1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 1025 FLUX
SDS Number: SDS-HG403
Revised Date: 29 MARCH 2015
Product Use: Industrial Use - Wave Solder Flux (mixture)

MANUFACTURER:

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

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

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

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: Carcinogen listed in

- Eye
- Inhalation
- Skin
- Ingestion

NTP    IARC    OSHA    Not Listed

GHS:

Signal Word: Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor
H319 Causes serious eye irritation
H336 May cause drowsiness or dizziness

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking
P233 Keep container tightly closed
P240 Ground/Bond container and receiving equipment
P241 Use explosion-proof electrical/ventilating/lightening/equipment
P242 Use only non-sparking tools
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
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)

Classification:
Flammable Liquid – Category 2
Eye irritation – Category 2A
Specific target organ toxicity- single exposure – Category 3- central nervous system

POTENTIAL HEALTH EFFECTS:

Eye Contact: Vapors may be irritating, liquid may damage eye tissue.
Ingestion: May result in gastric disturbances, such as persistent nausea, vomiting and abdominal pain.
Inhalation: May cause headache, dizziness and nausea.
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.

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>ISOPROPANOL</td>
<td>40-70</td>
<td>67-63-0 (US)</td>
<td>980</td>
<td>983</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU) N.E.</td>
<td>999</td>
<td>1250</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Canada) N.E.</td>
<td>983</td>
<td>1228</td>
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<tr>
<td></td>
<td></td>
<td>(Mexico) N.E.</td>
<td>980</td>
<td>1225</td>
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<tr>
<td></td>
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<td>(Singapore) -</td>
<td>983</td>
<td>-</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(China) -</td>
<td>350</td>
<td>700</td>
<td></td>
</tr>
<tr>
<td>PROPRIETARY ADDITIVE</td>
<td>15-44</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

HEXYLENE GLYCOL 3-10 107-41-5 N.E N.E 121(CEILING)

(Canada) - - 120(CEILING)

(Mexico) - - 125(CEILING)

CARBOXYLIC ACID 01-05 - N.E. N.E. N.E.

Symbol: XI, F Risk Phrases: R36/37/38, R67

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: (12 C) 54 F Method: Closed Cup

Auto-ignition Temperature: None

Flammable Limits: Upper: 12 Lower: 2

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions (water/dry chemical).
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not allow material to enter sewer system or waterway. Eliminate sources of ignition. Contain spill and absorb if possible. Dispose of following all Federal, State and Local regulations. In the EU refer to the Special Waste Regulations. Keep unauthorized personnel away.

7. HANDLING AND STORAGE

Handling Precautions: Keep containers tightly closed when not in use. Use care to avoid spills. Wear personal protective equipment. Ground containers. Keep away from sources of heat.

Storage Precautions: Store product in tightly capped original containers in a cool, dry and ventilated area. Refer to product label for specific storage temperature requirements. Rotate stock to ensure use before expiration date on the label. Keep away from sources of heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Ventilation should be sufficient to reduce exposure. Use exhaust ventilation.

Personal protection:

Eyes: Chemical safety glasses/splash goggles/face shield. Use face shield for splash hazards.

Respirator: An authority approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated. Additional protection as warranted.

Skin: Compatible chemical resistant 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, light straw</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcoholic odor.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.956 @ 60F</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>33 mm HG @68 F</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.1</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>(80.6 C) 177°F</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>1.7</td>
</tr>
</tbody>
</table>
% Volatiles by volume: 80

10. STABILITY AND REACTIVITY
   General: Stable.
   Conditions to Avoid: Direct heat, open flames and storage in aluminum.
   Incompatible Materials: Strong alkali, halogens, phosphorus, monomers, aldehydes & trichlorides
   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.
   Shipping Name: UN1219, ISOPROPANOL, 3, PG II MIXTURE

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

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

Canadian WHMIS: Division 2 Class B  FLAMMABLE  D2B Toxic Material Causing Other Toxic Effects (eye irritation in animals).

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 using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace.

SARA 313 Listing - 40 CFR 372.65: None

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

XI, F

Risk Phrases:

R36/37/38 Irritating to eyes, respiratory system and skin
R 11 Highly Flammable
R67 Vapors may cause drowsiness and dizziness

Safety Phrases:

S20/21 When using do not eat, drink or smoke
S16  Keep away from sources of ignition – “No Smoking”
S23  Do not breathe fumes
S24/25 Avoid contact with skin and eyes
S27  Take off immediately all contaminated clothing
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
S62  If swallowed, do not induce vomiting seek medical advice immediately and show container or label
S7  Keep container tightly closed
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating</th>
<th>Health</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire</td>
<td>3</td>
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<tr>
<td></td>
<td>Reactivity</td>
<td>0</td>
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</table>

Revised Date: 29 MARCH 2015

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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