INDIUM CORPORATION OF AMERICA ®
EUROPE®
ASIA-PACIFIC®
INDIUM CORPORATION (SUZHOU) ®
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 3545-P FLUX
SDS Number: SDS-4034
Product Use: Industrial use - Flux
Revised Date: 7 FEBRUARY 2015

MANUFACTURER:

In America:
The Indium Corporation of America
1676 Lincoln Ave., Utica NY 13502
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nswarts@indium.com

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Information: +44 [0] 1908 580400

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Asia-Pacific Operations-Singapore
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Singapore 628908
Information: +65 6268-8678

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

EMERGENCY PHONE:
CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887
3. HAZARDS IDENTIFICATION

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

GHS:

<table>
<thead>
<tr>
<th>Signal Word: Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard statement(s)</td>
</tr>
<tr>
<td>H225</td>
</tr>
<tr>
<td>H319</td>
</tr>
<tr>
<td>H336</td>
</tr>
</tbody>
</table>

**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 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351 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 cause persistent nausea, vomiting and abdominal pain. May cause irritation.

**Inhalation:** Vapor may cause irritation, headaches and or dizziness.

**Skin Contact:** Prolonged contact may cause irritation and dermatitis.

**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-STE L mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOPROPANOL</td>
<td>85-90</td>
<td>67-63-0 (US)</td>
<td>980</td>
<td>983</td>
<td>1225</td>
</tr>
<tr>
<td>(PROPAN-2-OL)</td>
<td></td>
<td>(EU)</td>
<td>-</td>
<td>999</td>
<td>1250</td>
</tr>
<tr>
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<td>(Canada)</td>
<td>-</td>
<td>983</td>
<td>1228</td>
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<tr>
<td></td>
<td></td>
<td>(Singapore)</td>
<td>983</td>
<td>-</td>
<td>1230</td>
</tr>
<tr>
<td></td>
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<td>(Mexico)</td>
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<td>980</td>
<td>1225</td>
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<td></td>
<td></td>
<td>(China)</td>
<td>-</td>
<td>350</td>
<td>700</td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td>10-15</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

Symbol: XI, F  
Risk Phrases: R36/37/38, R11
N.E. = Not established  
EU = European Exposure Limits

PRODUCT DOES NOT CONTAIN ANY EU REACH SUBSTANCES OF VERY HIGH CONCERN

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: 14°C (57°F)  
Method: Closed Cup

Auto-ignition Temperature: 750F

Flammable Limits: Upper: 12 ; Lower 2.0

Extinguishing Media: Dry chemical, Water or CO₂. Use extinguishers appropriate for the surrounding fire conditions.

Special Fire Fighting Procedures: Wear protective clothing and self contained breathing apparatus. Use water to cool fire exposed containers. Flammable vapors may travel great distances to ignition source and flash back.

6. ACCIDENTAL RELEASE MEASURES
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. 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 recommended.

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 where airborne concentrations are expected to be elevated.

Skin: Compatible chemical resistant gloves. Use gloves such as nitrile, which are compatible with alcohols and lower pH chemicals.

Other: Lab coat, eye-wash 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>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol odor.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.8178</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>33 mm HG @ 68F</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.1 (air=1)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>79°C (175F)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>1.7</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>% Volatiles by volume</td>
<td>85</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

General: Stable.

Conditions to Avoid: Direct heat, open flames and storage in aluminum.

Incompatible Materials: Anhydrides, halogens, phosphorus, trichlorides, monomers, aldehydes

Hazardous Decomposition / Combustion: Carbon dioxide/carbon monoxide.

Hazardous Polymerization: Will not occur.
11. TOXICOLOGICAL INFORMATION

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

LD50: Not established.  LC50: Not established.

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 regulations and requirements.
UN 1219, 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.
SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.
This product has been classified under the Mexican regulations NOM-018-STPS-2000 and NOM-010-STPS-1999.
This product has been classified using the Chinese Occupational Exposure Limit for Hazardous Agents in the Workplace, GBZ2-2002.

EC Classification, Packaging and Labeling Requirements:
Symbol and Hazard Classification of Product
XI,,F

Risk Phrases:
R36/37/38 Irritating to eyes, respiratory system and skin
R 11 Highly Flammable
R67 Vapors may cause drowsiness and dizziness

Safety Phrases:
S16 Keep away from sources of ignition - "No Smoking"
S20/21 When using do not eat, drink or smoke
S23 Do not breathe fumes
S24/25 Avoid contact with skin and eyes
S28 After contact with skin wash immediately with plenty of soap and water
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S62 If swallowed, do not induce vomiting seek medical advice immediately and show container or label
S7 Keep container tightly closed

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS Hazard Rating:</th>
<th>Health:</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Fire:</td>
<td>3</td>
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<tr>
<td></td>
<td>Physical Hazard:</td>
<td>0</td>
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</table>

Revised Date: 7 FEBRUARY 2015
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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