

# Material Safety Data Sheet

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DATE PREPARED: 10/01/2007  
PERSON RESPONSIBLE FOR PREPARATION  
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## SECTION 1 - IDENTITY

COMMON NAME: PRO-CLEAN Root Destroyer      CHEMICAL FAMILY: Copper/Cupric Salt  
CHEMICAL NAME: Copper Sulfate Pentahydrate  
FORMULA: ZZ1007

## SECTION 2 - HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS COMPONENT(S)	%	THRESHOLD LIMIT VALUE
Section 313 Supplier Notification: This product contains the following toxic chemical subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:		
CAS # 7758-99-8 Copper (ii) Sulfate Pentahydrate	99.0	(from NIOSH 1990 – Pocket Guide –RELs): As copper: 1mg/m <sup>3</sup> TWA (dusts & mists) ; 0.1 mg/m <sup>3</sup> TWA (fumes) There is No ACGIH, NIOSH, or OSHA exposure guidelines listed for this product's components.

## SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

BOILING POINT: N/A	SPECIFIC GRAVITY (H <sub>2</sub> O=1): 2.28
VAPOR PRESSURE (mm Hg): N/A	SOFTENING POINT: N/A
VAPOR DENSITY (AIR = 1): N/A	EVAPORATION RATE (Butyl Acetate=1): N/A
SOLUBILITY IN WATER: Appreciable	REACTIVITY IN WATER: N/A

APPEARANCE AND ODOR: Blue crystals or granules/None

FLASH POINT: N/A LEL: N/A UEL: N/A

SPECIAL FIRE FIGHTING PROCEDURES:

**GENERAL FIRE HAZARDS:** This material will not burn.

**HAZARDOUS COMBUSTION PRODUCTS:** Combustion may produce irritating copper fumes and toxic gaseous oxides (sulfur oxides).

**EXTINGUISHING MEDIA:** Use methods for the surrounding fire.

**FIRE FIGHTING EQUIPMENT/INSTRUCTIONS:** Firefighters should wear full protective clothing

including self-contained breathing apparatus.

**NFPA Rating:** Fire: 0 Health: 2 Reactivity: 1 Other: 0

**HMIS Rating:** Fire: 0 Health: 2 Reactivity: 1 Other: Personal Protection : Gloves, Goggles

### SECTION 4 - PHYSICAL HAZARDS

STABILITY  UNSTABLE                      CONDITIONS TO AVOID: None Identified

UNSTABLE  STABLE

**INCOMPATIBILITY (MATERIALS TO AVOID):** Incompatible with acetylene. Copper salts may react to form explosive acetylides. Copper sulfate can cause ignition upon contact with hydroxylamine due to the release of heat. Reducing agents react vigorously with copper salts.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Sulfur Oxides.

HAZARDOUS  MAY OCCUR                      CONDITIONS TO AVOID: None Known

POLYMERIZATION  WILL NOT OCCUR

### SECTION 5 - HEALTH HAZARDS

**ROUTE(S) OF ENTRY:** INHALATION:  SKIN:  INGESTION:  EYES:

May cause irritation to the eyes, nose, and throat. Firefighters should wear protective equipment and clothing when fighting a fire involving this material.

**EYES:** Concentrated solutions may cause irritation of the eye tissue.

**SKIN:** May use mild to moderate irritation of the skin. \

**INGESTION:** Copper salts impart a metallic taste in the mouth. May cause gastrointestinal irritation and vomiting. This product may be fatal if swallowed.

**INHALATION:** Dusts and mists (from solutions) can cause irritation of the nose and throat. Ulceration of nasal septum is possible, but may be due to traces of sulfuric acid impurities.

**SIGNS AND SYMPTOMS OF EXPOSURE:**

- 1. ACUTE OVEREXPOSURE:** General Product/Component Information: For dusts and mists, the target organs are the respiratory system, skin, liver, and kidneys. For fumes, the target organs are the respiratory system, skin, and eyes.
- 2. Component LD50/LC50:** Copper (ii) Sulfate Pentahydrate (1:1:5) (7758-99-8) Oral, rat: LD:50 = 300 mg/kg
- 3. CHRONIC OVEREXPOSURE:** Irritation of mucous membranes, gastro-intestinal tract

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Wilson's Disease, a disease, a disease associated with the inability to remove copper from the blood, is a medical condition aggravated by exposure to this product.

LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN?	NATIONAL TOXICOLOGY PROGRAM	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	I.A.R.C. MONOGRAPHS	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	OSHA	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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**EMERGENCY AND FIRST AID PROCEDURES:**

- 1. INHALATION:** If symptoms are experienced, remove sources of contamination or move victim to fresh air. Seek medical attention if symptoms persist.
- 2. EYES:** Immediately flush eyes with water for 20 minutes. Obtain medical attention if symptoms persist.
- 3. SKIN:** Immediately flush contaminated area with water for at least 20 minutes. Seek medical attention if symptoms persist. Completely decontaminate clothing, shoes, and leather goods before reuse or discard them.
- 4. INGESTION:** If swallowed, and victim is conscious, give large amounts of water. Seek medical attention immediately. If victim has not yet done so, induce vomiting.

**Notes to Physician:** Consult the nearest Poison Control Center for all exposures except minor instances of inhalation and skin contact.

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## **SECTION 6 - SPECIAL PROTECTION INFORMATION**

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**RESPIRATORY PROTECTION (SPECIFY TYPE):** None normally required

**VENTILATION:** Use general or local exhaust ventilation to meet TLV requirements.

**LOCAL EXHAUST:** MECHANICAL (General):

**SPECIAL:** OTHER:

**PROTECTIVE GLOVES:** Impervious gloves

**EYE PROTECTION:** Wear safety glasses with side shields or chemical goggles.

**OTHER PROTECTIVE EQUIPMENT:** Coveralls, boots, and/or other resistant protective clothing. Have safety shower and eyewash fountain readily available.

**General:** Use proper hygiene practices when handling this material, including changing and laundering work clothing after each use.

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## **SECTION 7 - SPECIAL PRECAUTION AND SPILL/LEAK PROCEDURES**

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**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Store in a cool dry place. Store in suitable labeled container.

**OTHER PRECAUTIONS:** Avoid inhalation of dusts. Use in designed areas with adequate ventilation. Keep containers closed and dry. Keep out of reach of children.

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Containment Procedure: Stop or reduce leak if safe to do so. Clean-up Procedures: Prevent material from entering sewers and waterways. Put material in suitable, covered labeled containers. Evacuation Procedures: Keep unnecessary personal away. Close off area. Special Instructions: Wear adequate personal protective equipment. Avoid inhalation of dusts. Ventilate the area.

**WASTE DISPOSAL METHODS:** Dispose of according to all local, state and federal laws.

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