1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WAVE SOLDER FLUX #1075-EXR-40  
SDS Number: SDS-HG018  
Product Use: Wave Solder Flux  
Revised Date: 10 January 2015

MANUFACTURER:

In America:  
The Indium Corporation of America  
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Information: (315) 853-4900  
nswarts@indium.com  

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Suchun Industrial Square  
Unit No. 14-C  
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Information: (86) 512-6283-4900

In Asia:  
Indium Corporation of America  
Asia-Pacific Operations-Singapore  
29 Kian Teck Avenue  
Singapore 628908  
Information: +65 6268-8678
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
⊙Eye  ⊙Inhalation  ⊙Skin  ⊙Ingestion  NTP  IARC  OSHA  ⊙Not Listed

GHS
Pictogram: None
Signal Word: None

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  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 + P341  IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351  IF IN EYES: Rinse continuously with water for several minutes (15 mins)

POTENTIAL HEALTH EFFECTS:

Eye Contact:  Vapors may be irritating.
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 it's products for human consumption.

WARNING:  This product contains chemicals known to the State of California to cause cancer and/or birth defects (or other reproductive harm).
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>PROPRIETARY (NON-HAZ)</td>
<td>1-11</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
<td></td>
</tr>
<tr>
<td>CARBOXYLIX ACID</td>
<td>4</td>
<td>68603-87-2</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 (SVHC)

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:  Not applicable

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.

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. 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. Recommend 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. Nitrile gloves recommended.

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

**Work/Hygienic Practices:** 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>1.021 @ 60°F</td>
</tr>
<tr>
<td>pH</td>
<td>2.8 (as is) 3.5 (1% solution)</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 determined</td>
</tr>
</tbody>
</table>

**10. STABILITY AND REACTIVITY**

**General:** Stable.

**Conditions to Avoid:** Not established.

**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.

Product mixture not tested.
12. ECOLOGICAL INFORMATION

Product not tested.

13. DISPOSAL CONSIDERATION

**Waste Disposal Method:** Dispose of in accordance with all Federal, State and Local environmental regulations.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Not regulated under US DOT (United States Department of Transportation).

UN: NONE
MARINE POLLTANT: NO

North American Emergency Guide Book – Not applicable

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 Mexican Standards: NOM-010-STPS-1999 and NOM-018-STPS-2000.

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.

**WARNING:** This product contains chemicals known to the State of California to cause cancer and/or birth defects (or other reproductive harm). (Trace amounts 1,4 dioxane 0.05%)

SARA 313 Listing - 40 CFR 372.65: 1,4 dioxane 0.05%

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

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
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S28</td>
<td>After contact with skin wash immediately with plenty of soap and water</td>
</tr>
<tr>
<td>S36/37/39</td>
<td>Wear suitable protective clothing, gloves and eye/face protection</td>
</tr>
<tr>
<td>S62</td>
<td>If swallowed, do not induce vomiting seek medical advice immediately and show container or label</td>
</tr>
<tr>
<td>S7</td>
<td>Keep container tightly closed</td>
</tr>
</tbody>
</table>

**16. OTHER INFORMATION**

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

**Revised Date:** 10 JANUARY 2015

**Prepared by:** Nancy Swarts, Indium Corporation of America

**Approved by:** Nancy Swarts, Indium Corporation of America

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