



# Safety Data Sheet

Trade name: Copper Rod


Product No: N/A

Print Date: 6/26/15

Version No: 1.0

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<b>GHS Classification</b>	Flammable Solid – Category 1; Eye Damage/Irritation – Category 2B; Respiratory Sensitizer – Category 1; Skin Sensitizer – Category 1; Germ Cell Mutagenicity – Category 2; Carcinogenicity – Category 1B; Toxic to Reproduction – Category 1A; Hazardous to the Aquatic Environment – Acute Hazard – Category 1
<b>GHS Label Elements</b>	
<b>Signal Word</b>	<b>Danger</b>
<b>Hazard Statements</b>	Flammable solid. Causes eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to respiratory system through prolonged or repeated exposure. Very toxic to aquatic life.
<b>Precautionary Statements</b>	<p><b>Prevention:</b> Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Use explosion proof electrical/ventilating/lighting equipment. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume. In case of inadequate ventilation wear respiratory protection Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment</p> <p><b>Response:</b> In case of fire: Use Class D agent to extinguish. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell. Collect spillage.</p> <p><b>Storage:</b> Store locked up</p> <p><b>Disposal:</b> Dispose of contents/container in accordance with local/regional/national/international regulations</p>

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## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

<b>Recovery and Neutralization</b>	Avoid dust formation. Collect scrap for recycling
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## Section 4: FIRST AID MEASURES

<b>Ingestion</b>	Keep affected person warm and at rest. Get immediate medical attention
<b>Skin</b>	Wash affected area with soap and water. Seek medical attention if irritation persists.
<b>Eyes</b>	Flush immediately with large amounts of water. Seek medical attention
<b>Inhalation</b>	Move affected person to fresh air. If breathing has stopped, perform artificial respiration. Get medical attention

## Section 5: FIRE FIGHTING MEASURES

<b>General Fire Hazards</b>	See Section 9 for Flammability Properties. This product does not present fire or explosion hazards as shipped.
<b>Hazardous Combustion Products</b>	Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact.
<b>Extinguishing Media</b>	Class D extinguishing agents on fines, dust, or molten metal. Use coarse water spray on chips and fines
<b>Unsuitable Extinguishing Media</b>	DO NOT use halogenated extinguishing agents on small chips or fines. DO NOT use water for fires involving molten metal. These fire extinguishing agents will react with burning material.
<b>Fire Fighting Equipment/Instructions</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and use protective gear.

## Section 6: ACCIDENTAL RELEASE MEASURES

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<b>Materials and Methods for Clean-Up</b>	If product is molten, contain the flow using dry sand or salt flux as a dam. All tools and containers which come in contact with molten metal must be preheated or specially coated and rust free. Allow the spill to cool before remelting as scrap.
<b>Emergency Measures</b>	Keep People away from and upwind of spill/leak.
<b>Personal Precautions and Protective Equipment</b>	Wear appropriate protective clothing and respiratory protection for the situation
<b>Environmental Precautions</b>	Prevent further leakage or spillage is safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system
<b>Prevention of Secondary Hazards</b>	None

## Section 7: HANDLING AND STORAGE

<b>Handling Procedures</b>	Avoid Contact with skin, eyes, and clothing, Wear PPE. Avoid dust formation. Keep material dry. Avoid contact with sharp edges or heated material
<b>Storage Procedures</b>	Keep container tightly closed in a dry and well-ventilated place
<b>Incompatibilities</b>	Acids. Alkalis. Water. Halogenated compounds. Metal Oxides

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Component Exposure Limits</b>	<b>Copper (7440-50-8)</b> ACGIH: 0.2 mg/m <sup>3</sup> TWA (fume) OSHA: 0.1 mg/m <sup>3</sup> TWA (dust, fume, mist, as Cu) NIOSH: 1 mg/m <sup>3</sup> TWA (dust and mist); 0.1 mg/m <sup>3</sup> TWA (fume)
<b>Engineering Measures</b>	Where feasible, enclose processes to prevent dust dispersion into the work area. Provide local exhaust when possible, and general ventilation as necessary, to keep airborne concentrations below exposure limits and as low as possible

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<b>Personal Protection</b>	
<b>PPE Respiratory</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>PPE Hands</b>	Use impervious gloves such as neoprene, nitrile, or rubber for hand protection.
<b>PPE Eyes</b>	Wear safety glasses with side shields and/or goggles as necessary to prevent dust from entering eyes
<b>PPE Skin and Body</b>	Use body protection appropriate for task
<b>Hygiene Measures</b>	Do not breathe vapors/dust. When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food and drink.

