SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: COATFLUX CF-100 LIQUID FLUX
SDS Number: SDS-5863 Revised Date: 15 SEPTEMBER 2020
Version: 1.1

Product Use: Industrial Use - Liquid flux for low-void solder bonding

MANUFACTURER:

In America:
The Indium Corporation of America®
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Information: (86) 512-6283-4900

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2. HAZARDS IDENTIFICATION

GHS
Classification
Flammable Liquid - Category 2
Eye irritation - Category 2A
Sensitization, skin - Category 1B
Sensitization, respiratory - Category 1B
Specific target organ toxicity - single exposure – Category 3, central nervous system
Respiratory irritation - Category 3

Signal Word: Danger
Hazard statement(s)
H225 Highly flammable liquid and vapor
H317 May cause an allergic skin reaction
H319 Causes eye irritation
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
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
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P270 Do not eat, drink or smoke when using this product
P273 Avoid breathing dust/fume/gas/mist/vapors/spray
P280 Wear protective gloves/protective clothing/eye protection/face protection
P362 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)

PRIMARY ROUTES OF ENTRY: Carcinogen listed in
⊗ Eye ⊗ Inhalation ⊗ Skin ⊗ Ingestion NTP  IARC OSHA ⊗ Not Listed

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 and damage to the mouth, esophagus and gastrointestinal tract.

Inhalation: Heated vapor concentrations may be harmful if inhaled. Irritating to respiratory tract. May cause headache or lightheadedness. 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 its 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>ROSIN</td>
<td>30-40</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>(EU) 0.05</td>
<td>N.E.</td>
<td>0.15</td>
</tr>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>50-65</td>
<td>67-63-0</td>
<td>980</td>
<td>983</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(EU) -</td>
<td>999</td>
<td>1250</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Canada) -</td>
<td>983</td>
<td>1228</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Mexico) -</td>
<td>980</td>
<td>1225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Singapore)</td>
<td>-</td>
<td>1230</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(China) -</td>
<td>350</td>
<td>700</td>
</tr>
<tr>
<td>FATTY ACIDS</td>
<td>5 – 10</td>
<td>67762-36-1</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>18 C (64 F)</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Limits not established. Flammable</td>
</tr>
<tr>
<td>Extinguishing Media</td>
<td>Use extinguishers appropriate for the surrounding fire conditions. Foam, dry chemical, water spray.</td>
</tr>
<tr>
<td>Special Fire Fighting Procedures</td>
<td>Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing. Evacuate area and fight fire from a safe distance. Containers can build up pressure if exposed to heat (fire) or flame.</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spill or Leak Procedures</td>
<td>Wear a respirator and appropriate Personal Protective (See Exposure Controls/Personal Protective Section). Size of spill shall determine respiratory protection from air purifying to self-contained breathing apparatus. Keep unnecessary and unprotected personnel from entering the spill area. 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.</td>
</tr>
</tbody>
</table>

7. HANDLING AND STORAGE

<table>
<thead>
<tr>
<th>Precaution</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling Precautions</td>
<td>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. Ground containers.</td>
</tr>
<tr>
<td>Storage Precautions</td>
<td>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.</td>
</tr>
</tbody>
</table>

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Control</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Controls</td>
<td>Exhaust point source ventilation should be sufficient to control airborne levels. Use ventilation.</td>
</tr>
<tr>
<td>Personal protection: Eyes</td>
<td>Chemical safety glasses/ splash goggles. Face shield for splash hazards.</td>
</tr>
<tr>
<td>Respirator:</td>
<td>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.</td>
</tr>
<tr>
<td>Skin:</td>
<td>Compatible chemical resistant gloves. Protective outer garment, apron or sleeves as appropriate and face shield. Latex gloves are not recommended.</td>
</tr>
<tr>
<td>Other:</td>
<td>Eyewash fountain in work area. Avoid the use of contact lenses.</td>
</tr>
<tr>
<td>Work/Hygienic Practices</td>
<td>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.</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid- yellowish clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight characteristic odor.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.9</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>(air=1) Not applicable.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</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>Not established</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: High temperatures, open flame.

Incompatible Materials: Not established

Hazardous Decomposition / Combustion: Not established

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: No
OSHA: No
IARC: No

LD50: Not established. LC50: Not established.

Isopropyl alcohol
LD 50- oral-rat-5,045 mg/kg
LC50-inhalation-rat-8h-16000 ppm
LD50 dermal-rabbit-12,800 mg/kg

12. ECOLOGICAL INFORMATION

Product not tested.

Isopropyl alcohol
Toxicity to fish- LC50-fathead minnow-9,640 mg/l-96h
EC50-water flea-5,102 mg/l-24h

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 waste.
## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

UN 1219, Isopropanol, 3, PG II


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).

Canadian WHMIS: Class B Division 2 Flammable, D2B Toxic Material Causing Other Toxic Effects (eye irritation in animals). D2B Materials Causing Other Toxic Effects –irritant.

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 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 Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2007.

SARA 313 Listing - 40 CFR 372.65 - None
All ingredients are listed on the USEPA TSCA Inventory.
All ingredients are listed on the Philippines Inventory of Chemicals.
All ingredients are listed on the Korean Existing Chemical List.
### 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>
</tr>
<tr>
<td></td>
<td>Physical Hazard:</td>
<td>0</td>
</tr>
<tr>
<td>Revised Date:</td>
<td>15 SEPTEMBER 2020</td>
<td></td>
</tr>
<tr>
<td>Prepared by:</td>
<td>Nancy Swarts, Indium Corporation of America</td>
<td></td>
</tr>
<tr>
<td>Approved by:</td>
<td>Nancy Swarts, Indium Corporation of America</td>
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</table>

The information and recommendations contained herein are, to the best of The Indium Corporation of America's knowledge and belief, accurate and reliable as of the date issued. The Indium Corporation of America does not warrant or guarantee their accuracy or reliability, and The Indium Corporation of America shall not be liable for any loss or damage arising out of the user thereof. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.