SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: FC-WS-HT-D
SDS Number: SDS-IN FC005
Revised Date: 5 DECEMBER 2018
Product Use: Industrial Use - Flip chip flux

MANUFACTURER:

In America:
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Singapore 628908
Information: +65 6268-8678

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Outside USA: +1 (703) 527-3887
In China: Emergency 86+ 4008417580

In China:
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Suchun Industrial Square
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Jiangsu Province, China 215126
Information: (86) 512-6283-4900

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

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

GHS:

Signal Word: Warning
Hazard statement(s)
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation
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 + 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:
Skin irritation (Category 2)
Eye irritation (Category 2A)
Specific target organ-single exposures (Category 3)- respiratory system

POTENTIAL HEALTH EFFECTS:

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

**Ingestion:** May be harmful if swallowed. May cause irritation.

**Inhalation:** Heated vapor concentrations may be harmful if inhaled or cause irritation.

**Skin Contact:** Causes skin irritation.

**Chronic:** Not established.

**WARNING:** This product can expose you to chemicals including [trace amounts of ethylene oxide and 1,4 dioxane] which is known to the State of California to cause cancer, and [trace amounts of ethylene oxide] which causes birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
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-STEAL mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALCOHOLS</td>
<td>35-45</td>
<td>68603-15-6</td>
<td>N.E.</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>PROPRIETARY</td>
<td>55-65</td>
<td>-</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

**Flash Point:** 300 C (572 F)  **Method:** Not established.

**Auto-ignition Temperature:** Not established.

**Flammable Limits:** Limits not established

**Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions. Foam, dry chemical, water spray.

**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. In the EU refer to the Special Waste Regulations.

7. HANDLING AND STORAGE
Handling: 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Exhaust ventilation should be sufficient to control airborne levels.

Personal protection:

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

Respirator: A NIOSH approved or EU compliant CE 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. Sleeves as appropriate.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid/Flux

Boiling Point: Not applicable.

Odor: Slight characteristic odor.

Melting Point: Not applicable

Specific Gravity: Not applicable.

pH: Not applicable

Vapor Pressure: Not applicable.

Solubility in Water: Soluble

Vapor Density: (air=1) Not applicable.

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.

**Other:** None known-product mixture not tested.

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**12. ECOLOGICAL INFORMATION**

Product mixture not tested.

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**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. Do not discharge to drain.

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**14. TRANSPORT INFORMATION**

Transport in accordance with international applicable regulations and requirements.

**UN – none**

Non-hazardous under all shipping standards.

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**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 and the Domestic Substance List.

**WARNING:** This product can expose you to chemicals including [trace amounts of ethylene oxide and 1,4 dioxane] which is known to the State of California to cause cancer, and [trace amounts of ethylene oxide] which causes birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

**WHMIS:** Insufficient information to classify

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**

This product has been classified in accordance with the Mexican guidelines, NOM-018-STPS-2015 and NOM-010-STPS-...
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: 1
- Fire: 1
- Reactivity: 0

Revised Date: 5 DECEMBER 2018
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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