



**INDIUM CORPORATION OF AMERICA®\EUROPE®\ASIA-PACIFIC®
INDIUM CORPORATION (SUZHOU)®
SAFETY DATA SHEET**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: COPPER CORE COATED WITH TIN AND NICKEL

SDS Number: SDS-6652

Revised Date: 31 MARCH 2017

Product Use: METAL ALLOY MIX: SOLDER PREFORM

MANUFACTURER:

In America:

The Indium Corporation of America
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Information: (315) 853-4900

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In Asia:

Asia-Pacific Operations-Singapore
29 Kian Teck Avenue
Singapore 628908
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
TIN	4.53	7440-31-5 (US)	2	2	-
		(EU)	-	2	4
		(Canada)	-	2	4
		(Singapore)	2	-	-

COPPER	93.67	7440-50-8 (US)	0.1	0.1	-
		(EU)	-	0.1	-
		(Canada)	-	0.2	0.6
		(Singapore)	0.2(fume)	1(dust)	-
		(Mexico)	-	0.2(fume) 1(dust)	2
		(China)	-	1(dust) 0.2(fume)	2.5 0.6
	NICKEL	1.8	7440-02-0	1	0.015

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

3. HAZARDS IDENTIFICATION

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.

Ingestion: Ingestion of dust may cause irritation

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

Skin Contact: Normal handling should not cause any adverse health effects. Hot molten metal may cause burns to the skin. Wear protective equipment when handling molten metal. Exposure to copper dust may cause a greenish-black skin discoloration.

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.

TIN: Has been shown to increase incidence of sarcoma in animal tests.

WARNING: This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (trace levels of lead, nickel)

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

4. FIRST AID MEASURES

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

attention if irritation persists.

- Ingestion:** If patient is conscious, ONLY induce vomiting as directed by trained personnel. 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:** Not established. **Method:** Not established.
- Auto-ignition Temperature:** Not established.
- Flammable Limits:** Limits not established. Massive metal is not flammable; however dust or powder may be flammable.
- Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions.
- 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. DO NOT SWEEP. Use a vacuum, place in barrels and return to process if applicable. Otherwise, dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste 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.
- 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.
- Personal protection:**
- Eyes:** Chemical safety glasses/goggles and face shield with molten metal.
- Respirator:** A NIOSH approved or EU compliant CE marked air-purifying respirator with a fume/dust chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.
- 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.
- Other:** Lab coat, safety shower and eye-wash fountain in work area. Avoid the use of contact lenses in high fume 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:	Silver grey solid metal	Boiling Point:	2595C (copper)
Odor:	Odorless	Melting Point:	1083C (copper)
Specific Gravity:		pH:	Not applicable
Vapor Pressure:	Not applicable.	Solubility in Water:	Insoluble
Vapor Density:	(air=1) Not applicable.		

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Not established.
Incompatible Materials:	Avoid contact with mineral acids.
Hazardous Decomposition / Combustion:	Harmful organic fumes and 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		
LD50:	Not established	LC50:	Not established
Irritancy of Product:	Not established	Mutagenicity:	Not established
Sensitization to Product:	Not established	Teratogenicity:	Not established
Reproductive Toxicity:	No specific data is available	Synergistic Products:	Not established

12. ECOLOGICAL INFORMATION

This section is subject to future development.

Biodegradability: Data not established.

Aquatic Toxicity: Data not established.

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 Special Waste Regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Not regulated under US DOT (United States Department of Transportation), IATA or IMDG.

North America Emergency Guide Book – Not applicable

UN- NONE

15. REGULATORY INFORMATION

The information in this Material 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).

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

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

California PROP 65: WARNING : This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (trace levels lead and nickel)

SARA 313 Listing - 40 CFR 372.65: Copper CAS# 7440-50-8 Nickel CAS# 7440-02-0

All ingredients are listed on the EPA TSCA Inventory.

Ingredients are listed on the Canadian Domestic Substance List.

Philippines: This product contains substances that are listed on the Philippines Inventory of Chemicals and Chemical Substances.

Malaysia:

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). (GHS)

In China:

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 using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007.

16. OTHER INFORMATION

HMIS Hazard Rating: **Health:** 1
 Fire: 0
 Reactivity: 0

Revised Date: 31 MARCH 2017

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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