SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 7833 LIQUID FLUX
SDS Number: SDS-HG4064  Revised Date: 23 AUGUST 2018
Product Use: Industrial Use - Solder Flux

MANUFACTURER:

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

In Europe:
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Kingston, Milton Keynes, UK, MK 10 OAG
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In Asia:
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Asia-Pacific Operations-Singapore
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Singapore 628908
Information: +65 6268-8678

EMERGENCY PHONE:
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USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887

In China:
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No. 428 Xinglong Street
Suzhou Industrial Park
Suchun Industrial Square
Unit No. 14-C
Jiangsu Province, China  215126
Information: (86) 512-6283-4900

http://www.indium.com
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  
<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>X</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogen listed in</td>
<td>NTP</td>
<td>IARC</td>
<td>OSHA</td>
<td>XNot Listed</td>
</tr>
</tbody>
</table>

GHS:

Signal Word: Danger

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 nausea and vomiting.

Inhalation:  May cause mild throat irritation, headache or dizziness. May cause occupational asthma.

Skin Contact:  May cause irritation or dermatitis.

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](http://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/m^3)</th>
<th>TLV-TWA (mg/m^3)</th>
<th>TLV-STEL (mg/m^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>70-75</td>
<td>67-63-0 (US)</td>
<td>980</td>
<td>983</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU)</td>
<td>-</td>
<td>999</td>
<td>1250</td>
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<td>(Canada)</td>
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<td>1228</td>
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<tr>
<td></td>
<td></td>
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<td>983</td>
<td>-</td>
<td>1230</td>
</tr>
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<td></td>
<td></td>
<td>(Mexico)</td>
<td>-</td>
<td>980</td>
<td>1225</td>
</tr>
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</tr>
<tr>
<td>RESIN</td>
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<td>8050-09-7</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU)</td>
<td>0.5</td>
<td>-</td>
<td>0.15</td>
</tr>
<tr>
<td>PROPRIETARY ALCOHOL</td>
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<td>1900</td>
<td>1880</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU)</td>
<td>-</td>
<td>1920</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Canada)</td>
<td>-</td>
<td>1884</td>
<td>2355</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Mexico)</td>
<td>-</td>
<td>1900</td>
<td>-</td>
</tr>
<tr>
<td>PROPRIETARY ALCOHOL</td>
<td>5-10</td>
<td>125(Ceiling)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Canada)</td>
<td>120(Ceiling)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Singapore)</td>
<td>-</td>
<td>-</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Mexico)</td>
<td>-</td>
<td>-</td>
<td>125</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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>13°C (55°F)</td>
</tr>
<tr>
<td>Method</td>
<td>TCC</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not established</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Upper limit 12. Lower limit 2.</td>
</tr>
<tr>
<td>Extinguishing Media</td>
<td>Use extinguishers appropriate for the surrounding fire conditions.</td>
</tr>
<tr>
<td>Special Fire Fighting Procedures</td>
<td>Standard fire fighting equipment</td>
</tr>
</tbody>
</table>

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.

**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 recommended to keep exposure limits as low as possible.

**Personal protection:**

- **Eyes:** Chemical safety glasses/goggles. Face shield for splash hazard.
- **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.
- **Skin:** Compatible chemical resistant gloves.
- **Other:** Lab coat, eyewash 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>Amber</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>81°C (177°F)</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcoholic</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.844@60°F</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

General: Stable.
Conditions to Avoid: Direct heat, open flames and storage in aluminum.
Incompatible Materials: phosphorus, halogens, anhydrides, 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

Biodegradability: Data not established.
Aquatic Toxicity: Data not established.

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.
UN1219, Isopropanol, 3, PGII (solution)

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).

Canadian WHMIS: Class B Division 2 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.

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

This product has been classified in accordance with the Mexican regulations: NOM – 018-STPS-2015 and NOM-010-STPS-2014.

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

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

16. OTHER INFORMATION

HMIS Hazard Rating:
Health: 2
Fire: 3
Reactivity: 0

Revised Date: 23 AUGUST 2018

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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