1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: INDIUM TRICHLORIDE POWDER

SDS Number: SDS-IB006 Revised Date: 7 APRIL 2017

Product Use: Industrial Use - Indium Trichloride (InCl₃) (powder)

MANUFACTURER:

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

In Europe:
Indium Corporation of Europe
7 Newmarket Ct.
Kingston, Milton Keynes, UK, Mk 10 OAG
Information: +44 [0] 1908 580400

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

EMERGENCY PHONE:
CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887
2. HAZARDS IDENTIFICATION

GHS:

Signal Word: Danger
Hazard statement(s)
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
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 Take off contaminated clothing and wash before reuse
P301 + P311 IF SWALLOWED: Call POISON CENTER or doctor/physician
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)

GHS Classification
Acute toxicity, Oral (Category 4)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)

PRIMARY ROUTES OF ENTRY:  CARCINOGEN LISTED IN:
√Eye   √Inhalation   √Skin   √Ingestion   NTP   IARC   OSHA   \Not Listed

POTENTIAL HEALTH EFFECTS:

Eye Contact: May cause severe irritation and possible burns.
Ingestion: Harmful if swallowed. May cause burns to the gastrointestinal tract. Kidney and liver damage from injected indium compounds has been reported based on limited animal testing.
Inhalation: May cause respiratory irritation or harm if inhaled. Severe exposure could cause pulmonary damage.
Skin Contact: May cause skin irritation or burns.
Chronic: Kidney and liver damage from injecting indium compounds has been reported based on limited animal testing but no systematic effects from human exposure has been reported.
Other: Hygiene practices should be in place when handling this product. Avoid breathing dust.
products for human consumption.

Warning: This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Trace levels of lead not intentionally added).

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #/EINECS</th>
<th>PEL</th>
<th>TLV-TWA</th>
<th>TLV-STEL</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>mg/m³</td>
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<tr>
<td>INDIUM TRICHLORIDE</td>
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</table>

N.E. = Not established  * Indium CAS# 7440-74-6

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. Not flammable.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.

Special Fire Fighting Procedures: Firefighters must wear NIOSH approved or equivalent self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Isolate spill and clean up with vacuum. Avoid conditions, which create fumes or fine dust. DO NOT SWEEP SOLIDS. Do not raise dust levels. Place material in proper waste container. An approved air purifying respirator with particulate cartridge and
other personal protective equipment such as gloves is recommended. Dispose of in accordance with Federal, State and Local regulations. In Europe dispose of following the Special Waste Regulations. Indium may have reclaim value.

7. HANDLING AND STORAGE

Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Wear appropriate personal protective equipment. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed.

Storage Precautions: Store product in tightly capped original containers in a cool, well ventilated and dry area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local and/or Mechanical (general) exhaust ventilation is recommended to control any air contaminants. Ventilation required if dust generated.

Personal Protection:

- **Eyes**: Wear chemical safety glasses/goggles. Face shield with splash application.
- **Respirator**: A NIOSH or authority approved air-purifying respirator with a particulate filter is recommended under certain circumstances where airborne concentrations are expected to be elevated. Confined areas may require additional protection.
- **Skin**: Gloves are recommended when handling solids. Disposable nitrile or other chemical glove.
- **Other**: Lab coat, apron, eyewash fountain in work area. Avoid the use of contact lenses in high fume or dusty 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**: White flakes/powder
- **Boiling Point**: No data available
- **Odor**: Odorless
- **Melting Point**: No data available
- **Specific Gravity**: 3.46 (H₂O=1)
- **pH**: Not available (Corrosive)
- **Vapor Pressure**: Not applicable.
- **Solubility in Water**: Soluble
- **Vapor Density**: Not applicable.
- **Molecular Weight**: 221.18
- **Flash Point**: Not applicable.
- **Viscosity**: No information available

10. STABILITY AND REACTIVITY

- **General**: Stable.
- **Conditions to Avoid**: Dust generation.
- **Incompatible Materials**: Strong acids
- **Hazardous Decomposition / Combustion**: Toxic chlorine fumes may form when heated to decomposition. May release toxic fumes. Deliquescent, hydrolyzes to form In (OH)₃
- **Hazardous Polymerization**: Will not occur.
11. TOXICOLOGICAL INFORMATION

Carcinogenicity:

- National Toxicology Program (NTP): No
- Occupational Safety & Health Administration (OSHA): No
- U.N. International Agency for Research on Cancer (IARC): No

See NIOSH RTECS# NL1400000
Oral toxicity – LD50 rat- 1,100 mg/kg

12. ECOLOGICAL INFORMATION

- Product not tested.

13. DISPOSAL CONSIDERATION

- Waste Disposal Method: Scrap indium metal may have some 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 regulations and requirements.
- Shipping Information: UN3260, Corrosive Solid, Acidic, Inorganic, N.O.S., 8, PG II (indium trichloride)

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: None

California Prop 65: Warning: This product contains a chemical known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Trace lead levels).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation.
WHMIS: Class E Corrosive Material

This product complies with EU Directive 2011/65/EU, Restriction of Hazardous Substances (RoHS 2).

Swiss Poison Class: 4

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

All ingredients are listed on the EPA TSCA Inventory, Japanese Chemical list, Korean Inventory, Philippines Inventory and Canadian Domestic Substance List.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
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<tr>
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<td>Fire:</td>
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<tr>
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<td>Physical Hazard:</td>
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Revised Date: 7 APRIL 2017

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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