SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY WITH CORE 230
SDS Number: SDS-CW 006
Product Use: Industrial Use - Flux cored wire

Revised Date: 25 SEPTEMBER 2018

MANUFACTURER:

In America:
The Indium Corporation of America®.
34 Robinson Rd., Clinton, NY 13323
Information: (315) 853-4900
nswarts@indium.com

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Chicago Materials Division
80 Scott Street
Elk Grove Village, Illinois 60007
Information: (847) 439-9135

In Europe:
The Indium Corporation of America® (European Operations)
7 Newmarket Ct.
Kingston, Milton Keynes, UK, MK 10 OAG
Information: +44 [0] 1908 580400

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

EMERGENCY PHONE:
CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887
In China: Emergency 86+ 4008417580

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
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

- Eye
- Inhalation
- Skin
- Ingestion

Carcinogen listed in

- NTP
- IARC
- OSHA
- Not Listed

GHS:

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)

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 + 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 + 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)

Classification:

Eye irritation- Category 2A
Skin sensitizer- Category 1B
Respiratory sensitizer- Category 1B

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POTENTIAL HEALTH EFFECTS:

**Eye Contact:** Irritating to the eyes and if not removed, may result in serious irritation. Contact with fume from molten metal may cause irritation.

**Ingestion:** May cause irritation.

**Inhalation:** Rosin has been known to cause occupational asthma.

**Skin Contact:** May cause skin irritation. Exposure to rosin may cause irritation or 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:** 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.
### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
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<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #:EINECS#</th>
<th>PEL mg/m³</th>
<th>TLV-TWA mg/m³</th>
<th>TLV-STEL mg/m³</th>
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ROSIN MIX 1.0-5.0 65997-05-9 (US) N.E. N.E. N.E. (EU) 0.05 N.E. 0.15 (sensitiser) N.E. = Not established

ALLOY TABLE

<table>
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<tr>
<th>Indalloy (metal mix)</th>
<th>%TIN Sn</th>
<th>%SILVER Ag</th>
<th>%COPPER Cu</th>
<th>%ANTIMONY Sb</th>
<th>RoHS 2/3 Compliance</th>
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RoHS 2 = Restriction of Hazardous Substances EU Directive 2011/65/EU
RoHS 3 = products do not contain any listed phthalates
Products above do not contain any RoHS metals intentionally added. Products above do not contain any RoHS flame retardants (PBB or PBDE).

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.
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Sweep up and place in a clearly labeled container for chemical waste. Not regarded as dangerous to the environment. 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: Good general ventilation should be used. If applicable use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Personal protection:

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

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

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 or particulate 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

Appearance: Solid metal

Boiling Point: Not applicable.

Odor: Odorless

Melting Point: See table

Specific Gravity: See Table

pH: Not applicable

Vapor Pressure: 1 mm Hg @ 973 C

Solubility in Water: Insoluble

Vapor Density: (air=1) Not applicable.

Flash Point: Not flammable
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: No

LD50: Not established.  LC50: Not established.

Other: Chronic Toxicity: Prolonged or repeated exposure to rosin flux fume may cause workers to develop occupational asthma.

12. ECOLOGICAL INFORMATION

Product not tested. No information available.

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 under shipping regulations, Ground/IATA/IMDG.

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.).

Some ingredients are listed on the New Jersey Right To Know List.

SARA 313 Listing - 40 CFR 372.65
Silver CAS# 7440-22-4  Copper CAS# 7440-50-8

All ingredients are listed on the EPA TSCA Inventory.

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

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.

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

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).

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.

This product complies with the requirements established under the EU directive 2011/65/EU, Restriction of Hazardous Substances (RoHS). 1907/2006 REACH Regulations

All ingredients are listed on the Canada (CDSL)
All ingredients are listed on the EU (EINECS)

16. OTHER INFORMATION

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

Revised Date: 25 SEPTEMBER 2018
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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