



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

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** INDALLOY WITH 197-53 FLUX

**SDS Number:** SDS-CW 4347

**Revised Date:** 15 FEBRUARY 2015

**Product Use:** Industrial Use- Flux cored wire

**MANUFACTURER:**

**In America:**

The Indium Corporation of America  
1676 Lincoln Ave., Utica NY 13502  
Information: (315) 853-4900  
nswarts@indium.com

**EMERGENCY PHONE:**

**CHEMTREC 24 hrs.**  
**USA: 1 (800) 424-9300**  
**Outside USA: +1 (703) 527-3887**

**In Europe:**

Indium Corporation of Europe  
7 Newmarket Ct.  
Kingston, Milton Keynes, UK, MK 10 OAG  
Information: +44 [0] 1908 580400

**In China:**

Indium Corporation (Suzhou), Co., Ltd.  
No. 428 Xinglong Street  
Suzhou Industrial Park  
Suchun Industrial Square  
Unit No. 14-C  
Jiangsu Province, China 215126  
Information: (86) 512-6283-4900

**In Asia:**

Indium Corporation of America  
Asia-Pacific Operations-Singapore  
29 Kian Teck Avenue  
Singapore 628908  
Information: +65 6268-8678

**2. HAZARDS IDENTIFICATION**

**PRIMARY ROUTES OF ENTRY:**

√Eye      √Inhalation      √Skin      √Ingestion      NTP

**Carcinogen listed in**

IARC      OSHA      √Not Listed



for lead containing

Signal Word: Warning

Hazard statement(s)

- H303            May be harmful if swallowed
- H317            May cause an allergic skin reaction
- 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)
- EUH201A        Warning! Contains lead (applicable only to the products listed that contain lead) Review listing
- H410            Very toxic to aquatic life with long lasting effects (lead)
- 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
- 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 + P341    IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351    IF IN EYES: Rinse continuously with water for several minutes (15 mins)

**POTENTIAL HEALTH EFFECTS:**

- Eye Contact:**      Moderately irritating to the eyes and if not removed, may result in serious injury. Contact with fume from molten metal may cause irritation.
- Ingestion:**        This product contains metal alloy and organic chemicals.
- Inhalation:**        Inhalation of fume or dust may cause local irritation to the respiratory system. Rosin flux fume may cause occupational asthma.
- Skin Contact:**     May cause skin irritation. Rosin may cause dermatitis.

**Chronic:** 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.

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

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.

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

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

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Components	% wt	CAS Registry #/EINECS#	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
<b>TIN</b>	*	7440-31-5/231-141-8			
		(US)	2	2	-
		(EU)	-	2	4
		(Canada)	-	2	4
		(Singapore)	2	-	-
<b>SILVER</b>	*	7440-22-4/231-131-3			
		(US)	0.01	0.1	-
		(EU)	-	0.1	-
		(Canada)	-	0.1	0.3
		(Singapore)	0.1	-	-
	(Mexico)	-	0.1	-	
<b>LEAD</b>	*	7439-92-1/231-100-4	0.05	0.05	-
		(EU)	-	0.15	-
		(Canada)	-	0.05	-
		(Mexico)	0.15	-	-
		(Singapore)	0.15	-	-
		(China)	-	0.05(dust) 0.03(fume)	-

**RESIN MIX**

1.0-6.0

N.E.

N.E.

N.E.

Symbol: Xn  
 N.E. = Not established

Risk Phrases: R20/22, R36/37/38  
 \* 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 established.
- Flammable Limits:** Limits not established.
- 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:** Pick up solids and put in container for reuse or recycling. Do not sweep powder or small particulate. Use vacuum. Reduce airborne dust and prevent scattering by moistening with water. Dispose of following all Federal, State and Local regulations.

#### 7. HANDLING AND STORAGE

- Handling** Keep containers tightly closed when not in use. Use care to avoid spills. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed.
- Storage Precautions:** Refer to product label for specific storage temperature requirements. Rotate stock to ensure use before expiration date on the label.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Local exhaust ventilation is recommended to keep exposures below established limits and protect operators. Lead fume needs to be properly vented. Follow state and federal regulations when there is a potential exposure to lead.

**Personal protection:**

**Eyes:** Chemical safety glasses/goggles. Face shield for splash hazards.

**Respirator:** An approved or compliant air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated or exceed exposure limits. Protect employees from exposure to lead fume.

**Skin:** Compatible chemical resistant gloves may be required for certain applications. Hot gloves as needed for melting applications.

**Other:** Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume areas.

**Work/Hygienic** 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. Keep exposures as low as possible.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Wire	<b>Boiling Point:</b>	Not applicable.
<b>Odor:</b>	Odorless	<b>Melting Point:</b>	Not available
<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

**General:** Stable.

**Conditions to Avoid:** Not established.

**Incompatible Materials:** Avoid contact with acids, bases or oxidizing agents.

**Hazardous Decomposition / Combustion:** Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.

**Hazardous Polymerization:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity:** **NTP:** No  
**OSHA:** No  
**IARC:** Yes – lead is listed Suspected carcinogen - lead.

**LD50:** Not established. **LC50:** Not established.

**Other:** 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

Product not tested.

## 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.

## 14. TRANSPORT INFORMATION

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

UN- NONE

## 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 using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

This product has been classified in accordance with 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).



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.

SARA 313 Listing - 40 CFR 372.65

Silver CAS# 7440-22-4

Lead CAS# 7439-92-1

All ingredients are listed on the EPA TSCA Inventory. EPA Genetic Toxicology Program - Lead

California Prop 65 Safe Drinking Water Standard: Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (lead)

EC Classification, Packaging and Labeling Requirements:



**Alloy Table**

Indalloy (Metal)	SPECIFIC GRAVITY	%TIN Sn	% LEAD Pb	% Silver Ag	RoHS 2 Compliance
NON STANDARD MIX 93.5Pb/5Sn/1.5Ag	11.03	4.89-4.93	91.4-92.1	1.47-1.48	YES*

\* RoHS 2 compliance under the exemptions as stated in EU Directive 2011/65/EU. Otherwise not compliant.  
RoHS 2 = Restriction of Hazardous Substances