SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 66 SOLDERING FLUX
SDS Number: SDS-HG4102
Revised Date: 12 SEPTEMBER 2018
Product Use: Industrial Use - Solder Flux

MANUFACTURER:

In America:
The Indium Corporation of America®.
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Asia-Pacific Operations-Singapore
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Information: +65 6268-8678

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No. 428 Xinglong Street
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Suchun Industrial Square
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Jiangsu Province, China 215126
Information: (86) 512-6283-4900
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
\(\bigcirc\) Eye  \(\bigcirc\) Inhalation  \(\bigcirc\) Skin  \(\bigcirc\) Ingestion  NTP  IARC  OSHA  \(\bigcirc\) Not Listed

Carcinogen listed in

GHS:

- Signal word: Warning
- Hazard statement(s)
  - H314  Causes severe skin burns and eye damage
  - H318  Causes serious eye damage
  - H335  May cause respiratory irritation
- 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 + 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)

Classification
- Skin corrosion (Category 1B)
- Serious eye damage (Category 1)
- Specific target organ toxicity-single exposure-Category 3-respiratory system

POTENTIAL HEALTH EFFECTS:

- **Eye Contact:** Vapors may be are corrosive and irritating. Damage can occur from splashes. May cause burns to the eyes.
- **Ingestion:** Corrosive, may cause burns or other harm.
- **Inhalation:** May be corrosive and irritating to the respiratory tract.
- **Skin Contact:** Corrosive. May cause irritation, redness and burns.
- **Chronic:** Prolonged exposure to vapors may cause skin and respiratory tract irritation.

**WARNING:** This product can expose you to chemicals including [trace amounts of 1,4 dioxane, acetaldehyde, ethylene oxide] which are known to the State of California to cause cancer and [trace amounts of ethylene oxide] which is known to the State of California to 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, manufacture, market or endorse any of it's
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>WATER</td>
<td>70-75</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
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<tr>
<td>HYDROBROMIC ACID</td>
<td>10-15</td>
<td>10035-10-6(US)</td>
<td>10</td>
<td>-</td>
<td>9.9(ceiling)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(EU) 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Canada) -</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Singapore) -</td>
<td>9.9(ceiling)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Mexico) -</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(China) -</td>
<td>10(max)</td>
</tr>
<tr>
<td>PROPRIETARY ADDITIVES</td>
<td>10-20</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

N.E. = Not established

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:** None  **Method:** Not applicable

**Auto-ignition Temperature:** Not established

**Flammable Limits:** Not established

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

**Special Fire Fighting Procedures:** Standard fire fighting equipment

6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** DO NOT allow material to enter sewer system or waterway. Wear personal protective equipment, such as gloves and depending on the quantity a respirator with acid gas cartridges may be required. Clean up by

7. HANDLING AND STORAGE
Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Wear personal protective equipment.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area away from sources of ignition. 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: Face velocity >2.1 cubic feet/minute in confined areas. Exhaust ventilation is recommended to keep exposure limits as low as possible.

Personal Protection:
Eyes: Chemical safety glasses/goggles. Face shield for splash hazards.
Respirator: An approved or compliant marked air-purifying respirator with an acid gas chemical cartridge is recommended where airborne concentrations are expected to be elevated.
Skin: Compatible chemical resistant gloves.
Other: Lab coat, eyewash fountain in work area. Avoid the use of contact lenses in high fume/splash areas.
Work/Hygienic Practices: 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: Clear
Odor: Slight amine
Specific Gravity: 1.080@60F
Vapor Pressure: Not determined
Vapor Density: Not determined
Volatile by Volume: 90%
Boiling Point: 212°F
Melting Point: <0°F
pH: <1
Solubility in Water: Soluble
Evaporation Rate: 1

10. STABILITY AND REACTIVITY
General: Stable.
Conditions to Avoid: Direct heat, open flames and storage in aluminum.
Incompatible Materials: Ammonia, strong oxidizing agents, alkalis
11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Carcinogenicity:</th>
<th>NTP: No</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA: No</td>
<td></td>
</tr>
<tr>
<td>IARC: No</td>
<td></td>
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</tbody>
</table>

LD50: Not established.  
LC50: Not established.

12. ECOLOGICAL INFORMATION

Biodegradability: Data not established.
Aquatic Toxicity: Data not established.

13. DISPOSAL CONSIDERATION

Waste Disposal Method: 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 for ground, air and sea.
UN3265, Corrosive Liquid, Acidic, Organic, N.O.S., 8, PG III (hydrobromic acid)

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.).

The information in this Material Safety Data Sheet meets the requirements of the EU under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2) Regulation 6.

This product has been classified in accordance with the hazard criteria of the Commission Directive 91/155/EEC and EH40.

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

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 under the Mexican regulations 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 1,4 dioxane, acetaldehyde, ethylene oxide] which are known to the State of California to cause cancer and [trace amounts of ethylene oxide] which is known to the State of California to cause 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

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

Revised Date: 12 SEPTEMBER 2018

Product Use: Industrial Use - Solder Flux

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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