



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

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** INDALLOY WITH RMA FLUX CORED WIRE

**SDS Number:** SDS- 4470

**Revised Date:** 29 MARCH 2015

**Product Use:** Industrial Use (mixture) - Flux Cored Wire

### MANUFACTURER:

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## 2. HAZARDS IDENTIFICATION

### PRIMARY ROUTES OF ENTRY:

\*Eye      \*Inhalation      \*Skin      \*Ingestion      NTP

### Carcinogen listed in

IARC      OSHA      \*Not Listed  
See Section 11

GHS:



applicable to lead containing products

Signal Word: Warning

#### Hazard statement(s)

H303	May be harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer (lead)
H361	Suspected of damaging fertility or the unborn child (applicable to lead containing product)
H373	May cause damage to organs through prolonged or repeated exposure (applicable to lead containing product)
H410	Very toxic to aquatic life with long lasting effects (lead)
EUH201A	Warning! Contains lead (applicable only to the products listed that contain lead) Review listing.
EUH208	Contains rosin. May produce an allergic reaction

#### Precautionary statement(s)

P233	Keep container tightly closed
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	Take off contaminated clothing and wash before reuse
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:

Carcinogenicity (Category 2) (lead)  
 Reproductive toxicity (Category 2 ) (lead)  
 Respiratory sensitizer-Category 1B  
 Acute toxicity, oral-Category 5  
 Acute aquatic toxicity – Category 1 for lead containing products (H400)  
 Chronic aquatic toxicity – Category 1 for lead containing products (H410)

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:** Irritating to the eyes and if not removed promptly. Do not allow material to come in contact with eyes. Contact with fume from molten metal may cause irritation.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** Inhalation of fume or dust may cause local irritation to the respiratory system. Rosin fume may cause irritation or sensitization by inhalation.

**Skin Contact:** Normal handling should not cause any adverse health effects. May cause skin irritation. Hot molten metal may cause burns to the skin. Wear protective equipment when handling molten metal. Rosin may cause irritation or dermatitis.

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

**LEAD:** Prolonged exposure to vapors and/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.

**COPPER:** Overexposure to fumes of copper may cause metal fume fever (chills, muscle aches, nausea, fever; dry throat, cough, weakness, lassitude); metallic or sweet taste; discoloration of skin and hair.

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

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

**Note:** The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

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

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
TIN	*	7440-31-5	2	2	-
		(EU)	-	2	4
		(Canada)	-	2	4
		(Singapore)	2	-	-
LEAD	*	7439-92-1	0.05	0.05	N.E.

		(EU)	N.E.	0.15	N.E.
		(Canada)	N.E.	0.05	N.E.
		(Mexico)	0.15	N.E.	N.E.
		(China)	-	0.05(dust) 0.03(fume)	-
		(Singapore)	0.15	N.E.	N.E.
<b>COPPER</b>	*	7440-50-8/231-159-6			
		(US)	0.1 (fume)	0.2 (fume)	-
		(EU)	-	0.2 (fume)	-
		(Canada)	-	0.2 (fume)	0.6 (fume)
		(Singapore)	0.2(fume)	-	-
		(Mexico)	-	0.2(fume)	2
		(China)	-	0.2(fume)	0.6
<b>SILVER</b>	*	7440-22-4/231-131-3			
		(US)	0.01	0.1	-
		(EU)	-	0.1	-
		(Canada)	N.E.	0.1	0.3
		(Singapore)	0.1	-	-
		(Mexico)	0.1	-	-
<b>ROSIN</b>	1.9-2.9	65997-05-9	N.E.	N.E.	N.E.
			(EU) 0.05	N.E.	0.15
<b>PROPRIETARY</b>	0.05-0.1	-	N.E.	N.E.	N.E.
Symbol: Xi		Risk Phrases: R20/22 R36/37/38		Review Section 15 for additional information	
N.E. = Not established		* See alloy table			

#### 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:** 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 applicable

**Flammable Limits:** Flammable in the form of dust when exposed to heat or flame. Solid metal not flammable.

**Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions. Use water spray, carbon dioxide, or foam. Do not allow water run-off to enter sewers or waterways.

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

## 6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** Wear HEPA (high efficiency particulate filter) filter respirator and other personal protective clothing. (See Exposure Controls/Personal Protection Section).  
Clean up spill without generating or dispersing dust into the air. Vacuum solids instead of sweeping. Reduce airborne dust and prevent scattering by moistening with water. Place spilt material in a container and dispose of in accordance with applicable regulations.

## 7. HANDLING AND STORAGE

**Handling Precautions:** Avoid breathing vapors from heated material and dusts from powder form. Avoid contact with eyes, skin and clothing. Follow routine safe handling procedures. Use with adequate ventilation.

