



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: COPPER METAL (POWDER)

SDS Number: SDS-7140

Revised Date: 30 MAY 2018

Product : INDUSTRIAL USE - COPPER ALLOY (Cu)

MANUFACTURER:

In America:

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2. HAZARDS IDENTIFICATION

GHS:



Signal Word - Danger

Hazard statement(s)

H228 Flammable solid
 H400 Very toxic to aquatic life
 H412 Harmful to aquatic life with long lasting effects

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
 P240 Ground/bond container and receiving equipment
 P241 Use explosion-proof electrical/ventilating/lighting/ equipment
 P261 Avoid breathing dust/fume/gas/mist/vapors/spray
 P270 Do not eat, drink or smoke when using this product
 P273 Avoid release to the environment
 P280 Wear protective gloves/protective clothing/eye protection/face protection
 P362 +P364 Take off contaminated clothing and wash before reuse
 P301 + P314 IF SWALLOWED: Get medical advice/attention if you feel unwell
 P302 +P352 IF ON SKIN: Wash with plenty of soap and water
 P304 + 341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305 + 351 IF IN EYES: Rinse continuously with water for several minutes (15 mins)

Classification:

Flammable solids- Category 1

Hazardous to the aquatic environment, acute hazard- Category 1

Hazardous to the aquatic environment, chronic, long-term hazard- Category 3

PRIMARY ROUTES OF ENTRY:

▲Eye ▲Inhalation ▲Skin ▲Ingestion

CARCINOGEN LISTED IN:

NTP IARC OSHA ▲Not Listed

POTENTIAL HEALTH EFFECTS:

Eye Contact: Contact with fume from molten metal may cause irritation. Severe eye damage may result from hot molten metal being splashed into the eyes. Wear safety glasses and face shield when working with molten metal. Dusts are irritating to eyes.

Ingestion: May be harmful or cause irritation..

Inhalation: Inhalation of fume or dust may cause local irritation to the respiratory system. May be harmful.

Skin Contact: May cause skin irritation.

Chronic: COPPER: Overexposure to fumes may cause metal fume fever (chills, muscle aches, nausea,

fever, dry throat, cough weakness, lassitude); metallic or sweet taste; discoloration of skin and hair. Tissue damage of mucous membranes may follow chronic dust exposure

Target organs: kidneys/liver/lungs



WARNING: This product can expose you to chemicals including [trace amounts of lead] which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

NOTE: The Indium Corporation does not recommend, manufacturer, market or endorse any of its products for human consumption.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry/ #EINECS#	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³	
COPPER (Cu)	100	7440-50-8/231-159-6	(US)	0.1 (fume) 1(dust)	0.2 (fume)	-
			(EU)	-	0.2 (fume)	-
			(Singapore)	0.2(fume)	1(dust)	-
			(Mexico)	-	0.2	2
			(Canada)	N.E.	0.2 (fume)	0.6 (fume)

IDLH = 100 mg/m³

N.E. = Not established EU = European Union Occupational Exposure Limits

4. FIRST AID MEASURES

Eye Contact: Hold eyelids apart and flush eyes with plenty of tepid water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion: Do not induce vomiting. NEVER give anything by mouth to an unconscious person. Seek medical attention immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

5. FIRE FIGHTING MEASURES

Flash Point: No data available **Method:** Not established.

Auto-ignition Temperature: Not applicable.

Flammable Limits: Limits not established. Massive metal is not flammable; however dust or powder may

ignite.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Use water-spray, alcohol resistant foam, dry chemical or carbon dioxide.

Special Fire Fighting Procedures: Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Contain spill. If molten, cool to allow metal to solidify. If a solid metal, wear gloves, pick up and return to process. If dust, wear recommended personal protective equipment including respiratory protection. DO NOT SWEEP. Use a vacuum, place in barrels and return to process if applicable. Use proper ventilation. Do not allow to enter drains, sewers or waterways. Otherwise, dispose of following all Federal, State and Local regulations. Metal may have reclaim value.

7. HANDLING AND STORAGE

Handling Precautions: Only dry metals should be added to molten bath. If working with molten metals, or exposed to fume or dust, use appropriate personal protective equipment. Do not eat, drink or smoke.

