



## SAFETY DATA SHEET

To better serve all of our customers Indium Corporation has generated one SDS, for this product, to be used within the United States as well as internationally. Some of the regulatory information contained within may not be applicable to the customer's individual state or country. Unless otherwise stated the health and safety information provided within is applicable to all products. This SDS covers a variety of metal mixtures using one common flux core.

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT IDENTIFIER:** INDALLOY WITH CORE 92/No Clean (NC)

**SDS NUMBER:** SDS CW003

**REVISED DATE:** 17 SEPTEMBER 2018

**PRODUCT USE:** INDUSTRIAL USE - FLUX CORED WIRE

#### MANUFACTURER:

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**2. HAZARDS IDENTIFICATION****PRIMARY ROUTES OF ENTRY:**

\*Eye    \*Inhalation    \*Skin    \*Ingestion    NTP    IARC    OSHA    \*Not Listed

**CARCINOGEN LISTED IN:****GHS:**

Lead free products



Signal Word: Warning

Hazard statement(s)

H317            May cause an allergic skin reaction  
 H319            Causes serious eye irritation  
 H334            May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 EUH208        Contains rosin. May produce an allergic reaction

Precautionary statement(s)

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)

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  
 H351            Suspected of causing cancer  
 H361            Suspected of damaging fertility or the unborn child  
 H373            May cause damage to organs through prolonged or repeated exposure  
 H410            Very toxic to aquatic life with long lasting harmful effects  
 EUH201A        Warning! Contains lead. Review listing.  
 EUH208        Contains rosin. May produce an allergic reaction

Precautionary statement(s)

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  
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**Classification:**

Carcinogenicity (Category 2) (lead)  
Reproductive toxicity (Category 2 ) (lead)  
Skin sensitizer-Category 1B  
Respiratory sensitizer-Category 1B  
Eye irritation-Category 2A  
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:** 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 headache, nausea, abdominal pain, fatigue and pain in the legs, arms and joints. May be harmful.

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

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

**Chronic:** 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.

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 and muscle and joint pain and damage to the nervous system, blood system and kidneys.

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

COPPER: Overexposure discoloration of skin and hair. Repeated inhalation can cause chronic respiratory disease. Ingestion may cause liver and kidney damage.

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



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

**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**

<b>Components</b>	<b>% wt</b>	<b>CAS Registry #/EINECS#</b>	<b>PEL mg/m<sup>3</sup></b>	<b>TLV-TWA mg/m<sup>3</sup></b>	<b>TLV-STEL mg/m<sup>3</sup></b>
<b>TIN</b>	*	7440-31-5/231-141-8			
		(US)	2	2	-
		(EU)	-	2	4
		(Canada)	-	2	4
		(Singapore)	2	-	-
<b>LEAD</b>	*	7439-92-1/231-100-4			
		(US)	0.05	0.05	-
		(EU)	-	0.15	-
		(Canada)	-	0.05	-
		(Mexico)	0.15	N.E.	N.E.
		(Singapore)	0.15	N.E.	N.E.
		(China)	-	0.05(dust) 0.03(fume)	- -
<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>COPPER</b>	*	7440-50-8/231-159-6			
		(US)	0.1	0.2	-
		(EU)	-	0.2 (fume)	2(dust)
		(Canada)	-	0.2	0.6
		(Singapore)	0.2(fume)	1(dust)	-
		(Mexico)	0.2	-	2
		(China)	-	0.2(fume)	0.6(fume)
<b>ROSIN</b>	2.0-3.0	65997-05-9	N.E.	N.E.	N.E.
		(EU)	0.05	N.E.	0.15(sensitizer)
<b>PROPRIETARY</b>	1.0-3.0		N.E.	N.E.	N.E.

