

## 1. IDENTIFICATION

- 1.1 Product identifier**  
 Trade name : **PSC 2102 Water-based Epoxy Coating Part B**  
 Chemical name : Aliphatic polyamine, epoxy Hardener water soluble.
- 1.2 Recommended use of the product and restrictions on use**  
 Recommended use : Industrial Use, Raw material for coatings for concrete floors. Epoxy curative  
 Non- recommended use(s) : None known
- 1.3 Details of the supplier of the safety data sheet**  
 Company : Polymer Science Corporation.  
 : Unit 1133, 6027 – 79 Avenue S.E  
 : Calgary, Alberta, Canada T2C 5P1  
 Telephone : 403 287 2751  
 Fax : 403 287 2766  
 Website : www.polymersciencecorp.com
- 1.4 Emergency telephone number**  
 Emergency : In case of emergency call CANUTEC: 613-996-6666

## 2. HAZARD IDENTIFICATION

- 2.1 Classification of the mixture**
- 2.1.1 Health Hazards**  
 Skin corrosion : Category 1B  
 Eye Irritation : Category 1  
 Skin sensitizer : Category 1A
- 2.1.2 Environmental Hazards**  
 Aquatic Environment Acute Hazard: Category 1  
 Aquatic Environment Chronic Hazard: Category 1
- 2.2 Label Elements**  
 Symbol :



Signal word :

Danger

Hazard Statements :

Causes Severe skin burns and eye damage  
 May cause an allergic skin reaction  
 Very toxic to aquatic life  
 Very toxic to aquatic life with long lasting effects

Precautionary Statements :

Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves / protective clothing / eye protection / face protection  
 Avoid breathing dust / fumes / gas / mist / vapors / spray  
 Contaminated work clothing should not be allowed out of the workplace  
 Avoid release to the environment.  
 Harmful if swallowed

## 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Mixtures

#### Water-based Epoxy coating Part A

HAZARDOUS INGREDIENTS	C.A.S.#	WEIGHT %
2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine	90530-15-7	0 - 6
m-Xylylenediamine	1477-55-0	0 - 2
Isophoronediamine	2855-13-2	0 - 2
Aliphatic polyamine	50-64	10 - 20
Benzyl Alcohol	100-51-6	0 - 5
Glycol Ether PnP	1569-01-3	0 - 5

#### 4 FIRST AID MEASURES

- EYE CONTACT:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice / attention
- SKIN CONTACT:** If on skin or hair, take off immediately all contaminated clothing and shoes. Rinse skin, washing thoroughly with soap and water. Wash contaminated clothing before use. If skin irritation occurs get medical attention. Wash clothes before reuse.
- INHALATION:** IF INHALED: Remove person to fresh air. Keep at rest. Call a POISON CENTER or doctor if you feel unwell.
- INGESTION:** IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor / physician. DO NOT induce vomiting.

##### Notes to Physician.

No specific measures have been identified. Treat symptomatically. Symptoms may be delayed.

#### 5 FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media**  
Suitable extinguishing media : Dry powder, Carbon dioxide (CO<sub>2</sub>), Foam. Water Spray  
Unsuitable extinguishing media : High volume water jet.
- 5.2 Protective Equipment**  
Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing.
- 5.3 Fire-fighting instructions:**  
Cool containers with flooding quantities of water until well after fire is out to minimize the risk of rupture. Evacuate area of unprotected personnel. Use full protective apparel and self-contained breathing apparatus pressure-demand, MSHA/NIOSH (or equivalent) and full protective gear.
- 5.4 Hazardous Combustion Products**  
Carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments.

#### 6 ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures.**  
Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes, or clothing. Keep people away from and upwind of spill / leak. Evacuate personnel to safe areas, depending on the size of the spill, site conditions, and ambient temperature. Notify managements. Call CANUTEC: 613-996-6666 for assistance and advice.
- 6.2 Environmental precautions**  
Do not allow into any sewer, on the ground or into any body of water. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained
- 6.3 Methods and materials for containment and cleaning up**  
Contain spill with dike if necessary. Absorb in suitable inert material. Sweep or scoop up using non-sparking tools. Place into a suitable container for disposal. After removal, flush spill area with soap and water to remove trace residue.

