

Material Safety Data Sheet

Hazard Rating:	NFPA	CODE TRANSLATION
Health:	2	0 = Minimal Hazard
Flammability:	0	1 = Slight Hazard
Reactivity:	1	2 = Moderate Hazard
Special:		3 = Severe Hazard
		4 = Extreme Hazard

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SECTION I: IDENTIFICATION

Effective Date: 6/20/05

Revised: N.A.

Name and Address:

Phone:

Emergency Phone: CHEMTREC (800) 424-9300

ProAsys
318 Hendel Street
Shillington, PA 19607

Chemical Name: SEE SECTION II

Formula: N.A.

Synonyms: Copper Sulfate Pentahydrate Blend

Chemical Family: COOLING WATER BIOCIDES

D.O.T. Shipping Name: CORROSIVE LIQUID, ACIDIC INORGANIC, N.O.S. (Contains Cupric Sulfate), MARINE POLLUTANT

D.O.T. Hazard Class: 8

ID No.: UN-3264

Packing Group: PG-III

SECTION II: INGREDIENTS

A. Hazardous Ingredients	CAS NO.	%	TLV
COPPER SULFATE PENTAHYDRATE	7758-99-8	18.25-21.75	1 mg/m ³
B. Other Ingredients		%*	TLV

SECTION III: PHYSICAL PROPERTIES

Boiling Point: 220°F

Specific Gravity: 1.19-1.21

Percent Volatile (volume): >75%

pH (undiluted): 1.0

Vapor Pressure (mm Hg): 0.1@68°F

Solubility in Water: COMPLETE

Vapor Density (air=1): 1.0 Est.

Est. Evaporation Rate (water=1): N/A

Appearance and Odor: CLEAR BLUE LIQUID, MINIMAL ODOR

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used): NON-FLAMMABLE (AQUEOUS SYSTEM)

Flammable Limits in Air (lower): N.A.

(upper): N.A.

Extinguishing Media: IF WATER IS EVAPORATED, REMAINING MATERIAL CAN BURN. USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Special Fire Fighting Procedures: SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE AVAILABLE FOR FIREFIGHTERS. USE WATER SPRAY TO COOL CONTAINERS. MINIMIZE EXPOSURE. **DO NOT** BREATHE FUMES. CONTAIN RUNOFF.

Unusual Fire or Explosion Hazards: MAY REACT WITH CARBON METALS TO PRODUCE HYDROGEN GAS, WHICH CAN FORM AN EXPLOSIVE MIXTURE.

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SECTION V: HEALTH HAZARD DATA

A. TLV and Source: NONE ESTABLISHED. REFER TO SECTION II.

B. Effects of a Single Overexposure by:

1. Ingestion: CORROSIVE. HARMFUL IF SWALLOWED. MAY CAUSE SEVERE IRRITATION AND POSSIBLY CHEMICAL BURNS OF THE MOUTH, THROAT, ESOPHAGUS AND STOMACH.
2. Inhalation: INHALATION OF VAPOR OR MIST CAN CAUSE SEVERE IRRITATION OF NOSE, THROAT, AND LUNGS.
3. Skin Contact: CORROSIVE. CAN BE CORROSIVE TO SKIN. CAUSES BURNS.
4. Eye Contact: CORROSIVE. CONTACT WITH EYES CAUSES SEVERE IRRITATION. CAN BE CORROSIVE TO EYES. MAY CAUSE PERMANENT, IRREVERSIBLE EYE DAMAGE.

C. Effects of Repeated Overexposures: NONE KNOWN

D. Emergency and First Aid Procedures for:

1. Ingestion: GET MEDICAL ATTENTION WITH **URGENCY**. DO NOT INDUCE VOMITING. IF SWALLOWED, DRINK PROMPTLY ONE TO THREE GLASSES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
2. Inhalation: IMMEDIATELY MOVE VICTIM TO FRESH AIR. GIVE OXYGEN IF BREATHING IS DIFFICULT. IF NOT BREATHING, APPLY ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.
3. Skin Contact: IMMEDIATELY GET UNDER A SAFETY SHOWER. WASH WITH PLENTY OF WATER FOR 20 MINUTES. IMMEDIATELY REMOVE CONTAMINATED CLOTHING AND HAVE IT COMMERCIALY LAUNDERED BEFORE REUSE. DISCARD CONTAMINATED SHOES, BELTS, AND OTHER ARTICLES MADE OF LEATHER. GET MEDICAL ATTENTION.
4. Eye Contact: IMMEDIATELY FLUSH WITH CLEAR WATER FOR AT LEAST 20 MINUTES AND THEN GET IMMEDIATE MEDICAL ATTENTION, PREFERABLY BY AN EYE SPECIALIST.

E. Notes to Physician: MATERIAL IS CORROSIVE. IT MAY NOT BE ADVISABLE TO INDUCE VOMITING. POSSIBLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE.

SECTION VI: PERSONNEL PROTECTION DATA

Respiratory Protection: NOT NORMALLY REQUIRED UNLESS PRODUCT IS OPENLY HANDLED IN CONFINED AREAS WHERE HIGH CONCENTRATIONS OF VAPOR COULD OCCUR. AVOID MIST. WEAR NIOSH APPROVED RESPIRATOR EQUIPPED WITH ORGANIC VAPOR CARTRIDGES AND DUST AND MIST FILTERS.

