SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: TACFLUX 010A
SDS Number: SDS-5141
Revised Date: 31 OCTOBER 2018

Product Use: Industrial Use - Tacflux used in soldering applications.

MANUFACTURER:

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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:

- Eye
- Inhalation
- Skin
- Ingestion

Carcinogen listed in:

- NTP
- IARC
- OSHA
- Not Listed

Signal Word: Warning

Hazard statement(s)

- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H410 Very toxic to aquatic life with long lasting effects

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 +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:

- Skin irritant- Category 2
- Eye irritation- Category 2B

POTENTIAL HEALTH EFFECTS:

Eye Contact: May cause burns to the eyes if not removed promptly. Causes eye irritation.

Ingestion: May cause irritation.

Inhalation: Heated vapor concentrations may cause irritation if inhaled.

Skin Contact: Causes skin irritation.

Chronic: Not established.

NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of its product’s 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>POLYGLYCOL ETHER</td>
<td>60-80</td>
<td>9038-95-3</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
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<tr>
<td>CARBOXYLIC ACID</td>
<td>1-10</td>
<td>70248-25-8</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
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<tr>
<td>ALCOHOLS</td>
<td>10-30</td>
<td>68603-15-6</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</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: Not established.

Method: Not established.

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established, not flammable.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.

Special Fire Fighting Procedures: Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Wear a respirator and appropriate Personal Protective (See Exposure Controls/Personal Protective Section). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. 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. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Empty containers may be hazardous as they contain product residue.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Good general ventilation should be sufficient to control airborne levels.

Personal Protection:

- **Eyes:** Chemical safety glasses/goggles. Face shield for splash hazards.
- **Respirator:** An authority approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated.
- **Skin:** Compatible chemical resistant gloves. Protective outer garment, apron. Sleeves as appropriate.
- **Other:** 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. 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:** Flux
- **Odor:** Mild characteristic odor.
- **Specific Gravity:** Not applicable.
- **Vapor Pressure:** Not applicable.
- **Solubility in Water:** Insoluble
- **Boiling Point:** Not applicable.
- **Melting Point:** Not applicable.
- **pH:** Not applicable.
- **Vapor Density:** (air=1) Not applicable.

10. STABILITY AND REACTIVITY

- **General:** Stable.
- **Conditions to Avoid:** Freezing temperatures. High temperatures.
- **Incompatible Materials:** Not established
- **Hazardous Decomposition / Combustion:** Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
- **Hazardous Polymerization:** Will not occur.

11. TOXICOLOGICAL INFORMATION

- **Carcinogenicity:**
  - NTP: No (National Toxicology Program)
  - OSHA: No (Occupational Safety and Health Administration)
  - IARC: No (International Agency for Research on Cancer)

- **LD50:** Not established.
- **LC50:** Not established.
- **Other:** Product not tested.

Contains an ingredient: Drauze test, rabbit, eye: 100 ul Moderate
Draize test, rabbit, skin: 500 ul Severe
Oral, rat: LD50 = 2100 mg/kg
Skin, rabbit: LD50 = 5 ml/kg
12. ECOLOGICAL INFORMATION

Product has not been tested. Some of the raw ingredients have not been individually tested. The following is information on ingredients that have testing or other information. Please note that this does not reflect the end product.

- 8% not readily biodegradable.
- 2% difficult to degrade biological.
- Fishtoxicity – Leuciscus idus LC50 > 10,000 mg/l/96h
  - Daphniatoxicity EC/LC50 (48h): 0.6 mg/l
  - Bacteriatoxicity EC/LC50(0.5h) > 10,000 mg/l log POW: 45

Harmful to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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. Contains an ingredient classified as a severe marine pollutant.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

- Non-hazardous under US DOT/IATA as defined under the US Department of Transportation’s regulations found in 49 CFR 171.4.

IMDG: (49 CFR 172.322)

UN3082, Environmentally hazardous substance, liquid, N.O.S., 9, PGIII (alkylphenol) (Severe Marine Pollutant)

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.).

- SARA 313 Listing - 40 CFR 372.65 - None
- All ingredients are listed on the USEPA TSCA Inventory.

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).
Canadian WHMIS: contains a substance classified as causing burns.

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 Mexican regulations NOM-0180STPS-2015 and NOM-010-STPS-2014.

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: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS).

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>1</td>
</tr>
<tr>
<td></td>
<td>Reactivity:</td>
<td>0</td>
</tr>
</tbody>
</table>

Revised Date: 31 OCTOBER 2018

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

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Note: This SDS may be translated into an international language. If there is any misinterpretation or misunderstanding of any words or phrases that may occur within any translation the ENGLISH language shall always prevail.