#### 7 HANDLING AND STORAGE

- 7.1 Precautions for safe handling**  
Avoid all personal contact. Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust / fume / gas / mist / vapor / spray. Use only with adequate ventilation. Provide good ventilation of the working area (local exhaust ventilation if necessary). Keep away from heat, sparks, flame and other sources of ignition.
- 7.2 Hygiene considerations.**  
Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Wash contaminated clothes before reuse. Do not eat, drink or smoke when handling this product. Remove contaminated clothing and protective equipment before entering eating areas. Avoid all contact.
- 7.3 Safe storage procedures**  
Keep away from heat. Keep containers tightly closed in a dry well ventilated place. Empty containers retain product residue and can be hazardous. Keep / store only in original container. Storage Temperature: Minimum 5 °C, Maximum 20 °C. Storage period 6 months after receipt of material by customer. Store separate from food products.

#### 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

##### 8.1 EXPOSURE LIMITS

Hazardous Components (Chemical Name)	ACGIH TLV	OSHA PEL	NIOSH IDLH	Alberta
2-Propenenitrile, reaction products with 3-amino-1,5,5- trimethylcyclohexanemethanamine m-Xylylenediamine	0.1 mg/m <sup>3</sup> (Ceiling)(skin)	Not established	Not established	No data
Isophoronediamine Aliphatic polyamine Benzyl Alcohol	10 ppm / 44 mg / m <sup>3</sup>			

**8.2 EXPOSURE CONTROLS**Industrial Hygiene/Ventilation Measures

General dilution and local exhaust ventilation as necessary to control airborne vapors, aerosols (e.g., dusts, mists) and the thermal decomposition products. Heating may result in generation of airborne vapors and/or aerosols.

Respiratory Protection

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. A full facepiece respirator also provides eye and face protection. Cutting, grinding or sanding of parts fabricated after curing may create respirable dust particles. Respiratory protection appropriate for this dust may be required. Refer to components listed above for potential hazardous components in the dust. Recommended respirators include those certified by NIOSH.

Hand Protection

Nitrile or fluorinated rubber gloves. Consider the porosity and elasticity data of the glove manufacturer and the specific conditions in the work place. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

Eye Protection

Prevent eye and skin contact. Provide eye wash fountain and safety shower in close proximity to points of potential exposure. Wear eye/face protection such as chemical splash proof goggles or face shield exists.

Skin Protection

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact. Where spray mist/vapor is anticipated, permeation resistant clothing is recommended.

Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

**9 PHYSICAL AND CHEMICAL PROPERTIES**Appearance:

Physical State : Liquid.  
Color : Yellowish  
Odor : amine like

Properties

Vapor Pressure : No information available  
Vapor Density : No information available  
Boiling Point : No information available  
Melting Point : No information available  
Flash Point : No information available  
PH : No Information available  
Density : 1.06 g/ cm<sup>3</sup>  
Viscosity : No information available  
VOC content : No information available  
Evaporation rate : No information available  
Solubility in water : Negligible

**10 STABILITY AND REACTIVITY**

Reactivity : No information available.  
Chemical Stability : Stable under normal conditions  
Incompatible Materials : None known.  
Hazardous Polymerization : Will not occur.  
Conditions to avoid : Avoid high temperatures. Avoid contact with epoxides, isocyanates, acids.  
Hazardous decomposition products: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide (CO).

