



## SAFETY DATA SHEET

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

**1.1 Product Identifier:** TACFLUX 026S

**MSDS Number:** SDS- 5776T

**Revised Date:** 13 SEPTEMBER 2019

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

**Product Use:** Industrial Use (Mixture) - Solder flux.

**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](mailto:nswarts@indium.com)  
Corporation web page: <http://www.indium.com>

**In Europe:**

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7 Newmarket Ct.  
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**In China:**

Indium Corporation (Suzhou) Co., Ltd.  
No. 428 Xinglong Street  
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Information: (86) 512-6283-4900

**In Asia:**

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**

**\* 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    IARC    OSHA    Not Listed

### Carcinogen listed in

#### 2.1 Classification:

#### 2.2 Label Elements



Signal Word: Warning

#### Hazard statement(s)

H303            May be harmful if swallowed  
 H315            Causes skin irritation  
 H319            Causes serious eye irritation  
 H335            May cause respiratory irritation  
 H410            Very toxic to aquatic life with long lasting effects

#### Precautionary statement(s)

P233            Keep container tightly closed  
 P261            Avoid breathing dust/fume/gas/mist/vapours/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            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:

Serious eye irritation (Category 2A)  
 Acute toxicity, oral (Category 5)  
 Acute toxicity, dermal (Category 5)  
 Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity ( Category 1)

### 2.3 POTENTIAL HEALTH EFFECTS:

- Eye Contact:** Irritating to the eyes and if not removed promptly, may result in serious eye damage. Do not allow material to come in contact with the eyes.
- Ingestion:** May be harmful if swallowed. May cause irritation and damage to mouth, esophagus and the gastrointestinal tract.
- Inhalation:** Vapors or fumes from this material may be harmful if inhaled.
- Skin Contact:** May cause skin irritation or burns.
- Chronic:** Not established.

## SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

### 3.2 Mixture:

Components	% wt	CAS Registry #/ EINECS#
POLYGLYCOL ETHER	80-85	9038-95-3
CARBOXYLIC ACID	5-10	68937-68-8
AMIDES (From C2-9 CARBOXYLIC ACIDS AND POLYETHYLENIMINE)	5- 10	68876-81-3

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## 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 serious damage.

**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**

Firefighters 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. Material is sticky and gluey and may cause a slip/fall hazard for clean-up crew.

**6.2 Environmental Precautions:** Dispose contaminated cloth rags or paper towels following all applicable governmental regulations. May not have any reclaim value. Do not discharge to the environment.

**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 odor and chemical content require exhaust whenever the container is open.

**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:**

			<u>TWA</u>	<u>STEL</u>
		<u>CAS#/EINECS#</u>	mg/m3	mg/m3
<b>POLYGLYCOL ETHER</b>	80-85	9038-95-3	N.E.	N.E.
<b>CARBOXYLIC ACID</b>	5-10	68937-68-8	N.E.	N.E.
<b>AMIDES</b> (From C2-9 Carboxylic acids and Polyethylenimine)	<b>5- 10</b>	68876-81-3	N.E.	N.E.

N.E. = Not established

TWA= TIME WEIGHTED AVERAGE  
STEL = SHORT TERM EXPOSURE LEVEL

**8.2 Exposure Controls:**

**Engineering Controls:** Use only with production equipment with adequate exhaust ventilation and other safety features specifically designed for chemical use. Face velocity of at least 100 ft per minute. Use exhaust ventilation when using the product especially while heating product. Air emission control equipment may be necessary based on the local governmental requirements for contaminants entering the atmosphere. Contains organic related compounds.

**Personal protection:**

- Eyes:** Chemical safety glasses/goggles. Face shield for splash hazard.
- Respiratory:** An 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. Recommend a nitrile disposable or other chemical glove.
- 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. Do not allow rags or paper towels to accumulate in the work area. 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.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties:

<b>Appearance:</b>	Clear liquid	<b>Boiling Point/Range:</b>	Not determined
<b>Odor:</b>	Slight characteristic odor.	<b>Melting Point/Freezing Point:</b>	Not applicable
<b>Odor Threshold:</b>	Not established	<b>Evaporation Rate:</b>	Not applicable
<b>Specific Gravity:</b>	1 g/cc	<b>pH:</b>	5 - 7
<b>Vapour Pressure:</b>	Not applicable.	<b>Solubility in Water:</b>	water soluble
<b>Vapour Density:</b>	(air=1) Not applicable.	<b>Partition coefficient:</b>	Not established
<b>Relative Density:</b>	Not established	<b>Flammability:</b>	Not applicable
<b>Flash Point:</b>	Not applicable	<b>Method:</b>	Not applicable
<b>Auto-ignition Temperature:</b>	Not applicable	<b>Flammable Limits:</b>	Limits not established
<b>UEL/LEL Limits:</b>	Not applicable	<b>Decomposition Temp:</b>	Not applicable
<b>Viscosity:</b>	Not established	<b>Explosive properties:</b>	Not applicable
<b>Oxidizing Properties:</b>	Not established		

