SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY WITH CORE 229-RC (lead containing)
SDS Number: SDS-166740
Revised Date: 10 OCTOBER 2020
Revision 1.1
Product Use: Industrial Use - Flux cored wire-soldering applications

MANUFACTURER:

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USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887
China Emergency: 86+ 4008417580
## 2. HAZARDS IDENTIFICATION

### PRIMARY ROUTES OF ENTRY:

<table>
<thead>
<tr>
<th>Route</th>
<th>Carcinogen listed in</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑️ Eye</td>
<td>☑️ Inhalation</td>
</tr>
</tbody>
</table>

GHS:

**Classification:**
- Skin sensitizer - Category 1B
- Respiratory sensitizer - Category 1B
- Rep. 1A: H360FD; Lact.: H362; STOT RE1, H372

### Signal Word: Danger

**Hazard statement(s):**
- H317 May cause an allergic skin reaction
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H360FD May damage fertility or the unborn child
- H362 May cause harm to breast-fed children
- H372 Causes damage to organs through prolonged or repeated exposure

**Precautionary statement(s):**
- P233 Keep container tightly closed
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P263 Avoid contact during pregnancy/while nursing.
- 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)

**Other:**
- EUH201A Warning! Contains lead. Review listing.
- EUH208 Contains rosin. May produce an allergic reaction

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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:

**TIN:** Prolonged inhalation of fume may result in lung complications.

**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.

**BISMUTH:** May cause kidney damage.

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

![WARNING](https://example.com/alert.png)

**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](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 joints or fittings in any private or public water supply system. Keep out of the reach of children.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<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-STELE mg/m³</th>
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<tbody>
<tr>
<td><strong>TIN</strong></td>
<td>*</td>
<td>7440-31-5/231-141-8</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(US) 2</td>
<td>2</td>
<td>-</td>
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<td>(EU) -</td>
<td>2</td>
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<td></td>
<td></td>
<td>(Canada) -</td>
<td>2</td>
<td>4</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(Singapore)</td>
<td>2</td>
<td>-</td>
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<tr>
<td><strong>LEAD</strong></td>
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<td>7439-92-1/231-100-4</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(US) 0.05</td>
<td>0.05</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(EU) -</td>
<td>0.15</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(Canada) 0.05</td>
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<td>(Singapore)</td>
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<td></td>
<td></td>
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<td>(China) -</td>
<td>0.05(dust)</td>
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<td></td>
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<td></td>
<td>0.03(fume)</td>
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<tr>
<td><strong>BISMUTH</strong></td>
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<td>7440-69-9/231-177-4</td>
<td>N.E.</td>
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</table>
ALLOY TABLE

<table>
<thead>
<tr>
<th>Indalloy (metal mix) Products</th>
<th>%TIN Sn</th>
<th>%LEAD Pb</th>
<th>%Bismuth Bi</th>
<th>RoHS 2/3 Compliance</th>
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</thead>
<tbody>
<tr>
<td>95 (48Sn/36Pb/16Bi)</td>
<td>45.6-47.5</td>
<td>34.2-35.6</td>
<td>15.2-15.8</td>
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<tr>
<td>106 (Sn63/Pb37)</td>
<td>59.9-62.4</td>
<td>35.2-36.6</td>
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<td>No</td>
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<tr>
<td>109 (Sn60/Pb40)</td>
<td>57-59.4</td>
<td>38-39.6</td>
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<td>No</td>
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</tbody>
</table>

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. Following standard governmental or company lead work practices while using this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid metal wire
Odor: Odorless
Specific Gravity: Not established
Vapor Pressure: Not established
Vapor Density: (air=1) Not applicable.

Boiling Point: Not applicable.
Melting Point: Not available
pH: Not applicable
Solubility in Water: Insoluble
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)
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

12. ECOLOGICAL INFORMATION

Product not tested.

Lead:
Toxicity to fish:
Rainbow trout- 1.19mg/l-96h
LC50 micropterus dolomieui- 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.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: Scrap metal alloy usually has value. Contact a commercial reclamer 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
Lead 7439-92-1

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] 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.
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health:</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire:</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Reactivity:</td>
<td>0</td>
</tr>
</tbody>
</table>

Revised Date: 1 OCTOBER 2020

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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