Storage Precautions: Store product in a cool, dry area away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation is recommended to control any air contaminants. Control concentration of all components so that their exposure levels are not exceeded. Use ventilation.

Personal protection:

Eyes: Chemical safety glasses/goggles and face shield with molten metal splash hazard. Use when handling powders.

Respirator: An approved or compliant marked air-purifying respirator with a fume/dust chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated. Additional respiratory protection may be required based on the work performed and the area in which the work is performed.

Skin: Gloves-leather or impervious (vinyl) type. Heat resistant gloves if handling hot metal. Safety type boots. Personal protective equipment is recommended when working with molten metal to avoid burns. PVC or other gloves. No gloves required when handling the plain metal form.

Other: Lab coat, safety shower and eye-wash fountain in work area. Avoid the use of contact lenses in high Fume/splash areas.

Work/Hygienic Practices: Maintain good housekeeping. Clean up spills immediately. Good personal hygiene is essential.

Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Reddish/brown metallic powder	Boiling Point:	4,703 F(2595C)
Odor:	Odorless	Melting Point:	1981.4 F (1083C)
Specific Gravity:	8.94	Ph:	Not applicable

Vapor Pressure:	0.13 @1628C	Solubility in Water:	Insoluble
Vapor Density:	(air=1) Not applicable.	Molecular Weight:	63.54

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Heat, flames and sparks
Hazardous Decomposition /	Toxic oxide fumes may form at elevated temperatures
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: National Toxicity Program (NTP):	No
Occupational Safety & Health Administration (OSHA):	No
U.N. International Agency for Research on Cancer (IARC):	No

RTECS GL 5325000, for additional information

12. ECOLOGICAL INFORMATION

Biodegradability: Data not established.

Aquatic Toxicity: Data not established.

Freshwater algae: 0.0426-0.0535 mg/l EC50 72h

Freshwater fish: 0.3 mg/l LC50 96h/0.112 mg/l LC50 96h/ 0.052 mg/l LC50 96h/0.0068 – 0.0156 mg/l LC50 96h

Bioaccumulation factor (108)

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Avoid release to the environment. Very toxic to aquatic life.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Scrap metal alloy usually has value. Contact a commercial reclaimer for recycling. Otherwise, dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the Environmental Agency guidelines.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

US DOT :

UN 3089, Metal Powders, Flammable, N.O.S., 4.1, PG II (copper powder)



IATA:

UN 3089, Metal Powder, Flammable, N.O.S., 4.1, PG II (copper powder)



IMDG:

UN 3089, Metal Powder, Flammable, N.O.S., 4.1, PG II Marine Pollutant (copper powder)



Reportable quantity: 5000 lbs

EHS mark required (ADR 2.2.9.1.10 IMDG Code 2.103) for single packaging's and combo containing inner packaging's with Dangerous Goods >5L for liquids and >5 Kg for solids.

15. REGULATORY INFORMATION

The information in this Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated hereunder (29 CFR 1910.1200 ET. SEQ.).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

WHMIS: Class D-2B Toxic material causing other toxic effects
B4- flammable solid

This product has been classified in accordance with the guidelines set by the Dept. of Industrial Health of the Republic of Singapore.

This product has been classified in accordance with the Mexican guidelines, NOM-018-STPS-2015 and NOM-010-STPS-2014.

In China:

This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007. Decree No. 591: Regulations on the Control over Safety of Hazardous Chemicals
GB 30000.2-29-2013, Rules for classification and labeling of chemicals. (GHS)
GB/T 16483-2008, GB/T 17517-2013

This product has been classified in accordance with: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS).



WARNING: This product can expose you to chemicals including [trace amounts of lead] which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

SARA 313 Listing – 40 CFR 372.65: Copper

All ingredients are listed on the EPA TSCA Inventory.

All ingredients are listed on the Canadian Domestic Substance List.

WGK Germany- 3

16. OTHER INFORMATION

HMIS Hazard Rating:	Health:	1
	Fire:	2
	Reactivity:	1

Revised Date:	30 MAY 2018
Prepared by:	Nancy Swarts, Indium Corporation of America
Approved by:	Nancy Swarts, Indium Corporation of America

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