

Material Safety Data Sheet

SECTION I

PRODUCT NAME OR NUMBER (AS IT APPEARS ON LABEL):

AR 147, AR 148, AR 149
Copper Pin

MANUFACTURER: Alpha Resources, Inc. TELEPHONE: 269-465-5559
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Stevensville, MI 49127

MANUFACTURER'S DUNNS NO. 08 383 8045

HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD
CLASSES, HAZARD ID NO:

Copper

CHEMICAL FAMILY: Metal

FORMULA: Cu

SECTION II - INGREDIENTS (LIST ALL INGREDIENTS)

CAS REGISTRY NO.	%W	CHEMICAL NAMES	LISTED AS A CARCINOGEN IN NTP, IARC OR OSHA 1910(Z) SPECIFY
7440-50-8	>99	Copper	no

SECTION III - PHYSICAL DATA

Boiling point: 2324 C SPECIFIC GRAVITY = 8.92
(WATER = 1)

% Volatile by volume: nil

Vapor pressure: 1 mm hg @ 887 Deg. C

Percent solid(s) by weight % = 100

Vapor density (air = 1): N/A

Evaporation rate: N/A

Solubility in water: insoluble pH N/A

Melting point: 1083 C

Material is Solid

Appearance and odor: copper colored metal

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash point: N/A

Flammable limits: LEL: N/A

UEL: N/A

Extinguishing media: Powdered dolomite, sodium chloride or graphite

Special fire fighting procedures: fine copper powder is a moderate fire hazard. For copper powder fires do not use water.

Unusual fire and explosion hazards: copper reacts violently with C₂H₂, NH₄NO₃, Bromates, Chlorates, Iodates, Cl₂, ClF₃, (Cl₂+OF₂), ethylene oxide, F₂, H₂O₂, Hydrazine mononitrate, Hydrazoic acid, H₂S, Pb(N₃)₂, K₂O₂, NaN₃, Na₂O₂.

SECTION V HEALTH HAZARD DATA

Threshold Limit Value: Fume: OSHA PEL 0.1 mg/m³, ACGIH TLV 0.2mg/m³, ACGIH STEL 2.0 mg/m³. Dust: OSHA PEL 1.0, ACGIH TLV 1.0 mg/m³.

Acute: metal fume fever

Chronic: no long term effects reported

Effects of overexposure: Chills, fever, aching muscles, dry mouth & throat, headache, nausea, vomiting and diarrhea.

Primary routes of entry: Inhalation

Emergency and first aid procedures: seek medical assistance for further treatment.

Eye contact - fragment in cornea may cause cataracts. Remove fragment and flush eyes with water.

Skin contact - may irritate skin. Wash skin with fresh water. Remove contaminated clothing and wash before reuse.

Inhalation - Remove to fresh air and administer artificial respiration.

Ingestion - may be moderately irritating to stomach lining. Induce vomiting if conscious.

Medical conditions aggravated by exposure: Wilson's disease

SECTION VI REACTIVITY DATA

Stability: Stable

Conditions to avoid: High temperatures may release toxic metal fumes

Incompatibility: (material to avoid) 1-Bromo 2-propyne. C₂H₂, NH₄NO₃, Bromates, Chlorates, Iodates, Cl₂, ClF₃, (Cl₂+OF₂), ethylene oxide, F₂, H₂O₂, Hydrazine mononitrate, Hydrazoic acid, H₂S, Pb(N₃)₂, K₂O₂, NaN₃, Na₂O₂.

Hazardous decomposition products: Toxic metal fumes

Hazardous polymerizations: Will not occur

Conditions to avoid: N/A

SECTION VII SPILL OR LEAK PROCEDURE

Steps to be taken in case material is released or spilled: If material is molten, allow to cool and solidify. Clean up using method which minimizes the generation of copper dust.

Waste disposal: recycle or dispose of scrap -
Comply with state, federal, and local regulations.

Reportable quantities in lbs.:

CERCLA N/A SARA N/A OTHER N/A

RCRA hazardous waste number(s): N/A

Volatile organic compounds (VOC) (as packaged minus water).

Theoretical (lbs/gal): N/A Analytical (lbs/gal): N/A

SECTION VIII SPECIAL PROTECTION

Eye protection: safety glasses is particles become airborne

Skin protection: none required

Respiratory protection: NIOSH/MSHA approved respirator when toxic dust and/or fumes are present

Practice good housekeeping and personal hygiene procedures

Ventilation Local Exhaust (specify rate): Local exhaust if toxic fumes are present

Special: N/A

Requirements Mechanical (General) (Specify rate): N/A

Other: N/A

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storing and/or other precautions:

Avoid storage near incompatible materials (see above). Also avoid conditions which create toxic copper fumes or dust.

SUPPLEMENTAL INFORMATION

The data and information as stated was furnished by the manufacturer/vendor &/or supplier of this product. Alpha Resources, Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.

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Prepared by: Scot Burns