

**Section VIII Protective Equipment to Be Used**

<b>VENTILATION REQUIREMENTS</b> Provide sufficient mechanical and/or local exhaust to maintain exposure below the Threshold Limit Value.
<b>RESPIRATORY PROTECTION</b> In the case where overexposure may exist, the use of NIOSH-MSHA dust and mist respirator (such as NIOSH-MSHA TC-21C-287) or an air supplied respirator is advised. Engineering or administrative controls should be implemented to control dust.
<b>EYE</b> Face shield and/or goggles should be worn.
<b>GLOVES</b> Rubber or plastic gloves should be worn.
<b>OTHER PROTECTIVE EQUIPMENT</b> Normal work clothing covering arms and legs and rubber apron should be worn.
<b>WORK/HYGIENIC PRACTICES</b> Wash thoroughly with soap and water after handling and before eating or smoking.

**Section IX Special Precaution and Other Comments**

Protect containers against physical damage. Store in a cool, dry area in closed containers. Segregate from acids, peroxides and all combustible, organic or easily oxidizable materials.

**DEPARTMENT OF TRANSPORTATION INFORMATION:**

Proper Shipping Name:	Potassium Permanganate
ID Number:	UN 1490
Hazard Class:	Oxidizer
Multiple Labeling Requirements:	Corrosive
Hazardous Substance Reportable Quantity:	RQ-100 lb.
Chemtrec Telephone No. (800) 424-9300	

ACRA: Oxidizers such as potassium permanganate meet the criteria of ignitable waste.

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Signature: Horst R. Adolf Date: 9 December 1986

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# MATERIAL SAFETY DATA SHEET

Name: **GERBO COPPER PRODUCTS CO.** Emergency Telephone Number: **610/337-6000**  
 Chemical Name: **COPPER (Cu)**  
 Trade Name and Synonyms:  
 E. ST. LOUIS, ILLINOIS 62202  
 Formula:

Standard Ingredients	TLV (UMS)	Airways and Respiratory	TLV (UMS)
Base Metal: <b>Cu (lubing, cathode)</b>	<b>99.9+%</b>	<b>OSHA mg/H3</b>	
Alloys		<b>ACGIH</b>	
Metallic Coatings		<b>PEL</b>	
		<b>Dust 1.0</b>	<b>1.0</b>
		<b>Fume 0.1</b>	<b>0.1</b>
Other: <b>Fair Metal Plus Coating or Core Plus Other</b>			

Physical Data	Specific Gravity (40°C)	B.P.
<b>950°C</b>	<b>8.96</b>	
<b>20 (um Hg)</b>	<b>Percent Volatile by Volume (%)</b>	
<b>16280°C</b>		
<b>Evaporation Rate</b>		
<b>N/A</b>	<b>11</b>	

Insoluble  
 Reactivity in water: **Not reactive**  
 Melting Point: **1083°C**  
 Solubility: **Insoluble**  
 Flammable Limits: **U/A**  
 Lower: **U/A**  
 Upper: **U/A**  
 Flash Point: **U/A**  
 Autoignition Temperature: **U/A**  
 Decomposition Temperature: **U/A**  
 Other: **U/A**

Section V - Health Hazard Data  
 Toxicological Data:  
 See Section 2

Effects of Overexposure:  
 Acute: **Metal fume fever. Chronic: No long-term effects reported. Symptoms: Chills, fever, aching muscles, dry mouth and throat, headache, nausea, vomiting, diarrhea. Unset may be delayed several hours.**  
 Emergency/First Aid Procedures: **Treat most urgent symptom first. In all cases, seek medical assistance. Inhalation: Remove to fresh air, give CPR, if needed. Eyes: Fragments in cornea may cause cataracts, particles must be removed. Use copious water, 15 min. Skin: Wash.**  
 Remove contaminated clothing. Ingestion: Induce vomiting, if conscious.

Section VI - Reactivity Data

Standard	Unstable	Conditions to Avoid
<b>Soluble</b>	<b>X</b>	<b>High temperatures that could result in fumes.</b>

Reactivity (Relative to Avoid): **Reacts violently with acetylene, hydrogen peroxides, gaseous chlorine, ammonia nitrate, bromates, chlorates, hydrogen sulfide, lead azide, hydrazine.**  
 Hazardous Decomposition Products: **Hydrogen nitrate, hydrazoic acid, potassium peroxide, sodium azide and sodium peroxides.**  
 Hazardous Polymerization: **May Occur**  
 Other: **Conditions to Avoid**

Section VII - Spill or Leak Procedures  
 Spills to be Treated as Hazardous Materials  
 ANY METHOD WHICH MINIMIZES DUST. Vacuuming preferred.

Waste Disposal Method:  
 If hazardous under 40 CFR, Subparts B and C, material must be treated or disposed of in a facility meeting the requirements of 40 CFR 264 and 265. If non-hazardous, material should be disposed of in a facility meeting the requirements of 40 CFR 257.

Section VIII - Special Protection Information

Respiratory Protection, Safety Type	Local Exhaust	Special
<b>NIOSH/MSHA approved respirator for toxic dust and/or fumes.</b>	<b>Yes</b>	<b>Special</b>
<b>Required</b>	<b>Yes, when appropriate</b>	<b>Other</b>

Section IX - Special Precautions  
 Precautions to be Taken in Handling and Storage:  
 Avoid storage near incompatible materials. See Section 6. Avoid conditions which create fumes or fine dusts.  
 Other Precautions:  
 Avoid inhalation or ingestion. Practice good housekeeping and personal hygiene procedures.

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