



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

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** INDALLOY WITH FLUXCAKE-219 (CW-219)  
**SDS Number:** SDS-CW 5813 **Revised Date:** 8 NOVEMBER 2016  
**Product Use:** Industrial Use - Flux cored wire for soldering applications. See alloy table for metal combinations.

**MANUFACTURER:**

**In America:**

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**2. HAZARDS IDENTIFICATION**

**PRIMARY ROUTES OF ENTRY:**

⊕Eye      ⊕Inhalation      ⊕Skin      ⊕Ingestion      NTP

**Carcinogen listed in**

IARC      OSHA      ⊕Not Listed

GHS:



Signal Word: Warning

Hazard statement(s)

- H317      May cause an allergic skin reaction
- H334      May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H335      May cause respiratory irritation
- 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 + 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)

**POTENTIAL HEALTH EFFECTS:**

- Eye Contact:**      May cause irritation 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 and organic chemicals. May cause irritation.
- Inhalation:**      Inhalation of fume or dust may cause local irritation to the respiratory system. Rosin may cause occupational asthma.
- Skin Contact:**      May cause skin irritation or allergic skin reaction.
- 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:** Prolonged inhalation of fume may result in lung complications.

**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.

**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. (trace levels of lead).

General- Normal handling of wire does not pose any hazard.

**2. 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>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>ROSIN</b>	0-3.0	65997-05-9	N.E.	N.E.	N.E.
		(EU)	0.05	N.E.	0.15 (sensitiser)

<b>PROPRIETARY ACTIVATORS</b>	0-3	-	N.E	N.E.	N.E.
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N.E. = Not established

TWA = time weighted average  
 STEL= short term exposure limit

**Alloy Table**

**Flux core 0-3%**

<b>Indalloy (metal mixture)</b>	<b>Tin Sn</b>	<b>Silver Ag</b>	<b>Copper Cu</b>	<b>RoHS 2 Compliance</b>
256 (SAC305) (96.5Sn/3Ag/0.5Cu)	93.6-96.5	2.9-3	0.485-0.5	Yes
262 (Sn995) (99.5Sn/0.5Cu) doped with 0.05Co	96.5-99.5	-	0.485-0.5	Yes
263 (SAC0307) (99Sn/0.3Ag/0.7Cu)	96-99	0.291-0.3	0.679-0.7	Yes

RoHS 2 = EU Restriction of Hazardous Substances (2011/65/EU)

#### 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.
- 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. Use proper ventilation.
- Personal protection:**
- Eyes:** Chemical safety glasses/goggles. Face shield for splash hazard.
- Respirator:** An approved or compliant marked 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.
- Skin:** 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Solid metal - wire	<b>Boiling Point:</b>	Not applicable.
<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>	Avoid contact with acids, bases or oxidizing agents.
<b>Hazardous Decomposition / Combustion:</b>	Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
<b>Hazardous Polymerization:</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Carcinogenicity:</b>	<b>NTP:</b> No		
	<b>OSHA:</b> No		
	<b>IARC:</b> No		
<b>LD50:</b>	Not established.	<b>LC50:</b>	Not established.

## 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, all modes.

UN – none

Marine pollutant: No

Not regulated- ground/IATA/ocean

#### 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  
Silver Copper

All ingredients are listed on the EPA TSCA Inventory.

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. (trace levels of lead)

This product has been classified in accordance with the 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:  
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.

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).

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 has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2007.

**16. OTHER INFORMATION**

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

**Revised Date:**            8 NOVEMBER 2016

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

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

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