

# MATERIAL SAFETY DATA SHEET

MITON EPOXY RESIN

MSDS DATE: Dec. 5, 2011

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** MITON XXX  
**SYNONYMS:** Epoxy Resin  
**PRODUCT CODES:** 205,208,223,224,225,227,228,377,414,514,518,525

**MANUFACTURER:** INFRATECH POLYMERS INC.  
**ADDRESS:** #4 19747 Telegraph Trail  
Langley, B.C. Canada  
V1M 3E6

**EMERGENCY PHONE:** 604-888-8808  
**CHEMTREC PHONE:** 613-996-6666 CANUTECS  
**OTHER CALLS:** 604-888-7171  
**FAX PHONE:** 604-888-8191

**CHEMICAL NAME:** EPOXY RESIN LIQUID  
**CHEMICAL FAMILY:** Bisphenol A based epoxy resin  
**SHIPPING NAME:** not regulated

**PRODUCT USE:** Thixotropic Epoxy Paste Adhesive  
**PREPARED BY:** Infratech Polymers Inc.

**SECTION 1 NOTES:** This MSDS covers multiple blend types of Epoxy resin. Individual composition of the hazardous components of the formulation will vary between types.

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	% by Weight	CAS Number	OSHA PEL – TWA (mg/m <sup>3</sup> )	ACGIH TLV – TWA (mg/m <sup>3</sup> )	LD <sub>50</sub> (rat, oral)	LC <sub>50</sub>
Bisphenol-A (epichlorhydrin)	60-100%	25068-38-6				
Silicone Dioxide	0-40%	112926-00-8				
Proprietary	0-20%					

**SECTION 2 NOTES:**

## SECTION 3: HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:**

**ROUTES OF ENTRY:** Primary – skin contact.

**POTENTIAL HEALTH EFFECTS**

**EYES:** May cause irritation

**SKIN:** May cause an illergic skin reponse and/or redness and itching to those sensitive. Not likely to cause any chronic effects.

**INGESTION:** Low acute oral toxicity.

**INHILATION:** Not likely to cause problems unless heated. Do not inhale dust. Heated material may cause vapours leading to nausea, headaches, dizziness, and irritation to the respiratory system. Repeated exposure to high concentrations of vapours may irritate pre-existing respiratory conditions and develop allergy like symptoms to over exposure. Animal testing showed temporary deposits of precipitated silica but it cleared when exposure ceased.



# MATERIAL SAFETY DATA SHEET

MITON EPOXY RESIN

MSDS DATE: Dec. 5, 2011

## SECTION 5: FIRE-FIGHTING MEASURES CONTINUED

### NFPA HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0  
OTHER:

### HMS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 1 PHYSICAL HAZARD: 0  
PROTECTION:

**EXTINGUISHING MEDIA:** Use water fog, form, dry chemical or carbon dioxide, Material will not burn unless preheated. Clear fire area of all non-emergency personnel. Cool fire exposed containers with water. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Excessive airborne cured epoxy dust from abrasive removals may cause explosion on ignition.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide and smoke.

**SECTION 5 NOTES:** Treat as a Class B.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:** Contain spill from exposure to water and soil. Clear non emergency cleanup personnel. Mechanically remove (scoop and vacuum) material and properly dispose. Collect remaining material with an inert material and wash residue with hot water and soap.

**SECTION 6 NOTES:** Dispose material according to governing regulations. Do not dispose of in sanitary sewers. Material not considered a hazardous waste by RCRA criteria (40CFR 261).

## SECTION 7: HANDLING AND STORAGE

**HANDLING AND STORAGE:** Handle product with care. Keep containers upright at all times and contain product in suitable solvent and heat resistant containers. Handle with care and extreme caution around exposed hot material sealed in air tight container. Do not store near any sources of ignition. Keep stored between 4°C and 35°C.

**OTHER PRECAUTIONS:** Avoid contact with skin.

**SECTION 7 NOTES:** Thoroughly wash clothing with degreasing soaps or other to remove product before reusing clothing. This resin may be handled, shipped and stored at elevated temperature in bulk. The recommended pumping temperature is 80° F.

