SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDALLOY WITH FLUXCAKE-201 (CW-201) LEAD CONTAINING
SDS Number: SDS-CW 4541L  Revised Date: 11 NOVEMBER 2020
VERSION: 1.1

Product Use: Industrial Use - Flux cored wire (soldering applications). Review alloy table for metal mixtures with the same core flux.

MANUFACTURER:

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

The Indium Corporation of America®.
Chicago Materials Division
80 Scott Street
Elk Grove Village, Illinois 60007
(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:
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
China: Emergency 86+ 4001-204937

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2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

- Eye
- Inhalation
- Skin
- Ingestion
- NTP

Carcinogen listed in

- IARC
- OSHA
- Not Listed

***See Section 11

GHS:

Lead containing

Classification:

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

Signal Word: Danger

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
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/vapours/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
P301 + P352 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 (15mins)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Irritating 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 be harmful if swallowed.

Inhalation: Inhalation of fume or dust may cause local irritation to the respiratory system. Rosin may cause...
occupation asthma.

**Skin Contact:** May cause skin irritation. Rosin may cause 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.

**LEAD:** Prolonged exposure to vapors or fumes at higher temperatures may cause respiratory irritation and systematic lead poisoning.

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

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**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

**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.

Solid metal wire does not pose a danger as is.

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### 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-STE L mg/m³</th>
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<td><strong>TIN</strong></td>
<td>*</td>
<td>7440-31-5/231-141-8</td>
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<tr>
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<td>(US) 2</td>
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<td>(Singapore) 2</td>
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<td><strong>SILVER</strong></td>
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<td></td>
<td>(EU) -</td>
<td>0.15</td>
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</table>
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:** 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. If applicable follow standard lead work practices.
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 when working with leaded products.

Personal protection:
Eyes: Chemical safety glasses/goggles. Face shield was splash hazards.
Respirator: An authority 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: 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 areas. Follow standard lead work practices when working with lead containing products.
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. Follow applicable lead work practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid metal
Odor: Odorless
Specific Gravity: See table
Vapor Pressure: Not established
Vapor Density: (air=1) Not applicable.
Boiling Point: Not applicable.
Melting Point: See table
pH: Not applicable
Solubility in Water: Insoluble

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: Yes
- OSHA: Yes
- IARC: Yes

Lead and lead compounds are listed as possible carcinogens.

LD50: Not established.  LC50: Not established.

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.

12. ECOLOGICAL INFORMATION

Avoid the entrance of metals into the environment, especially lead.
Lead- harmful to the environment in powder form.
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 under shipping regulations.

UN- None
Not regulated – IATA.

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  Lead  Antimony

All ingredients are listed on the EPA TSCA Inventory.
EPA Genetic Toxicology Program – Lead CAS# 7439-92-1

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 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: D2A-Materials Causing Other Toxic Effects-Very Toxic Material (Chronic) (lead)

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 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: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS).

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health:</th>
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<tr>
<td></td>
<td>Fire:</td>
<td>1</td>
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<tr>
<td></td>
<td>Reactivity:</td>
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</tr>
<tr>
<td>Revised Date:</td>
<td>11 NOVEMBER 2020</td>
<td></td>
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<tr>
<td>Prepared by:</td>
<td>Nancy Swarts, Indium Corporation of America</td>
<td></td>
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<tr>
<td>Approved by:</td>
<td>Nancy Swarts, Indium Corporation of America</td>
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The information and recommendations contained herein are, to the best of The Indium Corporation of America's knowledge and belief, accurate and reliable as of the date issued. The Indium Corporation of America does not warrant or guarantee their accuracy or reliability, and The Indium Corporation of America shall not be liable for any loss or damage arising out of the user thereof. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.
### ALLOY TABLE

**Metal Alloy Mix with Flux Core (1-6%)**

<table>
<thead>
<tr>
<th>INDALLOY</th>
<th>Lead Pb</th>
<th>Tin Sn</th>
<th>Bismuth Bi</th>
<th>Silver Ag</th>
<th>Specific Gravity</th>
<th>RoHS 2/3 Compliance</th>
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</thead>
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<tr>
<td>97 (43Sn/43Pb/14Bi)</td>
<td>40.4-42.6</td>
<td>40.4-42.6</td>
<td>13.2-13.9</td>
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<td>106 (Sn63/Pb37)</td>
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<tr>
<td>109 (Sn60/40Pb)</td>
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<tr>
<td>Non Standard Mix (Pb62 Sn25/Bi10/Ag3)</td>
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<td>9.80</td>
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</table>

RoHS 2 = Restriction of Hazardous Substances  **Review any exemptions that may apply. (2011/65/EU)
RoHS 3 = products do not contain any listed phthalates