



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

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY WITH NC-10HF-RED

MSDS Number: MSDS- 5351

Revised Date: 16 JUNE 2010

Product Use: INDUSTRIAL USE - FLUX COATED PREFORM

MANUFACTURER:

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2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

Eye Inhalation Skin Ingestion NTP

Carcinogen listed in

IARC OSHA Not Listed



Warning Word: Danger (lead with rosin)

Warning Word: Warning (lead-free with rosin)

POTENTIAL HEALTH EFFECTS:

Product may contain lead. Review product listing table.

- Eye Contact:** Irritating to the eyes and if not removed promptly. Molten metal may cause burns to the eyes.
- Ingestion:** May cause irritation. This product may contain lead alloy and organic chemicals. May be harmful if swallowed.
- Inhalation:** Heated vapor concentrations may be harmful if inhaled. Irritating to the respiratory tract. Rosin may cause occupational asthma.

Skin Contact: May cause skin irritation or dermatitis. Molten metal may cause burns to the skin.

Chronic: **LEAD:** Prolonged exposure to vapors or fumes at higher temperatures may cause respiratory irritation and systematic lead poisoning. Symptoms of lead poisoning include headache, nausea, abdominal pain, muscle and joint pain and damage to the nervous system, blood system and kidneys.

SILVER: Chronic skin contact or ingestion of silver dust, salts, or fume can result in a condition known as Argyria, a condition with bluish pigmentation of the skin and eyes.

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

NOTE: **The Indium Corporation does not recommend, manufacture, market or endorse any of its product's for human consumption.**

Warning: **This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (lead)**

Warning: **This product may contain lead. Lead may be harmful to your health. US Federal law prohibits the use of leaded solders in making joints or fittings in any private or public water supply system. Keep out of the reach of children.**

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
ROSIN FLUX MIXTURE	0.1 - 4	65997-05-9 (EU)	N.E. 0.05	N.E. -	N.E. 0.15
TIN	*	7440-31-5/231-141-8 (US) (EU)	2 -	2 2	- 4

		(Canada)	-	2	4
		(Singapore)	2	-	-
LEAD	*	7439-92-1/231-100-4			
		(US)	0.05	0.05	-
		(EU)	-	0.15	-
		(Canada)	0.05	0.05	-
		(Singapore)	0.15	-	-
		(Mexico)	N.E.	0.15	-
		(China)	-	0.05(dust) 0.03(fume)	-
SILVER	*	7440-22-4/231-131-3			
		(US)	0.01	0.1	-
		(EU)	-	0.1	-
		(Canada)	-	0.1	0.3
		(Mexico)	-	0.1	-
		(Singapore)	0.1	-	-
DOES NOT CONTAIN ANY LISTED EU REACH SUBSTANCES OF VERY HIGH CONCERN (SVHC)					
N.E. = Not established * See Alloy Table					

ALLOY TABLE

Metal mixed with flux coating

INDALLOY	%LEAD	%TIN	%SILVER	Specific Gravity	RoHS Compliance
104 (Sn62/Pb36/Ag2)	34.6-35.9	59.5-61.9	1.92-1.99	8.41	No

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 applicable **Method:** Not available.
- Auto-ignition Temperature:** Not established. Not flammable.
- Flammable Limits:** Limits not established.
- Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions. CO₂, foam, water.
- Special Fire Fighting Procedures:** Firefighters must wear NIOSH approved or equivalent self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

- Spill or Leak Procedures:** Wear a respirator and appropriate personal protective equipment (See Exposure Controls/Personal Protective Section). Let molten metal cool before picking up. Molten metal may have reclaim value.
- Dispose of following all Federal, State and Local regulations.
Ensure area is ventilated. Dusty areas require respiratory protection. Do not sweep areas that may generate lead containing dusts.

7. HANDLING AND STORAGE

- Handling Precautions:** Keep containers tightly closed when not in use. Use care to avoid spills. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation.
- Storage Precautions:** Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Dispose of empty containers properly.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering Controls:** Exhaust or point source ventilation should be sufficient to control airborne levels and keep exposure levels low. Always ventilate equipment that holds molten metal. Avoid exposure to lead containing fumes.
- Personal protection:**
- Eyes:** Chemical safety glasses/goggles. Face shield for molten metal.
- Respirator:** An approved or compliant marked air-purifying respirator with a HEPA/particulate cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated or when proper ventilation is not adequate to protect the worker.
- Skin:** Compatible chemical resistant gloves is recommended. Recommend protective outer

garment, apron and sleeves as appropriate. Avoid skin exposure.

Other: Eyewash fountain in work area. Avoid the use of contact lenses in high fume/dusty areas.

Work/Hygienic Practices: Maintain good housekeeping. Clean up spills immediately.

Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area. Follow standard lead worker requirements, if applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid metal with red flux coating	Boiling Point:	Not applicable.
Odor:	None	Melting Point:	Not applicable
Specific Gravity:	Not available	pH:	Not applicable
Vapor Pressure:	Not applicable.	Solubility in Water:	Not established
Vapor Density:	(air=1) Not applicable.		

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Not established
Incompatible Materials:	Not established
Hazardous Decomposition /	carbon monoxide, carbon dioxide
Combustion:	
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: **NTP:** No
 OSHA: No
 IARC: Yes Lead and lead compounds are listed as possible carcinogens.

Chronic Toxicity: Prolonged or repeated exposure to rosin flux fume may cause workers to develop occupational asthma. Lead can cause potential harm to the developing fetus.

12. ECOLOGICAL INFORMATION

This section is subject to future development.

Product not tested.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Dispose of in accordance with all Federal, State and Local environmental regulations. In Europe follow the Special Waste Regulations. Product may have reclaim value.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Not regulated under US DOT (United States Department of Transportation). Not hazardous under the shipping regulations.

North American Emergency Guide Book – Not classified

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.).

The information in this Material Safety Data Sheet meets the requirements of the EU under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2) Regulation 6.

This product has been classified in accordance with the hazard criteria of the Commission Directive 91/155/EEC and EH40.

This product has been classified in accordance with the hazard criteria of the Mexican regulations: NOM-018-STPS-2000 and NOM-010-STPS-1999.

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

Canadian WHMIS:



D2B Materials Causing Other Toxic Effects -irritant

D2A-Materials Causing Other Toxic Effects-Very Toxic Material (Chronic) (lead).

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

SARA 313 Listing - 40 CFR 372.65 - lead, tin, silver

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

Xn

