SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 1075-EXR-30 LIQUID FLUX
SDS Number: SDS-HG 010
Product Use: Industrial Use - Wave Solder Flux

MANUFACTURER:

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

Chicago Material 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
In China: Emergency 86+ 4008417580

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
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Carcinogen listed in

- Eye  NTP
- Inhalation  IARC
- Skin  OSHA
- Ingestion  Not Listed

GHS: No GHS hazards.

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)

POTENTIAL HEALTH EFFECTS:

Eye Contact: May cause serious eye irritation.
Ingestion: May cause irritation.
Inhalation: May cause irritation.
Skin Contact: May cause harm to the skin upon contact. May cause skin irritation.

Chronic: Not established.

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

WARNING: This product can expose you to chemicals including [1,4 dioxane] which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

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>85-95</td>
<td>7732-18-5 (US)</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td>2-12</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>CARBOXYLIX ACID</td>
<td>3</td>
<td>68603-87-2 (US)</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

<table>
<thead>
<tr>
<th>Flash Point:</th>
<th>None</th>
<th>Method:</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-ignition Temperature:</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammable Limits:</td>
<td>Limits not established.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extinguishing Media:</td>
<td>Use extinguishers appropriate for the surrounding fire conditions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Fire Fighting Procedures:</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

| Spill or Leak Procedures: | Do not allow product to enter sewer system or waterway, unless approved to do so. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. |

7. HANDLING AND STORAGE

| Handling Precautions: | 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. 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. Recommended personal protective equipment. |
| Personal protection: | |
| Eyes: | Chemical safety glasses/goggles. Face shield for splash hazards. |
| Respirator: | A NIOSH approved or EU compliant CE marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated. |
| Skin: | Compatible chemical resistant gloves. Disposable latex gloves not recommended. |
| Other: | Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses. |
| Hygienic | Maintain good housekeeping. Clean up spills immediately. |
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid, clear</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>100°C (212°F)</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild characteristic odor.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>0°C (32°F)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.015 @60°F</td>
</tr>
<tr>
<td>pH</td>
<td>2.8</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>23.7 mm HG @25°C</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>(air=1) Not applicable.</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

- **General:** Stable.
- **Conditions to Avoid:** Direct heat, open flames and storage in aluminum.
- **Incompatible Materials:** Strong alkali.
- **Hazardous Decomposition / Combustion:** Carbon dioxide/carbon monoxide.
- **Hazardous Polymerization:** Will not occur.

11. TOXICOLOGICAL INFORMATION

- **Carcinogenicity:**
  - NTP: No
  - OSHA: No
  - IARC: No
- **LD50:** Not established.
- **LC50:** Not established.

12. ECOLOGICAL INFORMATION

- Product not tested.

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. Not regulated under US DOT (United States Department of Transportation).
- Non hazardous
- **UN - none**

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: May not be classified.

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

SARA 313 Listing - 40 CFR 372.65: (contains trace levels of 1, 4 dioxane)

WARNING: This product can expose you to chemicals including [1,4 dioxane] which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

All ingredients are listed on the EPA TSCA Inventory.

Ingredients are listed on the Canadian Domestic Substance List.

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).

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire: 0</td>
</tr>
<tr>
<td></td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

Revised Date: 13 AUGUST 2018

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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