetate, ethyl acetate, propyl formate), ethers (e.g. dioxane, furfuran, tetrahydrofuran (THF)), fluorides (inorganic, e.g. ammonium fluoride, calcium fluoride, cesium fluoride), hydrocarbons (aromatic, e.g. benzene, chrysene, cumene, toluene), halogenated organics (e.g. dibromoethane, hexachlorobenzene, methyl chloride, trichloroethylene), isocyanates (e.g. methyl isocyanate), ketones (e.g. acetone, acetophenone, MEK, MIBK), mercaptans and other organic sulfides (e.g. butyl mercaptan, carbon disulfide, methanethiol), metals (alkali and alkaline, e.g. cesium, potassium, Carbon monoxide, oxides of sulfur, carbon dioxide.

Hazardous Decomposition Products

Hazardous Polymerization Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 99-76-3: DH2450000
CAS# 7664-93-9: WS5600000
CAS# 7732-18-5: ZC0110000
CAS# 7758-99-8: GL8900000

LD50/LC50: RTECS:
CAS# 99-76-3: Oral, mouse: LD50 = >8 gm/kg;
Oral, rabbit: LD50 = 6 gm/kg;

RTECS:
CAS# 7664-93-9: Draize test, rabbit, eye: 250 ug Severe;

Inhalation, mouse: LC50 = 320 mg/m³/2H;
Inhalation, mouse: LC50 = 320 mg/m³;
Inhalation, rat: LC50 = 510 mg/m³/2H;
Inhalation, rat: LC50 = 510 mg/m³;
Oral, rat: LD50 = 2140 mg/kg;

RTECS:

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

RTECS:

CAS# 7758-99-8: Oral, mouse: LD50 = 43 mg/kg;

Oral, rat: LD50 = 300 mg/kg;

Skin, rat: LD50 = >2 gm/kg;

Carcinogenicity: Methylparaben - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Sulfuric acid - ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists) California: carcinogen, initial date 3/14/03 (Strong inorganic acid mists containing sulfuric acid). NTP: Known carcinogen (Strong inorganic acid mists containing s). IARC: Group 1 carcinogen
Deionized Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Copper (ii) sulfate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Not available

Teratogenicity: Not available

Reproductive: Not available

Neurotoxicity: Not available

Mutagenicity: Not available

Other: Not available

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. RCRA P-Series: None listed. RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

USA RQ: CAS# 7664-93-9: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 99-76-3 is listed on the TSCA Inventory.

CAS# 7664-93-9 is listed on the TSCA Inventory.

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 7758-99-8 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

Health & Safety Reporting List	None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules Section 12b	None of the chemicals in this product are under a Chemical Test Rule. None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule	None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs	CAS# 7664-93-9: 1000 lb final RQ; 454 kg final RQ
SARA Section 302 Extremely Hazardous Substances	CAS# 7664-93-9: 1000 lb TPQ
SARA Codes	CAS # 99-76-3: acute. CAS # 7664-93-9: acute, chronic, reactive. CAS # 7758-99-8: acute, chronic.
Section 313	This material contains Sulfuric acid (CAS# 7664-93-9, 1 0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372. This material contains Copper (ii) sulfate (listed as Copper compounds, n.o.s.), 8 3%, (CAS# 7758-99-8) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.
Clean Air Act:	This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.
Clean Water Act:	CAS# 7664-93-9 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 7758-99-8 is listed as a Toxic Pollutant under the Clean Water Act.
OSHA: STATE	Methylparaben is not present on state lists from CA, PA, MN, MA, FL, or NJ. Sulfuric acid can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts. Deionized Water is not present on state lists from CA, PA, MN, MA, FL, or NJ. Copper (ii) sulfate can be found on the following state right to know lists: California, (listed as Copper compounds, n.o.s.), Pennsylvania, (listed as Copper compounds, n.o.s.).
California Prop 65	WARNING: This product contains Sulfuric acid, listed as 'Strong inorganic acid mists contain', a chemical known to the state of California to cause cancer.
California No Significant Risk Level:	None of the chemicals in this product are listed.
European/International Regulations	

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 99-76-3: 2

CAS# 7664-93-9: 2

CAS# 7732-18-5: Not available

CAS# 7758-99-8: 2

Canada

CAS# 99-76-3 is listed on Canada's DSL List

CAS# 7664-93-9 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not available

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 99-76-3 is not listed on Canada's Ingredient Disclosure List.

CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7758-99-8 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: 4/02/1998

Revision #4 Date 3/16/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.