SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WF-9946-NP FLUX
SDS Number: SDS-7160
Product Use: INDUSTRIAL USE - SOLDERING FLUX
Revised Date: 12 JULY 2018

MANUFACTURER:

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

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Information: +65 6268-8678

EMERGENCY PHONE:
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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
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  Carcinogen listed in

- Eye   - NTP
- Inhalation - IARC
- Skin - OSHA
- Ingestion - Not Listed

GHS – global harmonized system

Signal Word: Danger

Hazard statement(s)

H225  Highly flammable liquid and vapor
H318  Causes serious eye damage
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 release to the environment
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 + P341  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

Eye damage – (Category 1)
Flammable liquids - (Category 2)
Specific target organ systemic toxicity (single exposure) – (Category 3), Central nervous system

POTENTIAL HEALTH EFFECTS:

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

Ingestion:  May cause irritation.

Inhalation:  May cause irritation, headache or dizziness.

Skin Contact:  Prolonged contact may cause irritation. May be harmful.
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>EINECS#</th>
<th>PEL (mg/m³)</th>
<th>TLV-TWA (mg/m³)</th>
<th>TLV-STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-PROPYL ALCOHOL</td>
<td>90-96</td>
<td>71-23-8/200-746-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PROPYL ALCOHOL)</td>
<td></td>
<td>(US)</td>
<td>500</td>
<td>100 ppm</td>
<td></td>
<td>625 (dermal)</td>
</tr>
<tr>
<td>(n-PROPANOL)</td>
<td></td>
<td>(EU)</td>
<td>-</td>
<td>500</td>
<td>625 (dermal)</td>
<td></td>
</tr>
<tr>
<td>ROSIN</td>
<td>1-3</td>
<td>65997-05-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EU)</td>
<td>0.05</td>
<td></td>
<td></td>
<td>0.15</td>
</tr>
<tr>
<td>PROPRIETARY ACTIVATORS</td>
<td>1 - 7</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</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: 22C (72F)  Method: TCC  Flammable
Auto-ignition Temperature: Not established
Flammable Limits: Not established
Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.
Special Fire Fighting Procedures: Standard firefighting equipment
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 when in use. Keep away from sources of heat.

Storage Precautions: Store product in tightly capped original containers in a cool, dry area, well ventilated 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. Keep exposure as low as possible.

Personal Protection:
Eyes: Chemical safety glasses/goggles. Face shield for splash hazards.
Respirator: A NIOSH 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 nitrile rubber gloves. Do not use latex gloves.
Other: Lab coat, sleeve protectors, 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>Yellow-liquid</td>
</tr>
<tr>
<td>Odor:</td>
<td>Alcoholic</td>
</tr>
<tr>
<td>Specific Gravity:</td>
<td>0.821</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not established</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>5.86</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Insoluble</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.
Conditions to Avoid: Direct heat, open flames and sparks.
Incompatible Materials: strong oxidizing agents
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.

N-propyl alcohol:
LD50-oral-rat-8038mg/kg
LC50 Inhalation-rat-1h-20000ppm
LC50 dermal-rabbit-4000 mg/kg
Eyes-rabbit Result: severe eye irritation

12. ECOLOGICAL INFORMATION
Product not tested.
N-propyl alcohol:
Toxicity to fish: LC50-fathead minnow-4555 mg/l-96h
Toxicity to daphnia and other aquatic invertebrates: EC50-water flea – 3642 mg/l-48h

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 regulations and requirements.
UN1274, n-propanol, 3, PG II

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 EPA TSCA Inventory.

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.

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

HMIS Hazard Rating: Health: 2
Fire: 3
Physical Hazards: 0

Revised Date: 12 JULY 2018
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America
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