



**INDIUM CORPORATION OF AMERICA®\EUROPE®\ASIA-PACIFIC®
INDIUM CORPORATION (SUZHOU)®**

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: NC 510 FLIP CHIP FLUX

MSDS Number: MSDS-4571

Revised Date: 5 FEBRUARY 2010

Product Use: Industrial Use - Flip chip flux

MANUFACTURER:

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<http://www.indium.com>

2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

Eye

Inhalation

Skin

Ingestion

NTP

Carcinogen listed in

IARC

OSHA

Not Listed

GHS:



POTENTIAL HEALTH EFFECTS:

- Eye Contact:** Moderately irritating to the eyes and if not removed promptly, may result in serious eye injury. Do not allow material to come in contact with the eyes. May cause burns.
- Ingestion:** May cause irritation and damage to the mouth, esophagus and gastrointestinal tract.
- Inhalation:** Heated vapor concentrations may be harmful if inhaled. Moderately irritating to respiratory tract.
- Skin Contact:** May cause skin irritation or burns.
- Chronic:** Not established.
- 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	60-80	9038-95-3	N.E.	N.E.	N.E.
ALCOHOLS	10-30	68603-15-6	N.E.	N.E.	N.E.
NON-HAZARDOUS PROPRIETARY	1 – 10	-	N.E.	N.E.	N.E.

PRODUCT DOES NOT CONTAIN ANY EU SUBSTANCES OF VERY HIGH CONCERN (SVHC)

Symbol: Xi

Risk Phrases: R36/37/38

N.E. = Not established

RoHS Compliant <http://www.pbfree.com>

4. FIRST AID MEASURES

- Eye Contact:** Hold eyelids apart and flush eyes with plenty of 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.

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.
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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.
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:	Good general exhaust ventilation should be sufficient to control airborne levels. When heating ensure that there is exhaust ventilation to keep exposures as low as possible.
Personal protection:	
Eyes:	Chemical safety glasses/goggles. Face shield for any splash hazards.
Respirator:	An 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. 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:	Contains an ingredient: Drauze 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. Fishtoxicity – *Leuciscus idus* LC50:> 10,000 mg/l/96h
Daphniotoxicity EC/LC50 (48h):0.6 mg/l
Bacteriatotoxicity EC/LC50(0.5h) > 10,000 mg/l log POW:45

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.

14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Not regulated under US DOT (United States Department of Transportation). Non hazardous under shipping modes.

15. REGULATORY INFORMATION

The information in this Material 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.).

The information in this Material Safety Data Sheet meets the requirements of the EU under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994 (CHIP 2) Regulation 6.

This product has been classified in accordance with the hazard criteria of the Commission Directive 91/155/EEC and EH40.

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



Canadian WHMIS: contains a substance classified as causing burns.

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

SARA 313 Listing - 40 CFR 372.65 - None

All ingredients are listed on the EPA TSCA Inventory.

EC Classification, Packaging and Labeling Requirements:

Symbol and Hazard Classification of Product

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Risk Phrases:

R36/37/38 Irritating to eyes, respiratory system and skin

Safety Phrases:

S20/21 When using do not eat, drink or smoke

S23 Do not breathe fumes/gas/vapor/spray

S24/25 Avoid contact with skin and eyes

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S7 Keep container tightly closed

16. OTHER INFORMATION

HMIS Hazard Rating: **Health:** 2
 Fire: 1
 Reactivity: 0

Revised Date: 5 FEBRUARY 2010

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