**9.2 Other Information:** Above data for the whole mixture.

## SECTION 10. STABILITY AND REACTIVITY

<b>10.1 <u>Reactivity:</u></b>	Stable.
<b>10.2 <u>Chemical Stability:</u></b>	Stable
<b>10.3 <u>Possibility of Hazardous Reactions:</u></b>	Not established
<b>10.4 <u>Conditions To Avoid:</u></b>	High temperatures, open flame
<b>10.5 <u>Incompatible Materials:</u></b>	Avoid contact with oxidizing agents.
<b>10.6 <u>Hazardous Decomposition / Combustion:</u></b>	Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
<b>10.7 <u>Hazardous Polymerization:</u></b>	Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects:

<b><u>Acute toxicity:</u></b>	Not established	<b><u>Mutagenicity:</u></b>	Not established
<b><u>Irritation:</u></b>	Not established	<b><u>Toxicity for Reproduction:</u></b>	Not Established
<b><u>Corrosivity:</u></b>	Not applicable	<b><u>Absence of specific data:</u></b>	None available (not tested)
<b><u>Sensitization:</u></b>	Not available		
<b><u>Repeated dose toxicity:</u></b>	Not established		
<b><u>Carcinogenicity:</u></b>	Not established		

**Likely Routes of Entry:** eyes (damage) /skin (irritation ) /inhalation (irritation) ingestion (harmful)

**Interactive effects:** None known

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

May cause irritation or burns by skin contact.

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

No data is available on the mixture. Ingredient may be harmful by ingestion.

**Mixture verses substance information:** None known

**Other Information:**

**Carcinogenicity:** NTP: No (National Toxicity Program)

**Listing** OSHA: No (US Occupational Safety & Health Administration)

IARC: No (UN International Agency for Research on Cancer)

## **SECTION 12. ECOLOGICAL INFORMATION**

This section is subject to future development. 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.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Contains an ingredient that is very toxic to aquatic life – severe marine pollutant.

## **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.

## **SECTION 14. TRANSPORT INFORMATION**

Transport in accordance with applicable regulations and requirements.

**FOR GROUND AND AIR SHIPPING:**

**Not classified as hazardous for motor vehicle, rail car or aircraft when shipped as non-bulk packaging.**

**NOTE: Review any exceptions for ground and air shipping based on the quantity, 5L or less liquid and 5kg or less solids being shipped. IATA- A197, USA 49 CFR 171.4**

USA 49 CFR 171.4: Single or combination packaging containing a net quantity per single inner packaging of 5L or less for liquids or having a net mass of 5 kg or less of solids are not subject to any other requirements provided the packaging meets the requirements in Section 173.24 and 173.24a (general requirements for proper packaging material)

**FOR OCEAN SHIPPING ONLY:**

Product contains a chemical that is rated as a severe marine pollutant when transporting by ocean as based on the Annex II of the 1973 International Convention for Prevention of Pollution from Ships, as modified by Protocol of 1978 (MARPOL 73/78).

Classified only as hazardous for ocean shipping because it contains a marine pollutant. This product does not fall under any other hazards that would classify its shipping classification otherwise.

IMDG shipping – Marine pollutant

UN 3082, Environmentally Hazardous Substance Liquid, N.O.S., 9, PG III (Marine Pollutant) (polyglycol ether)



<b>14.1 UN Number:</b>	3082
<b>14.2 <u>UN proper shipping name:</u></b>	Environmentally Hazardous Substance Liquid
<b>14.3 <u>Transport hazard class(s):</u></b>	9
<b>14.4 <u>Packing group:</u></b>	III
<b>14.5 <u>Environmental hazards:</u></b>	Marine Pollutant
<b>14.6 <u>Special precautions for user:</u></b>	None
<b>14.7 <u>Transport in bulk:</u></b>	Not applicable

**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.

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

**NOTE:** The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

**Revised Date:** 13 SEPTEMBER 2019

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

Changes provided on this SDS were based on the requirements of EU No. 453/2010 of May 20, 2010 regarding amendments to EC No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

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