



SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: NC 510 FLIP CHIP FLUX

SDS Number: SDS-4571

Revised Date: 21 MAY 2018

Product Use: Industrial Use (mixture) - flux used in soldering applications.

MANUFACTURER:

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2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

Eye Inhalation Skin Ingestion NTP

Carcinogen listed in

IARC OSHA Not Listed

GHS:



Signal Word: Warning

Hazard statement(s)

- H315 Causes skin irritation
- H319 Causes serious eye 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/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

- Skin irritation- Category 2
- Eye irritation – Category 2A
- Hazardous to aquatic environment, long term hazard- Category 1

POTENTIAL HEALTH EFFECTS:

- Eye Contact:** May cause irritation to the eyes if not removed promptly.
- Ingestion:** May cause irritation.
- Inhalation:** Heated vapor concentrations may cause irritation if inhaled. May cause burns to the respiratory tract.
- Skin Contact:** May cause skin irritation.
- Chronic:** Not established. Effects may be delayed.
- NOTE:** **The Indium Corporation does not recommend, manufacture, market or endorse any of its product's for human consumption.**

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% wt	CAS Registry #	PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
POLYGLYCOL ETHER	65-80	9038-95-3	N.E.	N.E.	N.E.
CARBOXYLIC ACID (FATTY ACIDS)	5-10	67762-36-1	N.E.	N.E.	N.E.
ALCOHOLS	10-25	68603-15-6	N.E.	N.E.	N.E.

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. Exposure can cause burns and therefore seek medical attention.
- 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. Material may cause burns to the skin, seek medical attention.

5. FIRE FIGHTING MEASURES

- Flash Point:** Not established. **Method:** Not established.
- Auto-ignition Temperature:** Not established.
- Flammable Limits:** Limits not established, not flammable.
- Extinguishing Media:** Use extinguishers appropriate for the surrounding fire conditions.
- Special Fire Fighting Procedures:** Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

- Spill or Leak Procedures:** Wear a respirator and appropriate Personal Protective (See Exposure Controls/Personal Protective Section). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. 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. Avoid breathing vapors from heated material. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Wear proper PPE.
- Storage Precautions:** Store product in tightly capped original containers in a cool, dry area. Keep away from heat and flame. Store away from incompatible materials. Empty containers may be hazardous as they contain product residue.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Flux	Boiling Point:	Not applicable.
Odor:	Mild characteristic odor.	Melting Point:	Not applicable
Specific Gravity:	Not applicable.	pH:	Not applicable
Vapor Pressure:	Not applicable.	Solubility in Water:	Insoluble
Vapor Density:	(air=1) Not applicable.		

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	Freezing temperatures. High temperatures.
Incompatible Materials:	Not established
Hazardous Decomposition / Combustion:	Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: **NTP:** No (National Toxicology Program)
OSHA: No (Occupational Safety and Health Administration)
IARC: No (International Agency for Research on Cancer)

LD50: Not established. **LC50:** Not established.

Other: Product not tested.

Contains an ingredient: Draize test, rabbit, eye: 100 ul Moderate
 Draize test, rabbit, skin: 500 ul Severe
 Oral, rat: LD50 = 2100 mg/kg
 Skin, rabbit : LD50 = 5 ml/kg

12. ECOLOGICAL INFORMATION

Product has not been tested. Some of the raw ingredients have not been individually tested. The following is information on ingredients that have testing or other information. Please note that this does not reflect the end product.

8% not readily biodegradable. 2% difficult to degrade biological. Fish toxicity – *Leuciscus idus* LC50:> 10,000 mg/l/96h

Daphnia toxicity EC/LC50 (48h):0.6 mg/l

Bacteria toxicity EC/LC50(0.5h) > 10,000 mg/l log POW:45

Contains a severe marine pollutant.

Harmful to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal..

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. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Contains an ingredient classified as a severe marine pollutant.

14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements.

Non - hazardous under US DOT/IATA as defined under the US Department of Transportation's regulations found in 49 CFR 171.4.

IMDG: (49 CFR 172.322)

UN3082, Environmentally hazardous substance, liquid, N.O.S., 9, PGIII (alkylphenol) (Severe Marine Pollutant)



Note: Based on recent testing, this product does not meet the classification of Class 8 (Corrosive) under the US Department of Transportation requirements. Therefore, this is not hazardous under shipping requirements except for transportation over water. This is however still classified as a severe marine pollutant.

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.).

SARA 313 Listing - 40 CFR 372.65 - None

All ingredients are listed on the USEPA TSCA Inventory.

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

This product has been classified in accordance with the guidelines set by the Dept. of Industrial Health of the Republic of Singapore.

Malaysia:

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). (GHS)

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

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

All ingredients are listed on the China Chemical Inventory.

This product has been classified in accordance with Mexican regulations NOM-018-STPS-2015 and NOM-010-STPS-2014.

SARA 313 Listing - 40 CFR 372.65 - None

All ingredients are listed on the USEPA TSCA Inventory.

16. OTHER INFORMATION

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

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