SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WAVE SOLDER FLUX 1085
SDS Number: SDS-HG013
Product Use: Industrial Use - Wave Solder Flux

MANUFACTURER:

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

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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:  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/Bond container and receiving equipment
P241  Use explosion-proof electrical/ventilating/lightening equipment
P242  Use only non-sparking tools
P243  Take precautionary measures against static discharge
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

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 irritation. May be harmful by ingestion.

Inhalation:  Vapor may cause headaches and or dizziness. May cause irritation.

Skin Contact:  Prolonged contact may cause irritation.

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>
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<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>
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<td>56-81-5</td>
<td>N.E.</td>
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</table>

N.E. = Not established  EU = European 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:** 20°C (68°F)  **Method:** Closed Cup

**Auto-ignition Temperature:** 371°C (700°F)

**Flammable Limits:** Upper: 12 @77°F; Lower 2 @ 77°F

**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

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 from static charge.

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 authority 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.
Other: Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume/splash 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

Appearance: Liquid, Light Straw
Odor: Alcohol odor.
Specific Gravity: 0.868 @ 60° F
Vapor Pressure: 33 mm HG @68 F
Vapor Density: 2.1 (air=1)
Boiling Point: 81°C (177°F)
Evaporation Rate: 1.7
pH: Not available
Solubility in Water: Soluble
% Volatiles by volume: 76-80
10. STABILITY AND REACTIVITY

General: Stable.
Conditions to Avoid: Direct heat, open flames and storage in aluminum.
Incompatible Materials: Anhydrides, halogens, 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.

Product not tested.

Isopropyl alcohol:
LD50 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:
LC50-Pimephales promelas (fathead minnow)- 9,640 mg/l – 96h
EC50-Daphnia magna (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. Generally considered to be hazardous waste.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.
Shipping: UN 1219, Isopropanol, 3, PG II (mixture)

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.

This product has been classified in accordance with the Mexican guidelines, NOM-018-STPS-2015 and NOM-010-STPS-2014.

In China:
This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007. 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

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).

SARA 313 Listing - 40 CFR 372.65: None

All ingredients are listed on the EPA TSCA Inventory.

Ingredients are listed on the Canadian Domestic Substance List.

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

16. OTHER INFORMATION

HMIS Hazard Rating: Health: 2
Fire: 3
Reactivity: 0

Revised Date: 21 DECEMBER 2018
Prepared by: Nancy Swarts, Indium Corporation of America
Approved by: Nancy Swarts, Indium Corporation of America

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