# MATERIAL SAFETY DATA SHEET

MITON EPOXY RESIN

MSDS DATE: Dec. 5, 2011

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>ENGINEERING CONTROLS:</b>	Under normal use no engineered controls are required. Use local exhaust systems and/or ventilation if product is heated
<b>VENTILATION :</b>	
<b>RESPIRATORY PROTECTION:</b>	Under normal conditions no respiratory protection is required when using product. Wear NIOSH approved respiratory protection if sensitive to fumes.
<b>EYE PROTECTION:</b>	Wear approved safety glasses when handling material.
<b>SKIN PROTECTION:</b>	Wear oil impervious insulated gloves when handling equipment heated by product.
<b>OTHER PROTECTIVE EQUIPMENT:</b>	It is recommended to use disposable or higher density cotton coveralls to prevent skin exposure by saturation of the product through the clothing.
<b>WORK HYGIENIC PRACTICES:</b>	Do not reuse unwashed clothing contaminated with product. Wash exposed skin after handling.

### SECTION 8 NOTES:

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	Clear to slight amber colour liquid
<b>ODOR:</b>	
<b>PHYSICAL STATE:</b>	Low to high viscosity liquid depending on temperature.
<b>pH AS SUPPLIED:</b>	NA
<b>pH (Other):</b>	NA
<b>BOILING POINT:</b>	> 260°C / >500°F
<b>FLASHPOINT:</b>	251°C / 484°F (Pansky Martens)
<b>SPECIFIC GRAVITY:</b>	0.95 – 1.3
<b>EVAPORATION RATE:</b>	NA
<b>SOLUBILITY IN WATER:</b>	< 2% Negligable.
<b>PERCENT SOLIDS BY WEIGHT:</b>	100
<b>VOC's:</b>	0 g / l

### SECTION 9 NOTES:

# MATERIAL SAFETY DATA SHEET

MITON EPOXY RESIN

MSDS DATE: Dec. 5, 2011

## SECTION 10: STABILITY AND REACTIVITY

### STABLE

### UNSTABLE

STABILITY:

X

CONDITIONS TO AVOID (STABILITY):

Avoid excessive heating. Can react vigorously with strong oxidizing agents, strong mineral acid, and strong mineral and organic bases. Avoid contact with water or liquids. Do not allow molten product to contact water or other liquids. This can cause violent eruptions, splatter heated material, or ignite flammable material. Reaction with some curing agents may produce considerable heat and possible violent decomposition.

INCOMPATIBILITY (MATERIAL TO AVOID):

Strong mineral acids and organic bases, oxidizing agents, adding water to hot heated material.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

Carbon monoxide, carbon dioxide.

HAZARDOUS POLYMERIZATION:

Will not occur.

CONDITIONS TO AVOID (POLYMERIZATION):

NA

SECTION 10 NOTES:

## SECTION 11: TOXICOLOGICAL INFORMATION

### TOXICOLOGICAL INFORMATION:

Mute Orel Toxicity:

LD50 — Low toxicity, LD 50 > 2,000 mg/kg.

Acute Dermal Toxicity:

LD 50 — Low toxicity, LD 50 > 2,000 mg/kg

Chronic Health Hazard:

Components Concentration Regulation Value Remarks Reaction Product: 100% US. IARC This component Bisphenol-A- Monographs on has not been (sapichlorhydrin), epoxy Occupational classified by the resin (number average Exposures to international molecular weight <= 700) Chemical Agency for Agents. Research on Cancer (IARC)

Sensitization:

May cause skin sensitization.

Carcinogenicity:

Recent 2-year bioassays in rats and mice exposed by the dermal route to the diglycidyl ether of bisphenol A (BADGE) yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. Note: Diglycidyl ether of bisphenol A (BADGE) is a component in all BPA/ECH based epoxy resins.

