SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WF-1080-T FLUX THINNER
SDS Number: SDS-10005A
Revised Date: 2 NOVEMBER 2018

Product Use: Industrial Use – Water Soluble Solder Flux

MANUFACTURER:
The Indium Corporation of America®
34 Robinson Rd., Clinton, New York 13323
Information: (315) 853-4900
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China: Emergency 86+ 4008417580

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Singapore 628908
Information: +65 6268-8678

In China:
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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:

Symbol: Warning

Hazard statement(s)

H225  Highly flammable liquid and vapor
H319  Causes serious eye irritation
H360  May damage fertility or the unborn child
H335  May cause respiratory 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/lighting equipment
P242  Use 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
P270  Do not eat, drink or smoke when using this product
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)

Classification:

- Flammable liquids- Category 2
- Serious eye irritation- Category 2A
- Reproductive toxicity- 1A
- Specific target organ toxicity, single exposure; respiratory tract- 3
- Specific target organ toxicity- single exposure – narcotic effects-3

POTENTIAL HEALTH EFFECTS:

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

Ingestion: May result in gastric disturbances such as nausea and vomiting. May be harmful.

Inhalation: May cause throat irritation, headache or dizziness. May be harmful.

Skin Contact: May cause irritation or defatting of the skin with irritation, dryness and cracking.

Chronic: Not established.
WARNING: This product can expose you to chemicals including [trace amounts of acetaldehyde, methyl isobutyl ketone] which are known to the State of California to cause cancer and [methanol, methyl isobutyl ketone] which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

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-STE L mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>10</td>
<td>7732-18-5 (US)</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>ETHANOL MIXTURE</td>
<td>90</td>
<td>64-17-5(US)</td>
<td>1884 -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU)</td>
<td>1920 -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Singapore)</td>
<td>1880 -</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Mexico)</td>
<td>1900 -</td>
<td>-</td>
<td>-</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: 13-16C(55-60F) Method: TCC

Auto-ignition Temperature: Not available

Flammable Limits: Upper limit 19. Lower limit 3.3.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions: large fires use alcohol resistant form/water to cool containers/ small fires use dry chemicals/ CO2, water spray or alcohol resistant form.

Special Fire Fighting Procedures: Standard fire - fighting equipment: clothing and SCBA.

Alcohol vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back.
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not allow material to enter sewer system or waterway. Wear personal protective equipment, such as gloves and depending on the quantity a respirator with organic cartridges may be required. Clean up by absorption. Eliminate sources of ignition. Keep unnecessary personnel away. Put clean-up materials in a properly labeled metal drum. 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. Ground containers and dispensing equipment. Keep away from sources of ignition.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area away from sources of ignition. 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 required to keep exposure limits as low as possible.

Personal protection:

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

Respirator: An approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated or when working in confined areas.

Skin: Compatible chemical resistant gloves (rubber/neoprene or vinyl). Latex not recommended.

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

<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>Alcoholic</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.822</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>59.45 hPa</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>1.6</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>78.5°C (174°F)</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>7.0</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Completely soluble</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Storage in aluminum. Avoid contact with strong oxidizers, excessive heat, sparks or open flame.
11. TOXICOLOGICAL INFORMATION

Carcinogenicity:
- NTP: No
- OSHA: No
- IARC: No

LD₅₀: Not established.
LC₅₀: Not established.

Product not tested.
Ethanol Oral LD₅₀ >5000 mg/kg, rat
Ethanol Inhalation LC₅₀ > 20 mg/l, rat

Product contains a substance that may cause harm to breast-fed children.

12. ECOLOGICAL INFORMATION

Product not tested. Low acute toxicity to fish.

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. Flammable liquid.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

Shipping: UN 1170, Ethanol Solutions, 3, PG II

UN 1170 Flammable Liquid

15. REGULATORY INFORMATION

The information in this Safety Data Sheet meets the requirements of the United States Occupational...
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

Canadian WHMIS: Class B Flammable Division 2
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 in accordance with: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS).

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 the Mexican regulations: NOM – 018-STPS-2015 and NOM-010-STPS-2014.

WARNING: This product can expose you to chemicals including [trace amounts of acetaldehyde, methyl isobutyl ketone] which are known to the State of California to cause cancer and [methanol, methyl isobutyl ketone ] which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

SARA 313 Listing - 40 CFR 372.65:
Ethyl Alcohol

All ingredients are listed on the EPA TSCA Inventory.
### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire:</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Reactivity:</td>
<td>0</td>
</tr>
</tbody>
</table>

**Revised Date:** 2 NOVEMBER 2018  
**Prepared by:** Nancy Swarts, Indium Corporation of America  
**Approved by:** Nancy Swarts, Indium Corporation of America

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