## Section 9: Chemical Properties

Appearance: Reddish-Brown Metal

Odor: None

Physical State: Solid

pH: NA

Vapor Pressure: ND

Vapor Density: ND

Boiling Point: ND

Melting Point: 1051-1083 (°C) / 1924-1981 (°F)

Solubility (H2O): Insoluble

Specific Gravity: ~8.94

Evaporation Rate: ND

VOC: ND

Octanol/H2O Coeff.: ND

Flash Point: NA Flash Point Method: NA

Upper Flammability Limit (UFL): NA

Lower Flammability Limit (LFL): NA

Burning Rate: NA

Auto Ignition: NA

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## Section 10: CHEMICAL STABILITY & REACTIVITY INFORMATION

<b>Chemical Stability</b>	Stable under recommend storage conditions
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## Section 11: TOXICOLOGICAL INFORMATION

<b>Skin Contact</b>	Contact with dust can cause mechanical irritation or drying of the skin. Contact with oils from processing may cause irritation. Prolonged skin contact may defat the skin and produce dermatitis. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons
<b>Eye Contact</b>	Dust contact with the eyes can lead to mechanical irritation.
<b>Ingestion</b>	May be harmful if swallowed. May cause additional affects as listed under "Inhalation"
<b>Inhalation</b>	May be harmful if inhaled. Inhalation of dust in high concentration may cause irritation of respiratory system
<b>Respiratory</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
<b>Generative Cell Mutagenicity</b>	Suspected of causing genetic defects
<b>Reproductive Toxicity</b>	Lead may damage the reproductive system and cause developmental damage.

## Section 12: ECOTOXICITY

Copper Test & Species

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96 Hr LC50 Pimephales promelas	0.0068 - 0.0156 mg/L
96 Hr LC50 Oncorhynchus mykiss	0.052 mg/L [flowthrough]
96 Hr LC50 Lepomis macrochirus	1.25 mg/L [static]
96 Hr LC50 Cyprinus carpio	0.3 mg/L [semistatic]
96 Hr LC50 Poecilia reticulata	0.112 mg/L [flowthrough]

<b>Persistence/Degradability</b>	0.0068 - 0.0156 mg/L Metal powders may cause ecological damage through silting or sedimentation effect in water depriving organisms of habitat and mobility, and/or fouling of gills, lungs and skin thus limiting oxygen uptake.
<b>Bioaccumulation</b>	Metal powders in water or soil may form metal oxides or other metal compounds that could become bioavailable and harm aquatic or terrestrial organisms
<b>Mobility in Soil</b>	Metal powder would be relatively immobile in soils but some metal compounds may be transported with ground water.

## Section 13: DISPOSAL CONSIDERATIONS

<b>Waste Disposal Instructions</b>	See Section 7 for handling procedures. See section 8 for PPE recommendations
<b>Disposal of Contaminated containers or Packaging</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.

## Section 14: Transportation Information

<b>Component Marine Pollutants</b>	Copper - DOT regulated severe marine pollutant (powder)
<b>DOT Information</b>	Not Regulated
<b>IATA Information</b>	Not Regulated
<b>ICAO Information</b>	Not Regulated
<b>IMDG Information</b>	Not Regulated

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## Section 15: REGULATORY INFORMATION

<b>SARA 313:</b>	1.0% de minimis concentration
<b>CERCLA:</b>	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)

## Section 16: OTHER INFORMATION

### Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average