**SAFETY DATA SHEET**

### 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Identifier:</th>
<th>TACFLUX 089 HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS Number:</td>
<td>SDS- 5049</td>
</tr>
<tr>
<td>Revised Date:</td>
<td>14 FEBRUARY 2019</td>
</tr>
<tr>
<td>Product Use:</td>
<td>INDUSTRIAL USE (MIXTURE) - Soldering Flux</td>
</tr>
</tbody>
</table>

**MANUFACTURER:**

The Indium Corporation of America®
34 Robinson Rd., Clinton, New York 13323
Information: (315) 853-4900
NSWARTS@INDIUM.COM

**CHEMTREC 24 hrs.**

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

**In Europe:**

Indium Corporation of America ® (European Operations)
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

**In Asia:**

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

Signal Word: Warning
Hazard statement(s)
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
EUH208 Contains rosin. May produce an allergic reaction
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 +314 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)
P501 Dispose of contents/container in accordance with local laws.

Classification:
Sensitization skin (Category 1B)
Serious eye irritation (Category 2A)
Respiratory sensitizer- Category1B

POTENTIAL HEALTH EFFECTS:

Eye Contact: Irritating to the eyes and if not removed promptly, may result in serious eye irritation. Do not allow material to come in contact with the eyes.

Ingestion: May cause irritation.

Inhalation: Heated vapor concentrations may be harmful if inhaled. Irritating to respiratory tract. Rosin may cause occupational asthma.

Skin Contact: May cause skin irritation. Allergic reactions are possible, especially with repeated or prolonged exposure.

Chronic: Not established.

NOTE: The Indium Corporation does not recommend, manufacture, market or endorse any of it's 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>ROSIN</td>
<td>40-45</td>
<td>65997-05-9</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(EU) 0.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N.E.</td>
<td>0.15 (sensitiser)</td>
</tr>
<tr>
<td>POLYGLYCOL ETHER</td>
<td>35-40</td>
<td>9038-95-3</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>CAPRIC ACID</td>
<td>15-25</td>
<td>67762-36-1</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>(FATTY ACID)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N.E. = Not established          EU = European Union Occupational Exposure Limits

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 ignitable

Auto-ignition Temperature: Not established.

Flammable Limits: Not flammable.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions, such as water spray, or carbon dioxide.

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 Protection (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. Ensure area is properly vented. 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. Storage temperature: 0-30C.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Controls:** Good general exhaust ventilation should be sufficient to control airborne levels and keep exposures to 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 under certain circumstances where airborne concentrations are expected to be elevated.

**Skin:** Compatible chemical resistant gloves. Protective outer garment, apron and sleeves as appropriate. Protect the skin from direct exposure.

**Other:** 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. Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Flux-yellow</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not established</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild characteristic odor.</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not established</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not established</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable, not corrosive</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not established</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>(air=1) Not applicable.</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not flammable/Not ignitible</td>
</tr>
</tbody>
</table>

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**10. STABILITY AND REACTIVITY**

**General:** Stable.

**Conditions to Avoid:** Freezing temperatures. High temperatures.

**Incompatible Materials:** Not established

**Hazardous Decomposition:** Not established

**Hazardous Polymerization:** Will not occur.

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**11. TOXICOLOGICAL INFORMATION**

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

**LD50:** Not established.

**LC50:** Not established.

**Other:** Prolonged or repeated exposure to rosin flux fume may cause workers to develop occupational asthma. None of the ingredients including proprietary are listed as a carcinogen.
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 international regulations and requirements. Not regulated under US DOT (United States Department of Transportation).

UN – none. Non-hazardous under all shipping modes. Not regulated by US DOT/IATA/IMDG.

Marine Pollutant: No

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).

WHMIS: D2B – Materials Causing Other Toxic Effects (irritant or sensitizer)

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-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).

SARA 313 Listing (TRI Reporting) - 40 CFR 372.65 - 14% Proprietary polyglycol ether
All ingredients are listed on the USEPA TSCA Inventory.
RoHS = Restriction of Hazardous Substances. Product does not contain any ingredients that are listed.

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

16. OTHER INFORMATION

HMIS Hazard Rating:  
- Health: 1  
- Fire: 0  
- Physical Hazard: 0

Revised Date: 14 FEBRUARY 2019
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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