



SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier: FC-NC-HT-C

SDS Number: SDS-IN FC012

Revised Date: 12 NOVEMBER 2018

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

Product Use: Industrial Use - Flip chip 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

Technical & Safety Information: (315) 853-4900

Safety & SDS Information: nswarts@indium.com

Corporation web page: <http://www.indium.com>

In Europe:

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Information: (normal business hours) +44 [0] 1908 580400

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In China:

Indium Corporation (Suzhou) Co., Ltd.

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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

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

Carcinogen listed in

NTP

IARC

OSHA

*Not Listed

2.1 Classification of substance or mixture: (mixture)**2.2 Label Elements**

Labeling according to Regulation (EC) No. 1272/2008

GHS



Signal Word: Danger

Hazard statement(s)

H303 May be harmful if swallowed
 H314 Causes severe skin burns and eye damage
 H402 Harmful to aquatic life

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 + P311 IF SWALLOWED: Call POISON CENTER or doctor/physician
 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:

Acute toxicity, oral- Category 5

Skin irritation- Category 1C

Acute hazard, aquatic environment- Category 3

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

Eye Contact:	Causes eye burns. Do not allow material to come in contact with the eyes.
Ingestion:	May be harmful if swallowed.
Inhalation:	Heated vapor concentrations may be harmful if inhaled. Material may be destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin Contact:	May cause skin irritation or burns. May be harmful if absorbed through the skin.
Chronic:	Not established.
NOTE:	The Indium Corporation does not recommend, manufacture, market or endorse any of its products for human consumption.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixture:

Components	% wt	CAS Registry #
POLYGLYCOL ETHER	85-95	9038-95-3
PROPRIETARY ADDITIVES	5-15	-

N.E. = Not established

<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. 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. Inhalation 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 Firefighters must wear approved self-contained breathing apparatus and full protective clothing.

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. Do not allow material to enter any waterway. Contains a chemical that is harmful to aquatic life

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 flammable materials. 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. Ground containers.

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:

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
<u>POLYGLYCOL ETHER</u>	85-95	9038-95-3	N.E.	N.E.	N.E.
<u>PROPRIETARY ADDITIVES</u>	5-15	-	N.E.	N.E.	N.E.

TWA = time weighted average STEL = short term exposure limit N.E. = Not established

8.2 Exposure Controls:

Engineering Controls: Good general ventilation should be sufficient to control airborne levels.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield for splash hazards.

Respirator: A NIOSH 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 (nitrile, 0.11 mm thickness). Protective outer garment, apron. Sleeves as appropriate.

Other: Eyewash fountain in work area. Avoid the use of contact lenses in high fume 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: Liquid	Boiling Point: 335 C
Odor: Phenol like odor.	Melting Point: Not applicable
Specific Gravity: 0.95	pH: Not applicable
Vapor Pressure: Not applicable.	Solubility in Water: Not established
Vapor Density: (air=1) Not applicable.	Partition coefficient: Not established
Relative Density: Not established	Flammability: Not applicable
Flash Point: >110 C (230 F)	Method: Not applicable
Auto-ignition Temperature: Not established	Flammable Limits: Limits not established
UEL/LEL Limits: Not established	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:** Not established
- 10.5 Incompatible Materials:** Not established
- 10.6 Hazardous Decomposition / Combustion:** Not established
- 10.7 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. May cause eye damage.

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.

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)

Substance ingredient:

LD50 oral-rat-2,100 mg/kg

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.

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

SECTION 14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

14.1 UN Number: 3145

14.2 UN proper shipping name: ALKYLPHENOLS, LIQUID, N.O.S.,

14.2 Transport hazard class(s): 8

14.4 Packing group: II

14.5 Environmental hazards: Marine Pollutant

14.6 Special precautions for user: None

14.7 Transport in bulk: Not applicable

Marine Pollutant: Yes



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:	2
	Fire:	1
	Reactivity:	0

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