SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 1075 LIQUID FLUX
SDS Number: SDS-HG001
Product Use: Wave Solder Flux - mixture

MANUFACTURER:

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

In Europe:
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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:
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:

- Eye
- Inhalation
- Skin
- Ingestion

Carcinogen listed in

- NTP
- IARC
- OSHA
- Not Listed

GHS

No GHS hazard statements.

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:  Vapors, mist, liquid may be irritating.

Ingestion:  May cause irritation.

Inhalation:  Mists, vapors and splash may cause irritation, discomfort, itching, redness and swelling.

Skin Contact:  May cause 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</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>CARBOXYLIC ACID</td>
<td>3</td>
<td>68603-87-2</td>
<td>N.E</td>
<td>N.E</td>
<td>N.E</td>
</tr>
<tr>
<td>PROPRIETARY (NON-HAZ)</td>
<td>2 - 12</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: Not established. Method: Not established.
Auto-ignition Temperature: None
Flammable Limits: Limits not established.
Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.
Special Fire Fighting Procedures: None

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not allow material to enter sewer system or waterway. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. Product contains a substance that may be harmful to the aquatic environment.

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. Use exhaust ventilation especially when heating where vapors and mist may be generated. Avoid inhalation.

Personal protection:
Eyes: Chemical safety glasses/goggles. Face shield for splash hazard.
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 nitril or other rubber gloves.

**Other:** Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume/splash areas.

**Work/Hygienic Practices:** 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>Liquid, clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild characteristic odor.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.009</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>23.7 mm HG @25°C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>(air=1) Not applicable.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>100°C (212°F)</td>
</tr>
<tr>
<td>Melting Point</td>
<td>0°C (32°F)</td>
</tr>
<tr>
<td>pH</td>
<td>2.8 (as is) 3.5 (1% solution)</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</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**

<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>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LD50</th>
<th>Not established.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

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).

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.

Regulatory Information China:
GB/T 16483-2008, GB/T 17519-2013, Safety Data Sheets for Chemical Products
GB 30000.2-29-2013, Rules for classification and labeling of chemicals (GHS)
Decree No. 591: Regulations on the Control Over Safety of Hazardous Chemicals.
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 Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS).

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 [1,4 dioxane] which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

SARA 313 Listing - 40 CFR 372.65: trace amounts of 1, 4 Dioxane (<0.0.5%)

All ingredients are listed on the EPA TSCA Inventory.
Ingredients are listed on the Canadian Domestic Substance List.
16. OTHER INFORMATION

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

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

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