



NSRW, Inc.
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Material Safety Data Sheet
May be used to comply
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard Must be
Consulted for Specific Requirements.

U.S. Department of Labor
Occupational Safety and Health Admin.
(Non-Mandatory Form)
Form Approved
OMB No. 1210-0072

ALLOY C-18150

IDENTITY (As Used on Label) Chrome Copper R.W.M.A. Class #2 (C-18150)	Note: Blank Spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
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SECTION I

Manufacturer's Representative Southern Copper & Supply Co., Inc.	Emergency Telephone Number LOCAL 911 (Emergency)
Address (Number, Street, City, State & Zip Code) 875 Yeager Parkway, Pelham, AL 35124	Telephone Number for Information (205) 664-9440
Date Prepared January 2, 2014	Signature of Preparer (Optional)

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))	1985	1985-1986		Other Limits		% (Optional)
	OSHA PEL	OSHA PEL	AGGIH TLV	Recommended		
	(mg/m ³)	(mg/m ³)				
	TWA	STEL				
Copper						99.14
Fume	0.1	0.2	NA	NA		
Dust & Mists	1	1	2	NA		
Chromium - Metal & Insoluble Salts	1	0.5	NA	NA		0.85
Silicon (Total Dust < 1% Quartz)	NA	10	20	5	(Respirable Dust)	0.01
Zirconium	5	5	10	NA		<1

SECTION III - Physical/Chemical Characteristics

Boiling Point - Copper	2300 C	Specific Gravity (H ₂ O - 1) - Copper	8.92
Vapor Pressure (mm Hg) - @ 20 C	N/A	Melting Point - Copper	1083 C
Vapor Density (AIR - 1)	N/A	Evaporation Rate - (Butyl Acetate - 1)	N/A

Solubility in Water - Insoluble

Appearance and Odor - Yellowish-red metal; no odor

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used) - Not Applicable | Flammable Limits - Not Applicable | LEL - N/A | UEL - N/A

Extinguishing Media - Use no water; use powdered extinguishing agents: graphite, dolomite, sodium chloride.

Special Fire Fighting Procedures - Powder extinguisher agents should be applied gently on metal fires to avoid breaking any crust which may have formed over metal.

Unusual Fire and Explosion Hazards - Dangerous in dispersed form when exposed to flame or spark. Powdered metal may ignite spontaneously.

SECTION V - Health Hazard Data

Routes of Entry: (Primary) | Inhalation? - of dusts, fumes, mists | Skin: - skin contact | Ingestion?

Effects of Overexposure:

Copper

Acute overexposure by inhalation may result in irritation of upper respiratory tract, metal fume fever (Flu-like symptoms including fever, chills, fatigue, aches, nausea); metallic taste in mouth; skin or hair discoloration.

Ingestion may cause acute gastrointestinal irritation with possible nausea, vomiting, diarrhea, gastritis.

Hemolytic anemia from copper-tubing hemodialysis equipment.

Chronic overexposure may result in skin, hair, and gum discoloration; one study of workers grinding or sieving copper dusts showed symptoms of copper poisoning with effects on the blood, liver, lungs and gastrointestinal tract.

Chromium

Toxicity to chromium is dependent upon its valence state (2+, 3+, 6+) and, for chromium compounds, its solubility.

Inhalation of chromium fumes and dusts can result in perforations of the nasal septum, irritation of mucous membranes and the upper respiratory tract, sensitization of the respiratory tract, respiratory tract changes including pulmonary cancers, and inflammation of the larynx and liver.

Contact with the skin may cause allergic reactions and rashes. Penetrating ulcers on hands and forearms may result.

Ingestion of Cr 6+ may cause intense gastrointestinal irritation with violent epigastric pain, nausea, vomiting, severe diarrhea, hemorrhage, circulatory collapse, unconsciousness, death.

Silicon

Elemental silicon seems to be inert material, both chemically and biologically. It is classed as nuisance dust. Crystalline formation of the metal could change toxicological properties.

Carcinogenicity: NIP? - Yes, Chromium | IARC Monographs? - Yes, Chromium | OSHA Regulated? - NO

Medical Conditions Generally Aggravated by Exposure: Persons with Wilson's disease, G6PD deficiency, chronic respiratory problems, chronic skin problems, sensitized individuals.

Emergency and First Aid Procedures

Inhalation: Remove to fresh air. Establish respiration. Seek medical attention.

Ingestion: Dilute with water, induce vomiting, if conscious. Seek medical attention.

Eye: Form fumes and mists, flush with large amounts of water. Seek medical attention. For dust particles in eye, have trained medical personnel remove the foreign body.

Skin: Wash with soap and water. Seek medical attention for sensitization

SECTION VI - Reactivity Data

Stability	Unstable		Conditions to Avoid: In moist air, copper gradually becomes coated with green basic carbonate.
	Stable	X	

Incompatibility (Materials to Avoid)

Copper reacts violently with sodium azide. Avoid contact of powdered metal with oxidizers.

Hazardous Decomposition or Byproducts: No Data.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

SECTION VII - Precautions for Safe Handling and use

Steps to Be Taken in Case Material Is Released or Spilled

Not Applicable

Waste Disposal Method - Dispose of waste in accordance with Federal and State Regulations.

Precautions to be Taken in Handling and Storing - Avoid contact of metal with incompatible material (See Section V).

Other Precautions - None

SECTION VIII - Control Measures

Ventilation	Local Exhaust: As required to maintain dust and fumes below exposure limits.	Special: None
	Mechanical (General): As required to maintain dust and fumes below exposure limits	Other: None
Protective Gloves: Hand Shields for Welding.		Eye Protection: Shade goggles for welding; Impact resistant goggles for machining.
Other Protective Clothing or Equipment: None		
Work/Hygienic Practices: Good housekeeping practices should be maintained at all times in the work area.		

Abbreviations:

N/a - Not Applicable; TWA - Time Weighted Average; STEL - Short Term Exposure Limit