**Storage Precautions:** Keep away from heat and flame. Store in suitable, tightly capped, and labeled containers in cool dry, well-ventilated area. Empty containers may be hazardous as they contain product residue.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Local exhaust ventilation is recommended to control any fume or dust air contaminants. Avoid exposure to lead containing fume. Avoid exposure to rosin containing fumes.

### 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 HEPA type Chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.

Warning: Air purifying respirators do not protect the worker in oxygen-deficient atmospheres. Follow applicable lead work practices as established under OSHA or other comparable safety standards.

**Skin:** Wear protective gloves, clothing such as lab coat, coveralls, apron and boots.

<b>Other:</b>	Eye-wash fountain/shower in work area. Avoid the use of contact lenses in high fume and dust areas. Regular shower facilities and industry laundry service may be required.
<b>Work/Hygienic</b>	Maintain good housekeeping. Clean up spills immediately. Good personal hygiene is essential. Avoid eating, smoking or drinking in the lead work areas. Wash hands and face thoroughly with soap and water immediately upon leaving the work area and before eating. When applicable follow standard lead work practices.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Solid, gray metal	<b>Boiling Point:</b>	Not available
<b>Odor:</b>	Odorless	<b>Melting Point:</b>	See Table
<b>Specific Gravity:</b>	See Table	<b>pH:</b>	Not applicable
<b>Vapor Pressure:</b>	Not established	<b>Solubility in Water:</b>	Insoluble
<b>Vapor Density:</b>	(air=1) Not applicable.		

## 10. STABILITY AND REACTIVITY

<b>General:</b>	Stable.
<b>Conditions to Avoid:</b>	Not established
<b>Incompatible Materials:</b>	Not established
<b>Hazardous Decomposition / Combustion:</b>	Toxic fumes are emitted at elevated temperatures.
<b>Hazardous Polymerization:</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Carcinogenicity:</b>	<b>NTP(National Toxicity Program):</b>	No	
	<b>OSHA (Occupational Safety &amp; Health Administration):</b>	No	
	<b>IARC (International Agency for Research on Cancer):</b>	Yes (Lead and its compounds)	
<b>LD50:</b>	Not established.	<b>LC50:</b>	Not established.
Rosin fume may cause occupational asthma. Lead can cause potential harm to the developing fetus.			

## 12. ECOLOGICAL INFORMATION

Product not tested. Avoid release to the environment.

## 13. DISPOSAL CONSIDERATION

<b>Waste Disposal Method:</b>	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.
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## 14. TRANSPORT INFORMATION

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

UN – none

Non hazardous- ground/IATA/IMDG

## 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: 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.

WARNING: Applicable only in the State of California - this product contains a chemical known to the State of California to cause cancer and/or birth defects( or other reproductive harm).

SARA 313 Listing - 40 CFR 372.65 – Lead CAS# 7439-92-1 Copper 7440-50-8

Ingredient is listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

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### Risk Phrases:

- R20/21/22 Harmful by inhalation and if swallowed
- R36/37/38 Irritating to eyes, respiratory system and skin
- R42/43 May cause sensitization by inhalation and skin contact
- R33 Danger of cumulative effects (lead)
- R40 Limited evidence of carcinogenic effect (lead)
- R48 Danger of serious damage to health by prolonged exposure (lead)
- R61 May cause harm to the unborn child (lead)
- R52/53 Harmful to aquatic organisms and may cause long-term effects in the aquatic environment (lead)

### Safety Phrases:

- S20/21 When using do not eat, drink or smoke

S23	Do not breathe fumes
S24/25	Avoid contact with skin and eyes
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection

## 16. OTHER INFORMATION

**HMIS Hazard Rating:**

<b>Health:</b>	2
<b>Fire:</b>	1
<b>Reactivity:</b>	0

**Revised Date:** 29 MARCH 2015

**Prepared by:** Nancy Swarts, Indium Corporation of America

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## ALLOY TABLE

INDALLOY	%LEAD Pb	%TIN Sn	%COPPER Cu	%SILVER Ag	SG	MELTING POINT	RoHS 2 Compliance
121 (96.5Sn/3.5Ag)	-	96.5	-	3.5	7.50	430F(221C)	YES
NS	38	60	2	-	8.47	-	NO

EU Directive 2011/65/EU

NS = Non Standard Blend

Indium Corporation is providing this above RoHS statement as information only. Solder related products are not directly related to the EU Directive. It is the responsibility of the customer to determine compliance with the regulations. Please review any applicable exemptions that may apply.

<http://www.indium.com>