



## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** INDALLOY 170

**SDS Number:** SDS-005

**Revised Date:** 10 SEPTEMBER 2018

**Product Use:** INDUSTRIAL USE - METAL ALLOY CONSISTING OF LEAD (Pb)  
(ingot/powder/shapes/pieces)

#### MANUFACTURER:

##### In America:

**The Indium Corporation of America®.**

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Information: (315) 853-4900

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##### EMERGENCY PHONE:

**CHEMTREC 24 hrs.**

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**Outside USA: +1 (703) 527-3887**

**China Emergency: +86 4008417580**

##### In Europe:

**The Indium Corporation of America® (European Operations)**

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Kingston, Milton Keynes, UK, MK 10 OAG

Information: +44 [0] 1908 580400

##### In China:

Indium Corporation (Suzhou), Co., Ltd.

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<http://www.indium.com>

## 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)

H302 Harmful if swallowed  
 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

#### Precautionary statement(s)

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  
 P281 Use personal protective equipment as required  
 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)  
 P501 Dispose of content/container in accordance with applicable regulations. Recycle if possible.

#### Classification:

Acute toxicity, oral – Category 4  
 Carcinogenicity- Category 2  
 Reproductive toxicity- Category 2  
 Specific target organ toxicity- repeated exposure – Category 2  
 Acute aquatic toxicity – Category 1  
 Chronic aquatic toxicity- Category 1

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:** Contact with molten metal alloy or fume from molten metal may cause irritation. Severe eye damage may result from hot molten metal being splashed into the eyes. Wear safety glasses and face shield when working with molten metal.

**Ingestion:** Ingestion of dust may cause headache, nausea, abdominal pain, fatigue and pain in the legs, arms and joints. May be harmful. Toxic may cause acute poisoning.

**Inhalation:** Inhalation of fume or dust may cause local irritation to the respiratory system.. May be harmful.

**Skin Contact:** Normal handling should not cause any adverse health effects. May cause skin irritation. Hot molten metal may cause burns to the skin. Wear protective equipment when handling molten metal.

**Chronic:**

**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.



**WARNING:** This product can expose you to chemicals including [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](http://www.P65Warnings.ca.gov)

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

**WARNING:** This product contains 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

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>
LEAD	*	7439-92-1/231-100-4			
		(US)	0.05	0.05	-
		(EU)	-	0.15	-
		(Canada)	-	0.05	-
		(China)	-	0.05(dust)	-
			-	0.03(fume)	-
		(Mexico)	0.15	-	-
		(Singapore)	0.15	-	-
		(Germany)	-	0.05	-

N.E. = Not established      EU = European Union Occupational Exposure Limits

### 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

<b>Flash Point:</b>	Not established.	<b>Method:</b>	Not established.
<b>Auto-ignition Temperature:</b>	Not established. Not flammable.		
<b>Flammable Limits:</b>	Limits not established. Massive metal is not flammable; however dust or powder may be flammable. Avoid accumulation of dusts.		
<b>Extinguishing Media:</b>	Use extinguishers appropriate for the surrounding fire conditions. Never add water to molten metal.		
<b>Special Fire Fighting Procedures:</b>	Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.		

## 6. ACCIDENTAL RELEASE MEASURES

<b>Spill or Leak Procedures:</b>	Contain spill. If molten, cool to allow metal to solidify. If a solid metal, wear gloves, pick up and return to process. If dust, wear recommended personal protective equipment. DO NOT SWEEP, avoid generation of dust. Use a vacuum, place in barrels and return to process if applicable. Otherwise, dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. Metal may have reclaim value.
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## 7. HANDLING AND STORAGE

