



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY WITH CORE 230-RC

SDS Number: SDS-6740

Revised Date: 23 OCTOBER 2019

Product Use: Industrial Use - Flux cored wire

MANUFACTURER:

In America:

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

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

In Europe:

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

In Asia:

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

In India:

Indium Solder Private Limited
Shed A, NP-7 Guidny Industrial Estate,
Ekkaduthangal, Chennai, Tamil Nadu, India 600032
Tel: +91-044-46877888

EMERGENCY PHONE:

CHEMTREC 24 hrs.

USA: 1 (800) 424-9300

Outside USA: +1 (703) 527-3887

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 NTP

Carcinogen listed in

IARC OSHA ⊕Not Listed

GHS:
Lead free:



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
 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)

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
 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 effects
 EUH201A Warning! Contains lead. Review listing.
 EUH208 Contains rosin. May produce an allergic reaction

Precautionary statement(s)

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 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:

Skin sensitizer- Category 1B
 Respiratory sensitizer- Category 1B
 Specific target organ toxicity- repeated exposure – Category 2
 Carcinogenicity (Category 2) (lead)
 Reproductive toxicity (Category 2) (lead)
 Acute aquatic toxicity – Category 1 for lead containing products
 Chronic aquatic toxicity – Category 1 for lead containing products

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.

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.

NICKEL – poison by ingestion. Can cause pulmonary asthma, and hypersensitivity.

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



WARNING: This product can expose you to chemicals including [lead, trace amounts of nickel] which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to 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 joints or fittings in any private or public water supply system. Keep out of the reach of children.

Normal handling of solid metal wire is not harmful.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #/EINECS#	PEL mg/m³	TLV-TWA mg/m³	TLV-STEL mg/m³
TIN	*	7440-31-5/231-141-8			
		(US)	2	2	-
		(EU)	-	2	4
		(Canada)	-	2	4
		(Singapore)	2	-	-
SILVER	*	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	-
COPPER	*	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
		(China)	-	0.5	-
LEAD	*	7439-92-1/231-100-4			
		(US)	0.05	0.05	-
		(EU)	-	0.15	-
		(Canada)	0.05	0.05	-
		(Singapore)	0.15	-	-
		(Mexico)	N.E.	0.15	-
		(China)	-	0.05(dust) 0.03(fume)	-
NICKEL	*	7440-02-0/231-111-4			
		(US)	1	1.5	-
		(Canada)	-	1	2
		(Mexico)	-	1	-

		(Singapore)	1	-	-
		(China)	-	1	2.5
GERMANIUM	*	7440-56-4	N.E.	N.E.	N.E.
ROSIN MIX	1.0-5.0	65997-05-9 (US)	N.E.	N.E.	N.E.
		(EU)	0.05	N.E.	0.15 (sensitizer)

N.E. = Not established

ALLOY TABLE

1-5% flux core

Indalloy (metal mix)	%TIN Sn	%SILVER Ag	%COPPER Cu	% COBALT Co	%LEAD Pb	Nickel Ni	Germanium Ge	RoHS 2/3 Compliance
106 (Sn63/Pb37)	59.9-62.4	-	-	-	35.2-36.6	-	-	No
121 (96.5Sn/3.5Ag)	91.7-95.5	3.34-3.47	-	-	-	-	-	Yes
241 (SAC 387) (95.5Sn/3.8Ag/0.7Cu)	90.7-94.5	3.6-3.8	0.665-0.69	-	-	-	-	Yes
256 (SAC 305) (96.5Sn/3Ag/0.5Cu)	91.7-95.5	2.85-2.97	0.475-0.495	-	-	-	-	Yes
263 (SAC0307) (Sn99/0.3Ag/0.7Cu)	94.1-98	0.285-0.297	0.665-0.69	-	-	-	-	Yes
291 (99.25Sn, 0.7Cu, 0.05Ni, ≤0.01Ge)	94.29-98.26	-	0.665-0.693	-	-	0.0475-0.0495	<0.01	Yes
Non Standard (Sn96/4Ag)	91.2-95	3.8-3.96	-	-	-	-	-	Yes
Non Standard (99.3Sn/0.7Cu)	94.3-98.3	-	0.665-0.69	-	-	-	-	Yes
Sn995 (99.5Sn/0.5Co)	94.5-98.5	-	-	0.475-0.495	-	-	-	Yes

RoHS 2 = Restriction of Hazardous Substances
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.

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: 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 wire	Boiling Point:	Not applicable.
Odor:	Odorless	Melting Point:	Not available
Specific Gravity:	Not established	pH:	Not applicable
Vapor Pressure:	Not established	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:** Reasonably anticipated to be a human carcinogen (lead)
OSHA: 29 CFR 1910.1025 (lead)
IARC: Yes 2B: Group 2B. Possibly carcinogenic to humans (lead)

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

Other: Chronic Toxicity: Prolonged or repeated exposure to rosin flux fume may cause workers to develop occupational asthma. Lead can cause potential harm to the developing fetus.

RTECS: OF7525000 (lead)
NICKEL RTECS# QR5950000
GERMANIUM RTECS Number: LY5200000
TIN RTECS# XP7320000,
SILVER RTECS# VW3500000

Lead
reproductive toxicity – rat –inhalation
reproductive toxicity – rat – oral
reproductive toxicity – mouse-oral

Teratogenicity
Developmental toxicity – rat- inhalation
Developmental toxicity- rat- oral
Suspected human reproductive toxicant

Copper - LD50 – intraperitoneal mouse 3.5 mg/kg.
Silver – LD50 oral – rat > 5,000 mg/kg
Germanium LC50: rat inhalation >5,340 mg/m³/4hr

GHS- Specific target organ toxicity- repeated exposure
May cause damage to organs through prolonged or repeated exposure

12. ECOLOGICAL INFORMATION

Product not tested.

Lead:

Toxicity to fish:

Rainbow trout- 1.19mg/l-96h

LC50 micropterus dolomieu- 2.2 mg/l-96h

Mortality NOEC-salvelinus fontinalis-1.7 mg/l-10d

Toxicity to algae

Mortality EC50-skeletonema costatum-7.94mg/l-10d

An environmental hazard cannot be excluded in the event of unprofessional handling, use and or disposal of this product.

Contains a substance (lead) that is very toxic to aquatic life with long lasting effects.

Germanium is insoluble and presents minimal environmental risk.

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.).

SARA 313 Listing - 40 CFR 372.65

Silver CAS# 7440-22-4

Copper CAS# 7440-50-8

Lead 7439-92-1

Nickel CAS# 7440-02-0

EPA Genetic 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, trace amounts of nickel] which is known to the State of California to cause cancer, and 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



D2A-Materials Causing Other Toxic Effects-Very Toxic Material (Chronic) (lead)
Nickel: D2A Very Toxic Material Causing Other Toxic Effects carcinogenicity: IARC group 2B

D2B Toxic Material Causing Other Toxic Effects skin sensitization in humans

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

16. OTHER INFORMATION

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

Revised Date: 23 OCTOBER 2019

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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