



SAFETY DATA SHEET

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

1.1 Product Identifier

Product name **TACFLUX 020B**

SDS Number: SDS- IN TF038 **Revised Date:** 22 JUNE 2018

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

Product Use: Industrial Use (Mixture) – Tacflux - Soldering 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, NY 13323

Information: (315) 853-4900

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****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
IARC
OSHA
Not Listed

Carcinogen listed in**2.1 Classification of the substance or mixture****2.2 Label Elements**

Labeling according Regulation (EC) No 1272/2008

GHS



Signal Word: Danger

Hazard Statements:

H226	Flammable liquid and vapor
H303	May be harmful if swallowed
H317	May cause an allergic skin reaction
H320	Causes eye irritation
H333	May be harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H360FD	May damage fertility. May damage the unborn child
EUH208	Contains rosin. May produce an allergic reaction

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking
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)

Classification:

Flammable Liquids- Category3

Acute toxicity, oral-Category 5

Sensitization, skin-Category 1B

Serious eye irritation- Category2B

Acute toxicity, inhalation-Category 5

Sensitization, respiratory-Category 1B

Reproductive toxicity- Category 1B

POTENTIAL HEALTH EFFECTS:

Eye Contact: Irritating to the eyes and if not removed promptly, may result in serious eye irritation. 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 cause local irritation to the respiratory system. May be harmful if inhaled. Rosin may cause occupational asthma.

Skin Contact: May cause skin irritation or dermatitis. Rosin may cause skin sensitization.

Chronic: Not established. Contains a chemical that may impair fertility or cause harm to the unborn child. Target organs (2-methoxyethanol): CNS/liver/lungs/kidneys/immune system/bone marrow.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS**3.2 Mixture:**

Components	% wt	CAS Registry #/ EINECS#
ROSIN	45-55	65997-05-9
2-METHOXYETHANOL	30-45	109-86-4/203-713-7
PROPRIETARY (confidential)	10-15	-

<http://www.indium.com>

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 with tepid water. 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. Flush skin for 15 mins with tepid water. Wash clothing before reuse. If skin irritation persists, obtain medical attention.

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

Skin contact may cause irritation. Long term contact may cause dermatitis. Inhalation of decomposed rosin fume may cause irritation or occupational asthma. Inhalation of product containing 2-methoxyethanol may be harmful. Eye exposure may cause serious irritation. Effects due to ingestion may include, headache, central nervous system depression, and changes in blood count. Ingestion of large amounts of product containing 2-methoxyethanol may cause damage to the liver, kidney or central nervous system

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. CO2, foam media. Product is flammable.

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.

5.4 Further information 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. Use anti - static tools.

6.2 Environmental Precautions: Dispose contaminated cloth rags or paper towels following all applicable governmental regulations. Material is flammable. 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. Disposal see Section 13.

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 flux. 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. Keep away from sources of ignition.

7.3 Specific End Use(s): Soldering applications

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters:

		<u>CAS#/EINECS#</u>	<u>TWA</u>	<u>STEL</u>
			mg/m3	mg/m3
ROSIN	30-40	65997-05-9 (EU)	0.05	0.15 (sensitiser)
2-METHOXYETHANOL	30-45	109-86-4/203-713-7 (UK)	16 (MEL-skin).	N.E.
		France	16	N.E.
		Belgium	16	N.E.
		Spain	16	N.E.
		Portugal	0.1ppm	N.E.
		Finland	1.6	N.E.
		Denmark	16	N.E.
		Austria	15	60
		Switzerland	15	120
		Poland	15	60
		Norway	16	N.E.
		Ireland	16 skin	N.E.
PROPRIETARY (CONFIDENTIAL)	10-15	-	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. 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 rubber gloves, nitrile or butyl 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:

Appearance:	Flux	Boiling Point/Range:	Not determined
Odor:	Mild characteristic odor.	Melting Point/Freezing Point:	Not applicable
Odor Threshold:	Not established	Evaporation Rate:	Not applicable
Specific Gravity:	Not applicable.	pH:	Not applicable
Vapour Pressure:	Not applicable.	Solubility in Water:	Insoluble
Vapour Density:	(air=1) Not applicable.	Partition coefficient:	Not established
Relative Density:	Not established	Flammability:	Not applicable
Flash Point:	46C/115F	Method:	Not applicable
Auto-ignition Temperature:	Not available	Flammable Limits:	Limits not established
UEL/LEL Limits:	Not available	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 Reactivity:	Stable.
10.2 Chemical Stability:	Stable
10.3 Possibility of Hazardous Reactions:	Not established
10.4 Conditions To Avoid:	Freezing temperatures and high temperatures.
10.5 Incompatible Materials:	Avoid contact with acids, bases or oxidizing agents. Ignition sources.
10.6 Hazardous Decomposition / Combustion:	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	Mutagenicity:	Not established
Irritation:	Not established	Toxicity for Reproduction:	Not Established
Corrosivity:	Not applicable	Absence of specific data:	None available (not tested)
Sensitization:	Not available		

Repeated dose toxicity: Not established**Carcinogenicity:** Not established**Likely Routes of Entry:** eyes (irritation) /skin (irritation or sensitization) /inhalation (irritation/sensitization) ingestion (may be harmful)**Interactive effects:** None known**11.2 Symptoms related to the physical, chemical and toxicological characteristics:**

May cause irritation or sensitization by skin and inhalation.

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

Exposure to rosin fume has been known to cause occupational asthma. May cause harm by inhalation and ingestion. Teratogenic effects have occurred in experimental animals (2-methoxyethanol). May cause congenital malformation in the fetus. Presumed human reproductive toxicant.

Mixture verses substance information: None known**Other Information:****Carcinogenicity:** NTP: No (National Toxicity Program)**Listing** OSHA: No (US Occupational Safety & Health Administration)

IARC: No (U.N. International Agency for Research on Cancer)

2-methoxyethanol

LD50 oral- 2370 mg/kg (rat)

LD50 Dermal – 1280 mg/kg (rabbit) & 2000 mg/kg (rat)

RTECS: KL 577500 (2-methoxyethanol)

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.

2-methoxyethanol

500 mg/l LC50 96h (freshwater fish)

10000 mg/l LC50 96h (freshwater fish)

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.

RoHS (Restriction of Hazardous Substances): Compliant with RoHS 2 (2011/65/EU).

SECTION 14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

Flux is hazardous.

14.1 UN number: UN 1188

14.2 UN proper shipping name: Ethylene Glycol Monomethyl Ether

14.3 Transport hazard class(s): 3

14.4 Packing group: III

14.5 Environmental hazards: None Marine pollutant: No

14.6 Special precautions for user: None

Transport in bulk: Not applicable



Shipping Name: UN 1188, Ethylene Glycol Monomethyl Ether, PG III

SECTION 15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

Authorizations and / or restriction on use

2- methoxyethanol CAS No. 109-86-4

Candidate List of Substances of Very High Concern for Authorization

Toxic for reproduction (article 57c)

ED/95/2010

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

Complies with RoHS 2 (2011/65/EU)

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

15.2 Chemical Safety Assessment

For this product mixture no assessment has been carried out.

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).

SECTION 16. OTHER INFORMATION

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

Revised Date: 22 JUNE 2018

Prepared by: Nancy Swarts, The Indium Corporation of America, nswarts@indium.com

Approved by: Nancy Swarts, The Indium Corporation of America

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