<b>Handling Precautions:</b>	Only dry metals should be added to molten bath. If working with molten metals, or exposed to fume or dust, use appropriate personal protective equipment.
<b>Storage Precautions:</b>	Store product in a cool, dry area away from incompatible materials.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering Controls:</b>	Local exhaust ventilation is recommended to control any air contaminants. Control concentration of all components so that their permissible exposure limits are not exceeded.
<b>Personal protection:</b>	
<b>Eyes:</b>	Chemical safety glasses/goggles and face shield with molten metal.
<b>Respirator:</b>	An authority approved or compliant marked air-purifying respirator with a fume/dust chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated or if in powder form. Avoid inhalation of lead dust.
<b>Skin:</b>	Gloves-leather or impervious (vinyl) type. Heat resistant gloves if handling hot metal. Safety type boots. Personal protective equipment is recommended when working with molten metal to avoid burns.
<b>Other:</b>	Lab coat, safety shower and eye-wash fountain in work area. Avoid the use of contact lenses in high fume areas.
<b>Work/Hygienic Practices:</b>	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 standard lead work practices.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Silver grey solid metal or powder form		
<b>Boiling Point:</b>	1,740 C (3,164F)		
<b>Odor:</b>	Odorless	<b>Melting Point:</b>	621F (327C)
<b>Specific Gravity:</b>	11.35	<b>pH:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable.	<b>Solubility in Water:</b>	Insoluble
<b>Vapor Density:</b>	(air=1) Not applicable.		207.2 g/mol

## 10. STABILITY AND REACTIVITY

<b>General:</b>	Stable.
<b>Conditions to Avoid:</b>	Not established.
<b>Incompatible Materials:</b>	Avoid contact with mineral acids.
<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

### Carcinogenicity: National Toxicity Program (NTP):

Reasonably anticipated to be a human carcinogen (Lead group entry Annex I)

**Occupational Safety & Health Administration (OSHA):** 1910.1025 (lead)

**U.N. International Agency for Research on Cancer (IARC):** Yes

Lead and Lead compounds are listed as possible carcinogens. 2B - Group 2B

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

**Other:** Chronic Toxicity: Lead can cause potential harm to the developing fetus.

RTECS: OF7525000

Reproductive toxicity:

Rat-inhalation-effects on newborns

Rat-oral-effects on newborns

Mouse-oral-effects on fertility

Tertogenicity:

Developmental toxicity- rat – inhalation-effects on embryo or fetus

Developmental toxicity – rat-oral-specific developmental abnormalities

Developmental toxicity –rat-oral-effects on embryo or fetus

Developmental toxicity-mouse-oral-effects on embryo or fetus

May cause damage to organs through prolonged or repeated exposure.

Signs and symptoms of exposure- anemia

## 12. ECOLOGICAL INFORMATION

Bioaccumulation: Oncorhynchus kisutch – 2 weeks

Toxicity to fish – mortality LOEC –oncorhynchus mykiss (rainbow trout) – 1.190 mg/l – 96h

Toxicity to algae – mortality EC50 – Skeletonema costatum – 7.94 mg/l – 10d

Toxic to the aquatic environment.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal of lead material.

## 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. In Europe follow the Special Waste Regulations.

## 14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

Solid metal- Not hazardous under shipping modes/ regulations.

North American Emergency Guide Book – Not classified

Marine Pollutant: No

For Metal Powder form only:

UN 3077, Environmentally Hazardous Substances, Solid, N.O.S., 9, PG III

Reportable spill Quantity: 10 lbs



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.).

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).

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). (GHS)

In China:

Decree No. 591: Regulations on the Control over Safety of Hazardous Chemicals

GB 30000.2-29-2013, Rules for classification and labeling of chemicals. (GHS)

GB/T 16483-2008, GB/T 17517-2013

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

All ingredients are listed on the China Chemical Inventory

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



WARNING: This product can expose you to chemicals including [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](http://www.P65Warnings.ca.gov)

SARA 313 Listing - 40 CFR 372.65: Lead CAS# 7439-92-1

All ingredients are listed on the EPA TSCA Inventory.

Most of the ingredients are listed on the Canadian Domestic Substance List.

EPA Genetic Toxicology Program - Lead CAS# 7439-92-1

## 16. OTHER INFORMATION

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	2
	<b>Fire:</b>	0
	<b>Reactivity:</b>	0

**Revised Date:** 10 SEPTEMBER 2018

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

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