



## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** WS-446-HF FLUX

**SDS Number:** SDS-7173

**Revised Date:** 18 JULY 2018

**Product Use:** Industrial Use - Flux mixture for solder related use.

#### MANUFACTURER:

##### In America:

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

##### In Europe:

Indium Corporation of America (European Operations)  
7 Newmarket Ct.  
Kingston, Milton Keynes, UK, MK 10 OAG  
Information: +44 [0] 1908 580400

##### In Asia:

Indium Corporation of America  
Asia-Pacific Operations-Singapore  
29 Kian Teck Avenue  
Singapore 628908  
Information: +65 6268-8678

#### EMERGENCY PHONE (SPILL):

**CHEMTREC 24 hrs.**

**USA: 1 (800) 424-9300**

**Outside USA: +1 (703) 527-3887**

**In China: Emergency 86+ 4008417580**

##### In China:

Indium Corporation (Suzhou), Co., Ltd.  
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:

⊗Eye    ⊗Inhalation    ⊗Skin    ⊗Ingestion    NTP

### Carcinogen listed in

IARC    OSHA    ⊗Not Listed

GHS:

No pictograms or hazard statements.

### Precautionary statement (s)

P261    Avoid breathing dust/fume/gas/mist/vapors/spray  
 P280    Wear protective gloves/eye protection/face protection  
 P264    Wash, thoroughly after handling  
 P270    Do not eat, drink or smoke when using this product  
 P273    Avoid release to the environment  
 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 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)  
 P501    Dispose of following local/state and federal regulations

### POTENTIAL HEALTH EFFECTS:

**Eye Contact:**    May cause eye irritation.  
**Ingestion:**    May cause irritation.  
**Inhalation:**    May cause irritation.  
**Skin Contact:**    May cause skin irritation.

**NOTE:**    **The Indium Corporation does not recommend, manufacture, market or endorse any of it's product's for human consumption.**



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

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
POLYGLYCOL ETHER	65 - 75	9038-95-3	N.E.	N.E.	N.E.
PROPRIETARY ACTIVATORS	25-35	-	N.E.	N.E.	N.E.

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:** Not flammable      **Method:** Not available
- Auto-ignition Temperature:** Not established.
- Flammable Limits:** Limits not established.
- Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions.
- Special Fire Fighting Procedures:** Firefighters must wear approved self-contained breathing apparatus and full protective clothing.

### 6. ACCIDENTAL RELEASE MEASURES

- Spill or Leak Procedures:** Wear a respirator and appropriate Personal Protective (See Exposure Controls/Personal Protective Section). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Ventilate area. Keep unnecessary personnel away from the area. 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. 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. Ambient temperatures.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Good general ventilation or chemical hood should be sufficient to control any contaminate levels especially during heating applications.

### 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 under certain circumstances where airborne concentrations are expected to be elevated or if engineering controls are not available.

**Skin:** Compatible chemical resistant gloves. Protective outer garment, apron and sleeves as appropriate.

**Other:** Eyewash 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.

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

<b>Appearance:</b>	Flux creamy liquid, Gray	<b>Boiling Point:</b>	Not available
<b>Odor:</b>	mild odor characteristic	<b>Melting Point:</b>	Not available
<b>Specific Gravity:</b>	1.1 g/cc	<b>pH:</b>	4 -8
<b>Vapor Pressure:</b>	Not available		
<b>Vapor Density:</b>	(air=1) Not available.		

## 10. STABILITY AND REACTIVITY

**General:** Stable

### Conditions to Avoid:

**Incompatible Materials:** Oxidizing agents

**Hazardous Decomposition / Combustion:** Harmful organic fumes may form at elevated temperatures.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity:**        **NTP:** No  
                                  **OSHA:** No  
                                  **IARC:** No

**LD50:**                      Not established.                      **LC50:**                      Not established.

Product not tested

## 12. ECOLOGICAL INFORMATION

Product not tested. No information available.

## 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. Material is classified as none hazardous under US EPA guidelines.

## 14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.  
Not regulated as hazardous material. Not regulated by USDOT/IATA

Non - hazardous under ALL shipping modes.(ground/IATA/IMDG)

UN – none

Marine Pollutant: No

## 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.).

USA SARA 313 Listing - 40 CFR 372.65 - none

All ingredients are listed on the US TSCA Inventory.



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

Canada WHMIS: not classified.

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-018-STPS-2015 and NOM-010-STPS-2014.

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).

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.

## 16. OTHER INFORMATION

<b>HMIS Hazard Rating:</b>	<b>Health:</b>	1
	<b>Fire:</b>	0
	<b>Reactivity:</b>	0

**Revised Date:** 18 JULY 2018

**Prepared by:** Nancy Swarts, The Indium Corporation of America

**Approved by:** Nancy Swarts, The Indium Corporation of America

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