



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

User must review the contents of this (SDS) and determine what is applicable to their own country laws under Health and Safety and apply them as necessary. This (SDS) will not reference every countries Health and Safety Laws. It is the user's responsibility to determine what is applicable to them, including but not limited to review of any specific chemical lists and apply the requirements as necessary.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: WS – 3477 FLUX

SDS Number: SDS-4789

Revised Date: 3 NOVEMBER 2017

Product Use: INDUSTRIAL USE (MIXTURE) - WAVE SOLDER FLUX

MANUFACTURER:

In America:

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

EMERGENCY PHONE:

CHEMTREC 24 hrs.
USA: 1 (800) 424-9300
Outside USA: +1 (703) 527-3887

Indium Corporation of America
Chicago Material Division
80 Scott St.
Elk Grove Village, Illinois 60007
(847) 439-9134

In Europe:

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

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

In Asia:

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

2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

√ Eye √ Inhalation √ Skin √ Ingestion NTP

Carcinogen listed in

IARC OSHA √ Not Listed

GHS:

No GHS hazard statements

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 + 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)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Vapors may be irritating and liquid may irritate eye tissue.

Ingestion: May cause irritation.

Inhalation: May cause throat irritation.

Skin 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.**

WARNING: Applicable in the State of California. This product contains chemicals known to the State of California to cause cancer and/or birth defects (or other reproductive harm).
 Trace amounts 1,4 dioxane <0.05%

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
WATER	85-95	7732-18-5	N.E.	N.E.	N.E.
CARBOXYLIC ACID	4.0	68603-87-2	N.E.	N.E.	N.E.
POLYGYCOL ETHER	1.0-11.0	9038-95-3	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:** >200F **Method:** Not applicable
- Auto-ignition Temperature:** Not applicable
- Flammable Limits:** Not applicable
- 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.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Do not allow chemical material to enter sewer system or waterway unless allowed to do so. 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.
- 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 especially during heating and/or spraying activities.
- 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. Avoid inhalation of product.

Skin:	Compatible chemical resistant gloves. Use gloves such as nitrile.
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

Appearance:	Clear	Boiling Point:	212 F
Odor:	Mild	Evaporation Rate:	Not determined
Specific Gravity:	1.014 @60F	pH:	3.15
Vapor Pressure:	23.7 mm HG @ 25 C	Solubility in Water:	Soluble
Vapor Density:	Not determined	% Volatiles by volume:	100

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Direct heat, open flames and storage in aluminum.
Incompatible Materials:	Strong alkali
Hazardous Decomposition / Combustion:	Carbon dioxide/carbon monoxide.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity Listed:	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.
Product not tested.			

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. Non hazardous under EPA. Contains substances harmful to aquatic environment.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements.

Non - hazardous for all shipping modes.

UN – none

Not hazardous – IATA. Not regulated.

North America Emergency Guide Book – Not applicable

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.).

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

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.

WARNING: Applicable only in California: This product contains chemicals known to the State of California to cause cancer and/or birth defects (or other reproductive harm). 1,4 dioxane <0.05%

SARA 313 Listing - 40 CFR 372.65: trace 1,4 dioxane <0.05%

All ingredients are listed on the EPA TSCA Inventory.

This product has been classified under the Mexican regulations NOM-018-STPS-2015 and NOM-010-STPS-2014.

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

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).

RoHS (Restriction of Hazardous Substances): This product complies with the requirements set under the EU Directive 2002/95/EC. This product does not contain any metals or flame - retardants.

16. OTHER INFORMATION

HMIS Hazard Rating:	Health:	1
	Fire:	0
	Reactivity:	0

Revised Date: 3 NOVEMBER 2017

Prepared by: Nancy Swarts, Indium Corporation of America

Approved by: Nancy Swarts, Indium Corporation of America

The information and recommendations contained herein are, to the best of The Indium Corporation of America's knowledge and belief, accurate and reliable as of the date issued. The Indium Corporation of America does not warrant or guarantee their accuracy or reliability, and The Indium Corporation of America shall not be liable for any loss or damage arising out of the user thereof. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container.