SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 3590-T FLUX
SDS Number: SDS-HG008 Revised Date: 22 JUNE 2018
Product Use: Industrial Use - No residue wave solder flux

MANUFACTURER:

In America:
The Indium Corporation of America®.
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Information: (315) 853-4900
nswarts@indium.com

In Europe:
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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

EMERGENCY PHONE:
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USA: 1 (800) 424-9300
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

http://www.indium.com
2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:  Carcinogen listed in

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

GHS

Signal Word: Danger

Hazard Statements:

H225  Highly Flammable liquid and vapor
H319  Causes serious eye 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 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
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:

Serious eye damage/eye irritant – Category 2
Flammable liquids - Category 2
Specific target organ systemic toxicity (single exposure) – Category 3

POTENTIAL HEALTH EFFECTS:

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

Ingestion:  May cause persistent nausea, vomiting and abdominal pain.

Inhalation:  Vapor may cause headaches and or dizziness. Irritating to respiratory tract.

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 it's products for human consumption.
WARNING: This product can expose you to chemicals including [trace amounts of 1,4 dioxane] which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### 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>ISOPROANOL</td>
<td>90-95</td>
<td>67-63-0 (US)</td>
<td>980</td>
<td>983</td>
<td>1225</td>
</tr>
<tr>
<td>(EU)</td>
<td></td>
<td>-</td>
<td>999</td>
<td>1250</td>
<td></td>
</tr>
<tr>
<td>(Canada)</td>
<td></td>
<td>-</td>
<td>983</td>
<td>1228</td>
<td></td>
</tr>
<tr>
<td>(Singapore)</td>
<td></td>
<td>993</td>
<td>-</td>
<td>1230</td>
<td></td>
</tr>
<tr>
<td>(Mexico)</td>
<td></td>
<td>-</td>
<td>980</td>
<td>1225</td>
<td></td>
</tr>
<tr>
<td>(China)</td>
<td></td>
<td>-</td>
<td>350</td>
<td>700</td>
<td></td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td>0 - 5</td>
<td>-</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>ORGANIC ACID</td>
<td>0 - 5</td>
<td>68603-87-2</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:** 12°C (54°F)

**Auto-ignition Temperature:** None

**Flammable Limits:** Upper: 12.7 @77°F; Lower 2 @ 77°F

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

**Special Fire Fighting**

Wear protective clothing. Use water to cool fire exposed containers.
6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: DO NOT allow material to enter sewer system or waterway. Wear personal protective equipment. Eliminate sources of ignition. Ventilate area in accordance with regulations. 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.

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. Keep away from flame, or ignition points.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Face velocity >2.1 cubic feet/minute in confined areas. Recommend exhaust ventilation to reduce exposure to vapors.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield for splash hazards.

Respirator: An authority approved or EU compliant CE marked air-purifying respirator with a fume/organic chemical cartridge is recommended where airborne concentrations are expected to be elevated. Additional protection especially in confined areas may be required.

Skin: Compatible chemical (alcohol) resistant gloves.

Other: Lab coat, eye-wash/shower 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>Liquid, clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol odor.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.808 @ 60°F</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>33 mm HG @68°F</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.1(air=1)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>79°C (175°F)</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>3.2 (as is) 3.6 (1% solution)</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Hazardous Decomposition /</td>
<td>Carbon dioxide/carbon monoxide.</td>
</tr>
<tr>
<td>Combustion</td>
<td></td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur.</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.
11. TOXICOLOGICAL INFORMATION

Carcinogenicity:  
NTP: No  
OSHA: No  
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 international regulations and requirements.

UN1219, Isopropanol, 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.).

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

Canadian WHMIS: Class B2 Flammable Liquid, 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.

In China:
Decree No. 591: Regulations on the Control over Safety of Hazardous Chemicals
GB 30000.2-29-2013, Rules for classification and labeling of chemicals. (GHS)
GB/T 16483-2008, GB/T 17517-2013
Information on exposure levels in China is from regulation document GBZ2-2007 Occupational Exposure Limit for Hazardous Agents in the Workplace.

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).

⚠️ WARNING: This product can expose you to chemicals including [trace amounts of 1,4 dioxane] which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

SARA 313 Listing - 40 CFR 372.65: trace amounts 1, 4 Dioxane

All ingredients are listed on the EPA TSCA Inventory.
Ingredients are listed on the Canadian Domestic Substance List.

16. OTHER INFORMATION

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

Revised Date: 22 JUNE 2018
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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