Teratogenicity, Mutagenicity, Other Reproductive Effects: Mutagenicity:

Resins of this type, liquid, resins based on diglycidyl ether of bisphenol A, have proved to be inactive when tested by in vivo Mutagenicity assays. These resins have shown activity in in vitro microbial Mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown. This product may contain components which may cause adverse reproductive and/or development effects.

SECTION 11 NOTES:

# MATERIAL SAFETY DATA SHEET

MITON EPOXY RESIN

MSDS DATE: Dec. 5, 2011

---

## SECTION 12: ECOLOGICAL INFORMATION

---

### ECOLOGICAL INFORMATION:

Material is non-toxic to fish and aquatic invertebrates on an acute basis (LC50 greater than 100mg/L).  
Not readily biodegradable.

### SECTION 12 NOTES:

---

## SECTION 13: DISPOSAL CONSIDERATIONS

---

**WASTE DISPOSAL METHOD:** Dispose of waste according to local governing authorities of the region.

**RCRA HAZARD CLASS:** 40 CFR 261 (non hazardous)

### SECTION 13 NOTES:

---

## SECTION 14: TRANSPORT INFORMATION

---

### MINISTRY OF TRANSPORTATION

#### CONTAINER (COLD) FORM

**PROPER SHIPPING NAME:**

**HAZARD CLASS:**

**ID NUMBER:**

**PACKING GROUP:**

**LABEL STATEMENT:**

### WATER TRANSPORTATION

**PROPER SHIPPING NAME:**

**HAZARD CLASS:**

**ID NUMBER:**

**PACKING GROUP:**

**LABEL STATEMENTS:**

### AIR TRANSPORTATION

**PROPER SHIPPING NAME:**

**HAZARD CLASS:**

**ID NUMBER:**

**PACKING GROUP:**

**LABEL STATEMENTS:**

**SECTION 14 NOTES:** This product is not regulated.

---

## SECTION 15: REGULATORY INFORMATION

---

**Status under Workplace Hazardous Materials Information System (WHMIS), Canada:** NA

**Status under Canadian Environmental Protection Act:** Not Listed.

# MATERIAL SAFETY DATA SHEET

MITON EPOXY RESIN

MSDS DATE: Dec. 5, 2011

## SECTION 15: REGULATORY INFORMATION CONTINUED

**TSCA:** This product is listed on the TSCA 8(b) inventory. If identified components of this product are listed under the TSCA 12(b) Export Notification Rule, they will be listed below.

**TSCA 12(b) Component Listed under TSCA Section:** None

**SARA-Section 313 Emissions Reporting:** Not listed

### SARA-Section 311/312:

The physical and health hazard categories for the hazardous components exceeding the de minimis amount subject to reporting under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.

Name of Chemical	Health Hazard
Silicon Dioxide	Acute
Bisphenol A/Epichlorohydrin Epoxy Resin	Acute

### ADDITIONAL RIGHT-TO-KNOW INFORMATION ON COMPONENTS:

Component	CAS#	Amount	Key
Diglycidyl ether	2238-07-5	<2 ppm	5
Phenyl glycidyl ether	122-60-1	<6 ppm	3

**SARA-Section 355:** Not listed

**CERCLA Hazardous Substances and their Reportable Quantities:** Not listed

**WHMIS RATING:** Not available

### Carcinogenicity:

This product is not listed on EPA, IARC, NTP, TLV, MAX, NIOSH-Ca, OSHA-Ca

## SECTION 15 NOTES:

## SECTION 16: OTHER INFORMATION

### OTHER INFORMATION:

**PREPARATION INFORMATION:** Prepared by Randy Blystone December 5, 2011

### DISCLAIMER:

Infratech Polymers Inc. and its accompanying divisions believes the information contained herein is accurate; however, there shall be no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein which is not intended to be and should not be construed as legal advice or as insuring compliance with any federal, state, or local laws or regulations. Any party using this product should review all such laws, rules, or regulations prior to use, including but not limited to US and Canada Federal, Provincial, and State regulations.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION CONTAINED HEREIN OR THE CHEMICAL TO WHICH THE INFORMATION REFERS.