N.E. = Not established

\* See Alloy Table

**ALLOY TABLE**

INDALLOY (metal)	RoHS 2/3 Compliance*	%metal			
		%SILVER Ag	%LEAD Pb	%COPPER Cu	%TIN Sn
<b>104</b> (Sn62/Pb36/Ag2)	No	2	36	-	62
<b>106</b> (Sn63/Pb37)	No	-	37	-	63
<b>241</b> (SAC387) (95.5Sn/3.8Ag/0.7Cu)	Yes	3.8	-	0.7	95.5
<b>256</b> (SAC 305) (96.5Sn/3Ag/0.5Cu)	Yes	3	-	0.5	96.5

RoHS 2 = Restriction of Hazardous Substances (review applicable exemptions) EU Directive (2011/65/EU)  
RoHS 3- products do not contain any listed phthalates

**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, not flammable. None combustible solid in bulk form, however, dust or powder may be flammable.
- Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions, such as foam, carbon dioxide, dry chemical and water.
- Special Fire Fighting Procedures:** Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.
- Explosion Data - Sensitivity to:** **Mechanical Impact:** Not established  
**Static Discharge:** Not established

**6. ACCIDENTAL RELEASE MEASURES**

**Spill or Leak Procedures:** Contain spill. If molten, cool to allow metal to solidify. If solid metal wear gloves, pick up and return to process. If dust, wear recommended personal protective equipment. DO NOT SWEEP LEAD CONTAINING DUSTS. Use a vacuum, place in barrels and return to process if possible. Use PPE and proper ventilation.

## 7. HANDLING AND STORAGE

**Handling Precautions:** Only dry metals should be added to molten bath. If working with molten metal, or exposed to fume or dust, use appropriate personal protective equipment. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed. Avoid dust generation.

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

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Exhaust ventilation is necessary to control any air contaminants and keep exposures as low as possible.

**Personal protection:**

**Eyes:** Chemical safety glasses/goggles and face shield with molten metal.

**Respirator:** An authority approved or compliant marked air-purifying respirator with a HEPA particulate/fume cartridge is recommended when contaminants are elevated or during cutting or melting.

**Skin:** Rubber or heat resistant gloves. Apron, boots, sleeve protectors may be necessary depending on the type of work performed.

**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. Wash hands thoroughly with soap and water immediately upon leaving the work area and before eating. Refrain from eating or smoking in work areas. Follow standard lead worker practices when using lead containing products.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Metal wire	<b>Boiling Point:</b>	Not determined
<b>Odor:</b>	Odorless.	<b>Melting Point:</b>	Not available
<b>Specific Gravity:</b>	Not available	<b>pH:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable.	<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, sulfur or oxidizing agents. Ignites and incandesces on heating with sulfur.

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

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

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

**LD50:** Not established.

**LC50:** Not established.

**Other:** Chronic Toxicity: Overexposure to fumes may cause respiratory tract irritation. Overexposure to rosin fume may cause occupational asthma. Lead may affect the central nervous system, kidneys, blood and reproductive system.

**Irritancy of Product:** May be an irritant

## 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 international regulations and requirements. Not regulated under US DOT (United States Department of Transportation). Not hazardous in shipping (Ground/IATA/Ocean).

UN- none

Marine Pollutant- no

## 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.).

SARA 313 Listing - 40 CFR 372.65 Lead, Copper and Silver

Contains ingredients listed on the New Jersey State Right To Know

EPA Toxicology Program Lead CAS# 7439-92-1

All ingredients are listed on the EPA TSCA Inventory.



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

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

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

Canadian WHMIS: D2A-Materials Causing Other Toxic Effects-Very Toxic Material (Chronic). (lead)  
D2B Materials Causing Other Toxic Effects -irritant



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

**Regulatory Information China:**

GB/T 16483-2008, GB/T 17519-2013, Safety Data Sheets for Chemical Products

GB 30000.2-29-2013, Rules for classification and labeling of chemicals (GHS)

Decree No. 591: Regulations on the Control Over Safety of Hazardous Chemicals.

This product was classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2007.

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).

**16. OTHER INFORMATION**

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	2
	<b>Fire:</b>	1
	<b>Physical Hazards:</b>	0

**Revised Date:** 17 SEPTEMBER 2018**Prepared by:** Nancy Swarts, Indium Corporation of America**Approved by:** Nancy Swarts, Indium Corporation of America

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