

# COPPER TARTRATE

CTT

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Tartaric acid, copper salt	Solid powder Green to blue Odorless
Sinks and slowly mixes with water.	
Notify local health and pollution control agencies. Protect water intakes.	
<b>Fire</b>	Fire data not available.
<b>Exposure</b>	CALL FOR MEDICAL AID.  SOLID Harmful if swallowed. Irritating to skin and eyes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and induce vomiting.
<b>Water Pollution</b>	Effects of low concentrations on aquatic life are unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

### 1. CORRECTIVE RESPONSE ACTIONS

Stop discharge  
Contain  
Collection Systems: Dredge  
Cover with organic sulfur containing compounds

### 2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Not listed.  
2.2 **Formula:**  $CuC_4H_4O_6$   
2.3 **IMO/UN Designation:** Not listed  
2.4 **DOT ID No.:** 9111  
2.5 **CAS Registry No.:** 815-82-7  
2.6 **NAERG Guide No.:** 171  
2.7 **Standard Industrial Trade Classification:** 51391

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Currently not available  
3.2 **Symptoms Following Exposure:** INHALATION: Inhalation of dust may cause nasal congestion. EYES: May cause conjunctivitis and edema of eyelids. SKIN: May irritate skin. INGESTION: Vomiting is caused by local irritant and astringent action of ionic copper on stomach and bowel.  
3.3 **Treatment of Exposure:** Call a physician. EYES: flush with water. SKIN: Wash with water. INGESTION: Induce vomiting and administer gastric lavage. Give saline cathartic.  
3.4 **TLV-TWA:** Not listed.  
3.5 **TLV-STEL:** Not listed.  
3.6 **TLV-Ceiling:** Not listed.  
3.7 **Toxicity by Ingestion:** Currently not available  
3.8 **Toxicity by Inhalation:** Currently not available.  
3.9 **Chronic Toxicity:** Copper poisoning in animals leads to injury of liver, kidneys, and spleen.  
3.10 **Vapor (Gas) Irritant Characteristics:** Not pertinent  
3.11 **Liquid or Solid Characteristics:** Currently not available  
3.12 **Odor Threshold:** Odorless  
3.13 **IDLH Value:** 100 mg Cu/m<sup>3</sup> (dust, mist, fumes)  
3.14 **OSHA PEL-TWA:** 0.1 mg/m<sup>3</sup> as copper  
3.15 **OSHA PEL-STEL:** Not listed.  
3.16 **OSHA PEL-Ceiling:** Not listed.  
3.17 **EPA AEG1:** Not listed

### 4. FIRE HAZARDS

- 4.1 **Flash Point:** Currently not available  
4.2 **Flammable Limits in Air:** Currently not available  
4.3 **Fire Extinguishing Agents:** Currently not available  
4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available  
4.5 **Special Hazards of Combustion Products:** Currently not available  
4.6 **Behavior in Fire:** Currently not available  
4.7 **Auto Ignition Temperature:** Currently not available  
4.8 **Electrical Hazards:** Currently not available  
4.9 **Burning Rate:** Currently not available  
4.10 **Adiabatic Flame Temperature:** Currently not available  
4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent  
4.12 **Flame Temperature:** Currently not available  
4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent  
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

### 5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** Currently not available  
5.2 **Reactivity with Common Materials:** Currently not available  
5.3 **Stability During Transport:** Currently not available  
5.4 **Neutralizing Agents for Acids and Caustics:** Currently not available  
5.5 **Polymerization:** Currently not available  
5.6 **Inhibitor of Polymerization:** Currently not available

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**  
The toxicity varies significantly, not only with species, but also with physical and chemical characteristics of the water. Concentrates from 0.015 to 3.0 mg/l cu is toxic to many fish, crustacean, mollusks, insects, and plankton.  
6.2 **Waterfowl Toxicity:** Currently not available  
6.3 **Biological Oxygen Demand (BOD):** Currently not available  
6.4 **Food Chain Concentration Potential:** Currently not available  
6.5 **GESAMP Hazard Profile:**  
Bioaccumulation: 0  
Damage to living resources: -  
Human Oral hazard: 0  
Human Contact hazard: 0  
Reduction of amenities: 0

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available  
7.2 **Storage Temperature:** Currently not available  
7.3 **Inert Atmosphere:** Currently not available  
7.4 **Venting:** Currently not available  
7.5 **IMO Pollution Category:** Currently not available  
7.6 **Ship Type:** Currently not available  
7.7 **Barge Hull Type:** Currently not available

### 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed  
8.2 **49 CFR Class:** Not pertinent  
8.3 **49 CFR Package Group:** Not listed.  
8.4 **Marine Pollutant:** No  
8.5 **NFPA Hazard Classification:** Not listed  
8.6 **EPA Reportable Quantity:** 100 pounds  
8.7 **EPA Pollution Category:** B  
8.8 **RCRA Waste Number:** Not listed  
8.9 **EPA FWPCA List:** Yes

### 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid  
9.2 **Molecular Weight:** 211.61; 265.66 trihydrate  
9.3 **Boiling Point at 1 atm:** Trihydrate decomposes on heating  
9.4 **Freezing Point:** Currently not available  
9.5 **Critical Temperature:** Currently not available  
9.6 **Critical Pressure:** Currently not available  
9.7 **Specific Gravity:** >1  
9.8 **Liquid Surface Tension:** Not pertinent  
9.9 **Liquid Water Interfacial Tension:** Not pertinent  
9.10 **Vapor (Gas) Specific Gravity:** Not pertinent  
9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent  
9.12 **Latent Heat of Vaporization:** Currently not available  
9.13 **Heat of Combustion:** Currently not available  
9.14 **Heat of Decomposition:** Currently not available  
9.15 **Heat of Solution:** Currently not available  
9.16 **Heat of Polymerization:** Currently not available  
9.17 **Heat of Fusion:** Currently not available  
9.18 **Limiting Value:** Currently not available  
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
60	0.021		N		N		N
70	0.030		O		O		O
80	0.040		T		T		T
90	0.050		P		P		P
100	0.059		E		E		E
110	0.069		R		R		R
120	0.078		T		T		T
130	0.088		I		I		I
140	0.097		N		N		N
150	0.107		E		E		E
160	0.116		N		N		N
170	0.126		E		E		E
180	0.135		N		N		N