



INDIUM CORPORATION OF AMERICA
®\EUROPE®\ASIA-PACIFIC®/INDIUM CORPORATION (SUZHOU) ®
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: NF220 No Flow Underfill

SDS Number: SDS-UF005

Revised Date: 6 JULY 2016

Product Use: Industrial Use-No-Flow Underfill Adhesive

MANUFACTURER:

In America:

The Indium Corporation of America
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 Information: (315) 853-4900

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In Asia:

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 Asia-Pacific Operations-Singapore
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 Singapore 628908
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2. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY:

⊕Eye ⊕Inhalation ⊕Skin

⊕Ingestion

Carcinogen listed in

NTP

IARC

OSHA

⊕Not Listed

GHS:



Signal Word: Warning

Hazard statement(s)

- H303 May be harmful if swallowed
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H318 Causes serious eye damage
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

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 Take off contaminated clothing and wash before reuse
- P301 +P312 IF SWALLOWED: Call POISON CENTER or doctor/physician if you feel unwell
- P302 +P352 IF ON SKIN: Wash with plenty of soap and water
- P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351 IF IN EYES: Rinse continuously with water for several minutes (15 mins)

Classification:

Skin irritant- Category 2

Skin sensitization- Category 1B

Respiratory sensitization- Category 1B

Eye irritant- Category 2A

POTENTIAL HEALTH EFFECTS:

- Eye Contact:** Do not allow material to come in contact with the eyes. Will cause eye injury if not immediately removed.
- Ingestion:** May be harmful if swallowed. May cause irritation.
- Inhalation:** Heated vapor concentrations may be harmful if inhaled. May cause irritation if heated, otherwise harmful effects are not expected at ambient temperatures.
- Skin Contact:** Causes skin irritation. Allergic reactions or dermatitis are possible, especially with repeated or prolonged exposure. May cause skin sensitization. Epoxy systems are known to cause de-fatting

and drying of the skin. Heating of epoxy may cause irritation or sensitization.

Chronic: Prolonged or repeated overexposure to mist or vapor generated at high temperatures may result in the inhalation of harmful amounts of material.

Note: **The Indium Corporation does not recommend, manufacture, market or endorse any of its products 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
EPOXY RESINS	38-52	-	N.E.	N.E.	N.E.
HARDENER	31-44	19438-60-9	N.E.	N.E.	N.E.
PROPRIETARY INTERMEDIATES	1-10	-	N.E.	N.E.	N.E.
NON HAZARDOUS PROPRIETARY	10-20	-	N.E.	N.E.	N.E.

N.E. = Not established

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.
- 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 applicable	Method:	Not applicable
Auto-ignition Temperature:	Not established.		
Flammable Limits:	Limits not established		
Extinguishing Media:	Use extinguishers appropriate for the surrounding fire conditions. Foam, dry chemical, water spray.		
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: Under certain situations, as appropriate, wear a respirator and personal protective equipment (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. Avoid contamination of the environment.

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 considered hazardous as they contain product residue.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation is necessary to control airborne levels especially during heating. Avoid breathing fumes. If ventilation is not adequate or if not available respiratory protection is recommended to keep exposures to as low as possible.

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, such as nitrile should be worn. Protective outer garment, apron and sleeves as appropriate.

Other: Eyewash fountain in work area. Avoid the use of contact lens especially during mixing and heating application.

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:	Epoxy	Boiling Point:	Not established
Odor:	Slight characteristic odor.	Melting Point:	Not applicable
Specific Gravity:	Not established	pH:	Not applicable
Vapor Pressure:	Not applicable.	Solubility in Water:	Not established
Vapor Density:	(air=1) Not applicable.		

10. STABILITY AND REACTIVITY

General:	Stable.
Conditions to Avoid:	High temperatures
Incompatible Materials:	Not established
Hazardous Decomposition / Combustion:	Not established
Hazardous Polymerization:	Information not available

11. TOXICOLOGICAL INFORMATION

Carcinogenicity:	NTP: No		
	OSHA: No	Product not classified.	
	IARC: No		
LD50:	Not established.	LC50:	Not established.
Other:	None known		

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Data not established.

13. DISPOSAL CONSIDERATION

Waste Disposal Method:	Dispose of in accordance with all Federal, State and Local environmental regulations. Non - hazardous under US EPA.
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14. TRANSPORT INFORMATION

Transport in accordance with applicable regulations and requirements. Not regulated under US DOT.
Not regulated under IATA/IMDG
UN-None

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 EPA TSCA Inventory.

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

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.

16. OTHER INFORMATION

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

Revised Date: 6 JULY 2016

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Approved by: Nancy Swarts, Indium Corporation of America

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