1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 1075-EXF-30 LIQUID FLUX
SDS Number: SDS-HG4052
Product Use: Industrial use- Soldering Flux

Revised Date: 7 FEBRUARY 2015

MANUFACTURER:

In America:
The Indium Corporation of America
1676 Lincoln Ave., Utica NY 13502
Information: (315) 853-4900
nswarts@indium.com

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7 Newmarket Ct,
Kingston, Milton Keynes, UK, MK 10 OAG
Information: +44 [0] 1908 580400

In Asia:
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Asia-Pacific Operations-Singapore
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Singapore 628908
Information: +65 6268-8678

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

PRIMARY ROUTES OF ENTRY: Carcinogen listed in

- Eye
- Inhalation
- Skin
- Ingestion

NTP IARC OSHA Not Listed

POTENTIAL HEALTH EFFECTS:

Eye Contact: Vapors may be irritating, liquid may damage eye tissue.

Ingestion: May cause irritation.

Inhalation: May cause irritation.

Skin Contact: May cause irritation.

Chronic: Not established.

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>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>WATER</td>
<td>60-75</td>
<td>7732-18-5</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td>22-37</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

N.E. = Not established

PRODUCT DOES NOT CONTAIN ANY EU REACH SUBSTANCES OF VERY HIGH CONCERN

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>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-ignition Temperature:</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammable Limits:</td>
<td>N/A</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>Standard fire fighting equipment.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** DO NOT allow material to enter sewer system or waterway. Clean up by absorption. Dispose of following all Federal, State and Local regulations.

### 7. HANDLING AND STORAGE

**Handling:** Keep containers tightly closed when not in use.

**Precautions:**

**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. Exhaust ventilation is recommended.

**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.

**Other:** Lab coat, eyewash fountain in work area. Avoid the use of contact lenses in high fume 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

**Appearance:** Liquid, clear

**Boiling Point:** 212F
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.029@60F</td>
</tr>
<tr>
<td>Melting Point</td>
<td>32F</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>ND</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Volatile by Volume</td>
<td>100%</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 regulations and requirements. Not hazardous under the shipping regulations.
North American Emergency Guide Book – Not applicable
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: Not classified

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

This product has been classified in accordance with Mexican regulations NOM-0180STPS-2000 and NOM-010-STPS-1999.

This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

**Safety Phrases:**

S20/21 When using do not eat, drink or smoke
S23 Do not breathe fumes
S24/25 Avoid contact with skin and eyes
S28 After contact with skin wash immediately with plenty of soap and water
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S7 Keep container tightly closed

**16. OTHER INFORMATION**

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

Revised Date: 7 FEBRUARY 2015

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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