



SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier: WS 759-16-2 FLUX

SDS Number: SDS-59055

Revised Date: 3 JANUARY 2018

1.2 Relevant Identified uses of the substance or mixture and uses advised against

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

1.3 Details of the supplier of the safety data sheet

MANUFACTURER/SUPPLIER/IMPORTER:

In America:

The Indium Corporation of America®
34 Robinson Rd., Clinton, New York 13323
Technical & Safety Information: (315) 853-4900
Safety & SDS Information: nswarts@indium.com
Corporation web page: <http://www.indium.com>

In Europe:

The Indium Corporation of America (European Operations)
7 Newmarket Ct.
Kingston, Milton Keynes, UK, MK 10 OAG
Information: (normal business hours) +44 [0] 1908 580400
EU Contact: aday@indium.com

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:

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

1.4 Emergency telephone number**FOR CHEMICAL EMERGENCY ONLY PHONE *:****CHEMTREC 24 hrs.****USA: 1 (800) 424-9300****Outside USA: +1 (703) 527-3887****In China: Emergency 86+ 4008417580***** Used only for spill/leak/fire/exposure/accident****ALL OTHER INQUIRIES: TOLL FREE: +1-800-448-9240 Indium Corporation****SECTION 2. HAZARDS IDENTIFICATION****PRIMARY ROUTES OF ENTRY:** Eye Inhalation Skin Ingestion

NTP

Carcinogen listed in

IARC

OSHA

 Not Listed**2.1 Classification:****2.2 Label Elements**

GHS:



Signal Word: Warning

Hazard statement (s)

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H335 May cause respiratory irritation

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

P301+P314 IF SWALLOWED: Get Medical advice/attention if you feel unwell.

P302+P352 IF ON SKIN: Wash with soap and water

P305+P351 IF IN EYES: Rinse continuously with water for several minutes

P501 Dispose of following local/state and federal regulations

Classification:

Serious eye irritation- Category 2A

Sensitization, skin- Category 1B

Specific target organ toxicity, single exposure, respiratory tract irritation- Category 3

2.3 OTHER HAZARDS:**POTENTIAL HEALTH EFFECTS:**

Eye Contact:	Causes irritation to the eyes and can cause serious eye irritation.
Ingestion:	May be harmful if swallowed.
Inhalation:	May cause irritation.
Skin Contact:	May cause skin irritation or sensitization upon contact.
NOTE:	The Indium Corporation does not recommend, manufacture, market or endorse any of it's product's for human consumption or food stuffs.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixture:

Components	% wt	CAS Registry #
POLYGLYCOL ETHER	65 - 85	9038-95-3
CARBOXYLIC ACIDS	5 – 15	68937-72-4
ALCOHOLS (C6-12) (non-hazardous)	1 - 20	68603-15-6

N.E. = Not established

SECTION 4. FIRST AID MEASURES

4.1 Description of 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.

4.2 Most important symptoms and effect, both acute and delayed:

Skin contact may cause irritation. Eye exposure may cause irritation.

4.3 Indication of any immediate medical attention and special treatment needed:

No specific special treatment information is available on this mixture. Review data provided in this document to understand the hazards when working with the product. No other information is available at this time. Seek medical attention if eye irritation continues after flushing. If respiratory discomfort is evident seek medical advice.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions. Water, CO2, foam media.

5.2 Special hazards arising from the substance or mixture:

May produce toxic fumes of carbon monoxide if burning .

5.3 Advice for Firefighters Fire fighters must wear approved self-contained breathing apparatus and full protective clothing.

Material product is not flammable. No other information is available.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Keep away from the spill. Remove sources of ignition. Keep exhaust ventilation system running. In the event of a fire evacuate area.

For emergency responders:

Wear safety glasses, gloves when cleaning up any spill. Other equipment may be necessary based on the immediate area and other chemicals unrelated to the product that may be in use. Adequate ventilation should be available. Keep unnecessary personnel away from area during clean up. If on floor wear foot protection to avoid any direct contamination to shoes and boots.

6.2 Environmental Precautions: Dispose contaminated rags or absorbents following all applicable governmental regulations. Material is non-hazardous. May not have any reclaim value.

6.3 Methods and material for containment and cleaning up:

Spill or leak procedures: Using a spatula, scoop up flux and place into a plastic pail or drum and tightly cap.

6.4 Reference to other sections: See Section 8 for exposure levels.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions For Safe Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Use only with production equipment specifically designed for use with flux. Wear appropriate personal protective equipment when working or handling solder paste. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed. Do not eat, drink or smoke when handling this product. Utilize exhaust ventilation especially during heating product. General exhaust recommended when using the product.