Ventilation: PROVIDE LOCAL EXHAUST. NORMAL (MECHANICAL) ROOM VENTILATION IS SATISFACTORY FOR MAINTAINING CONCENTRATIONS BELOW THE MAXIMUM TLV LEVEL IN MOST SITUATIONS WHERE THE MATERIAL IS HANDLED NORMALLY.

Protective Gloves: IMPERVIOUS RUBBER.

Eye Protection: CHEMICAL GOGGLES WHICH ARE DUST AND SPLASH PROOF OR FACE SHIELD.

Other Protective Equipment: RUBBER BOOTS AND CHEMICAL APRON. EYEWASH STATION AND SAFETY SHOWER IN AREA OF USE.

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SECTION VII: REACTIVITY DATA

- A. Product Stability: STABLE
Conditions to Avoid: HIGH TEMPERATURES (>200°F) WHICH WILL EVAPORATE WATER. MIXING WITH STRONG REDUCING AGENTS AND BASES.
- B. Incompatibility: AVOID CONTACT WITH STRONG REDUCING AGENTS AND BASES.
- C. Hazardous Combustion or Decomposition Products: THERMAL DECOMPOSITION GENERATES TOXIC FUMES OF SULFUR OXIDES.
- D. Hazardous Polymerization: WILL NOT OCCUR

SECTION VIII: ENVIRONMENTAL DATA

- A. Spill or Leak Procedures: WEAR PROTECTIVE CLOTHING (SEE SECTION VI). CAUTION: TOXIC TO FISH. KEEP SPILLS AND UNTREATED SOLUTION RUNOFF OUT OF MUNICIPAL SEWERS, GROUNDWATER, AND OPEN BODIES OF WATER. DIKE AND ABSORB SPILLS IMMEDIATELY WITH INERT MATERIALS (e.g. DRY CLAY, SAND, EARTH OR VERMICULITE). TRANSFER ALL CONTAMINATED SOLIDS INTO SUITABLE CORROSION PROOF WASTE CONTAINER. KEEP CONTAINER IN DRY, VENTILATED AREA AND DISPOSE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. AFTER REMOVING DIKED MATERIAL, DECONTAMINATE SPILL AREA BY APPLYING TWO (2) VOLUMES OF A AQUEOUS SOLUTION OF SODIUM BICARBONATE. WAIT APPROXIMATELY 30 MINUTES AND FLUSH THE TREATED SOLUTION INTO A CHEMICAL SEWER.
- B. Waste Disposal: MATERIAL IS CORROSIVE. FOR DISCARD, THIS MATERIAL WOULD BE CLASSIFIED AS A HAZARDOUS WASTE AND CONTROLLED BY EPA RESOURCE CONSERVATION AND RECOVERY ACT; RCRA NO. D002; REPORTABLE QUANTITY, 5.1 US GALLONS. DISPOSE IN ACCORDANCE WITH FEDERAL, STATE OR LOCAL REGULATIONS.
- C. Other Environmental Data: THE ACTIVE INGREDIENTS (a.i.) IN THIS PRODUCT ARE TOXIC TO FISH AND AQUATIC LIFE. THEREFORE, ALL POSSIBLE PRECAUTIONS MUST BE TAKEN TO PREVENT CONTAMINATION OF NATURAL WATERWAYS. AQUATIC AND RELATED DATA INCLUDE:

<u>Species</u>	<u>mg/l as a.i.</u>
RAINBOW TROUT, 96 hr. LC ₅₀	0.19 mg/l
BLUE GILL SUNFISH, 96 hr. LC ₅₀	0.28 mg/l
ALGAL (SELENASTRUM), EC ₅₀	0.018 mg/l
DAPHNIA (Water Flea), 48 hr. EC ₅₀	0.16 mg/l
ACTIVATED SLUDGE RESPIRATION, EC ₅₀	4.5 mg/l

SECTION IX: SPECIAL PRECAUTIONS

- A. Handling and Storage: HANDLE AND OPEN CONTAINER WITH CARE. CAUTION: CONTENTS OF CONTAINER MAY BE UNDER PRESSURE. DO NOT BREATHE VAPOR OR MIST EMITTED. STORE IN A COOL DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE AND FOLLOW ALL RECOMMENDED SAFETY PRECAUTIONS WHEN HANDLING THE MATERIAL. KEEP FROM FREEZING AND TEMPERATURES GREATER THAN 140°F (60°C).
- B. Other Precautions: THIS PRODUCT HAS BEEN DESIGNED AS AN ANTIMICROBIAL AGENT FOR USE IN SPECIFIC TYPES OF COOLING WATER CIRCUITS AND SHOULD ONLY BE USED IN

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ACCORDANCE WITH THE INSTRUCTIONS STATED ON THE PRODUCT LABEL AND PROVIDED BY THE TECHNICAL REPRESENTATIVE SERVICING THE FACILITY. IT MAY NOT BE USED FOR THE TREATMENT OF POTABLE WATER.

The data contained in this Material Safety Data Sheet has been prepared based upon an evaluation of the ingredients contained in the product, their concentration in the product and potential interactions. The information is offered in good faith and is believed to be accurate. It is furnished to the customer who is urged to study it carefully to become aware of hazards, if any, in the storage, handling, use and disposal of the product; and to insure his employees are properly informed and advised of all safety precautions required. The information is furnished to comply with the "Occupational Safety and Health Act" (OSHA) hazard communication regulation [Rule 29 CFR 1910.1220 (g) (2)]. Use or dissemination of all or part of this information for any other purpose is not permitted.