# SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Identifier</th>
<th>INDIUM FLUOBORATE BATH</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS Number:</td>
<td>SDS-IB016</td>
</tr>
<tr>
<td>Revised Date:</td>
<td>13 DECEMBER 2018</td>
</tr>
<tr>
<td>Product Use:</td>
<td>Industrial Use: (B3F12In)</td>
</tr>
</tbody>
</table>

### MANUFACTURER:

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

**EMERGENCY PHONE:**
CHEMTREC 24 hrs.  
USA: 1 (800) 424-9300  
Outside USA: +1 (703) 527-3887  
In China: Emergency 86+ 4008417580

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

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

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: Danger

Hazard statement(s):
- H303 May be harmful if inhaled
- 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 +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)

Classification:
- Acute toxicity, inhalation-Category 5
- Skin corrosion-Category 1C

POTENTIAL HEALTH EFFECTS:

Eye Contact: May cause irritation.

Ingestion: May be 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. 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.

WARNING: This product can expose you to chemicals including [trace amounts of 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

Note: The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>% wt</th>
<th>CAS Registry #</th>
<th>PEL mg/m³</th>
<th>TLV-TWA mg/m³</th>
<th>TLV-STEL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDIUM FLUOBORATE BATH SOLUTION</td>
<td>100</td>
<td>27765-48-6</td>
<td>0.1 (as Indium*)</td>
<td>0.1</td>
<td>-</td>
</tr>
<tr>
<td>(EU)</td>
<td>-</td>
<td>-</td>
<td>0.1 (as Indium)</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>(Canada)</td>
<td>-</td>
<td>0.1 (as Indium)</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Singapore)</td>
<td>0.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>(Mexico)</td>
<td>-</td>
<td>0.1 (as indium)</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(China)</td>
<td>-</td>
<td>0.1 (as indium)</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N.E. = Not established  EU = EUROPEAN EXPOSURE LIMITS

* 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. Will not burn.

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 absorbent or neutralize. Place material in proper waste container. An approved air purifying respirator with acid gas/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. Use good work practices when handling corrosive material. 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.

Personal protection:
Eyes: Wear chemical safety glasses/goggles. The addition of a face shield may be necessary during some work practices.
Respirator: A NIOSH or EU approved air-purifying respirator with an acid gas/particulate filter is recommended under certain circumstances where airborne concentrations are expected to be elevated.
Skin: Compatible acid resistant chemical gloves are recommended.
Other: Lab coat, apron, eyewash fountain in work area. Avoid the use of contact lenses in high fume 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight Odor</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not established</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not established</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>1 (Corrosive)</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.
Conditions to Avoid: Not established.
Incompatible Materials: Bases
Hazardous Decomposition / Combustion: Toxic fumes may form at elevated temperatures. Deliquescent, hydrolyzes to form In (OH)₃
Hazardous Polymerization: Will not occur.
11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Carcinogenicity: National Toxicology Program (NTP):</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Safety &amp; Health Administration (OSHA):</td>
<td>No</td>
</tr>
<tr>
<td>U.N. International Agency for Research on Cancer (IARC):</td>
<td>No</td>
</tr>
<tr>
<td>LD50: Not established.</td>
<td>LC50: Not established.</td>
</tr>
<tr>
<td>Irritancy of Product: May be an irritant</td>
<td>Mutagenicity: Not established</td>
</tr>
<tr>
<td>Sensitization to Product: Not established</td>
<td>Teratogenicity: Not established</td>
</tr>
<tr>
<td>Reproductive Toxicity: Not established</td>
<td>Synergistic Products: Not established</td>
</tr>
</tbody>
</table>

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 international regulations and requirements.

**Shipping Name:** UN3264, Corrosive Liquid, Acidic, Inorganic, N.O.S., 8, PG III (indium fluoborate solution)

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).

**WHMIS:** Class E Corrosive Material

This product has been classified in accordance with the guidelines set by the Dept of Industrial Health of the Republic of Singapore.

This product has been classified in accordance with the Mexican guidelines, NOM-018-STPS-2015 and NOM-010-STPS-2014.
In China:
This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007.
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 in accordance with: Malaysian – OCCUPATIONAL SAFETY AND HEALTH
(CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER
2013 – (CLASS).

WARNING: This product can expose you to chemicals including [trace amounts of 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

SARA 313 listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

16. OTHER INFORMATION

HMIS Hazard Rating:          Health:       2
                             Fire:         0
                             Reactivity:   1

Revised Date:               13 DECEMBER 2018
Prepared by:                Nancy Swarts, Indium Corporation of America
Approved by:                Nancy Swarts, Indium Corporation of America

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