7.2 Conditions for Safe Storage, including any incompatibilities:

Storage Precautions: Store product in tightly capped original containers in a cool, dry area. Refer to product label and product data sheet for specific storage temperature requirements. Rotate stock to ensure use before expiration date.

7.3 Specific End Use(s): Soldering applications

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters:

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
POLYGLYCOL ETHER	65 - 85	9038-95-3	N.E.	N.E.	N.E.

CARBOXYLIC ACIDS	5 – 15	68937-72-4	N.E.	N.E.	N.E.
ALCOHOLS (C6-12) (non-hazardous)	1 - 20	68603-15-6	N.E.	N.E.	N.E.

8.2 Exposure Controls:

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance:	Flux yellow liquid	Boiling Point:	Not available
Odor:	mild odor characteristic	Melting Point:	Not available
Specific Gravity:	1.1 g/cc	pH:	4 -8
Vapor Pressure:	Not available		
Vapor Density:	(air=1) Not available.	Partition coefficient:	Not established
Relative Density:	Not established	Flammability:	Not applicable
Flash Point:	>100C	Method:	Not applicable
Auto-ignition Temperature:	Not applicable	Flammable Limits:	Limits not established
UEL/LEL Limits:	Not applicable	Decomposition Temp:	Not applicable
Viscosity:	Not established	Explosive properties:	Not applicable
Oxidizing Properties:	Not established		

9.2 Other Information: Above data for the whole mixture.

SECTION 10. STABILITY AND REACTIVITY

10.1 <u>Reactivity:</u>	Stable.
10.2 <u>Chemical Stability:</u>	Stable
10.3 <u>Possibility of Hazardous Reactions:</u>	Not established
10.4 <u>Conditions To Avoid:</u>	Direct heat, open flames.
10.5 <u>Incompatible Materials:</u>	Oxidizing agents, acid chlorides, acid anhydrides
10.6 <u>Hazardous Decomposition / Combustion:</u>	Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.

Hazardous Polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Acute toxicity: Not established
Irritation: Not established
Corrosivity: Not applicable
Sensitization: Not available
Repeated dose toxicity: Not established
Carcinogenicity: Not established for product.
Likely Routes of Entry: eyes /skin /inhalation/ ingestion (may be harmful)
Interactive effects: None known

Mutagenicity: Not established
Toxicity for Reproduction: Not Established
Absence of specific data: None available (not tested)

11.2 Symptoms related to the physical, chemical and toxicological characteristics:

May cause irritation by skin and inhalation.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure:

None known.

Mixture verses substance information: None known

SECTION 12. ECOLOGICAL INFORMATION

Product mixtures not tested.

12.1 Toxicity: No information available

12.2 Persistence and degradability: No information available

12.3 Bioaccumulative potential: No information available

12.4 Mobility in soil: No information available

12.5 Results of PBT and vPvB assessments: No data is available

12.6 Other adverse effects: No information is available for mixture. Avoid release to environment.

SECTION 13. DISPOSAL CONSIDERATION

13.1 Waste treatment method:

Dispose of in accordance with environmental regulations. Containerize material and classify according to applicable regulations. No pre-treatment on site is recommended. Do not dispose of down any drain or waterway. Utilize the same personal protective equipment as the user when handling for disposal. Non - hazardous flux.

RoHS (Restriction of Hazardous Substances): Compliant with RoHS.

SECTION 14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

Flux is non hazardous.

Not regulated/non hazardous under US DOT (United States Department of Transportation).

Not regulated/non hazardous under international shipping requirements. (IATA/Ocean)

- 14.1 UN Number:** None
14.2 UN proper shipping name: None
14.2 Transport hazard class(s): None
14.4 Packing group: None
14.5 Environmental hazards: None
14.6 Special precautions for user: None
14.7 Transport in bulk: Not applicable

Marine Pollutant: No

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

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.).

All ingredients are listed on the USEPA TSCA Inventory.

All ingredients are listed on EINECS. Note Rosin was recently listed under the No Longer Polymer List, Notification of New Chemical Substances in Accordance with Directive 67/548/EEC.

Safety data sheet was developed using EC 1907/2006 amended as of 20 May 2010 EU No 453/2010 and information as stated under regulation EC No 1272/2008 CLP Regulation.

GHS = Global Harmonized System

CLP= Classification, labeling and packaging

Product does not contain any substances ozone depleting substances and therefore not subject to EC 2037/2000.

15.2 Chemical safety assessment: None performed for mixture.

SECTION 16. OTHER INFORMATION

HMIS Hazard Rating:

Health:	1
Fire:	0
Reactivity:	0

Revised Date: 3 JANUARY 2018

Prepared by: Nancy Swarts, The Indium Corporation of America

Approved by: Nancy Swarts, The 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.