**11 TOXICOLOGICAL INFORMATION****11.1 Toxicity**

Ingredient Name	Oral LD50	Dermal LD50	Inhalation LC50
2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine	Acute LD50 > 2000 mg/kg (tested) (Rat)	Acute LD > 2000 mg/kg (Rabbit)	Acute LC50 > 5 mg/l (Dust / Mist) (Rat) (4h)
m-Xylylenediamine	930 mg / kg (Rat)	2 g / kg (Rabbit)	700 ppm. 1 hour (Rat)
Isophoronediamine	1030 mg / kg (Rat, male)	> 5.01 mg / l (4h)	> 2000 mg / kg
Aliphatic polyamine	No data	No data	No data
Benzyl Alcohol	LD50: 1230 – 3100 mg/ kg (Rat, several tests) 1040, 1360 & 1580 mg/kg (Mouse), 1040 mg/kg (Rabbit) 2500 mg/kg (guinea pig)	2000 mg / kg (Rabbit), 5250 mg / kg (Guinea pig)	Above 114 ppm (rat)

Glycol Ether PnP	3449 mg / Kg (Rat)	4052 mg / Kg (Rabbit)	>9.0 mg / L (6h)
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## 11.2 Skin Corrosion and / or irritation

Corrosive

## 11.3 Eye Damage or irritation

Causes serious eye damage

## 11.4 Respiratory and skin sensitization.

Severe Sensitizing on skin

No data on respiratory sensitization.

## 11.5 Repeated Dose Toxicity

No data

## 11.6 Genotoxicity

No data.

## 11.7 Carcinogenicity

No data.

## 11.8 Reproductive Toxicity

Not Available

## 11.9 Specific Target Organs Effect

Not information available.

## 12 ECOLOGICAL INFORMATION

### Toxicity, Persistence and Degradability, Bioaccumulative Potential, Mobility in Soil, Other Adverse Effects.

**Overall Environmental Toxicity:** Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

This material is not readily biodegradable.

This material may cause long-term adverse effects in the environment.

This substance may be highly toxic to aquatic organisms.

### Algae Test Results

Test: Growth Inhibition (OECD 201)

Duration: 72

Species: Pseudokirchneriella subcapitata

0.47 mg/l ErC50

0.098 mg/l EbC50

### Toxicity to Fish

Test: Acute toxicity, freshwater (OECD 203)

Duration: 96 hr.

Species: Zebra Fish (Brachydanio rerio)

0.5 – 1.0 mg/l LC50

### Invertebrate Test Results

Test: Acute Immobilization (OECD 202)

Duration: 24, 48 hr

Species: Water Flea (Daphnia magna)

2.3, 1.5 mg/l EC50

### Bacteria Test Results

Test: DIN 38412 T.8

Duration: 16 hr

Species: Pseudomonas putida > 1 – 10 mg/l EC50

### Degradation

Test: Manometric Respirometry (OECD 301F)

Duration: 28 day

0%

Test: Closed Bottle (OECD 301D)

Duration: 28

0%

Procedure: Ready biodegradability

Complete inhibition of bacteria was observed. This material is not readily biodegradable.

### Results of PBT and vPvB Assessment

Not determined

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
2-Propenenitrile, reaction products with 3-amino-1,5,5-trimethylcyclohexanemethanamine	EC50 = 9.92 mg/L Pseudokirchneriella subcapitata (72hrs) NOEC = 8.11 mg/L Pseudokirchneriella subcapitata (72hrs)	LC100 > 100 mg/L Zebra Fish (Brachydanio rerio) 96hrs	EC50 > 100 mg/L Daphnia magna - 48hrs
m-Xylylenediamine	Not available	Not available	Not available
Isophoronediamine	EC50 = 37 mg/L Desmodesmus subspicatus (72 h) NOEC = 1.5 mg/L Desmodesmus subspicatus (72 h)	LC50 = 110 mg/L Leuciscus idus (96 h)	EC50 = 23 mg/L - Daphnia magna (48h) NOEC = 8.3 mg/L - Daphnia magna (48h) NOEC = 3 mg/L - Daphnia magna (21d)
Aliphatic polyamine	Not Available	Not Available	Not Available

### 13 DISPOSAL CONSIDERATIONS

#### Waste Disposal Method

Incinerate or dispose of unused material, residues and containers in a licensed facility in accordance with all applicable local, state and federal regulations. Do not discharge substance/product into sewage system. Do not contaminate pond, waterways or ditches with chemical or used container. The product should not be allowed to enter drains, water courses or the soil.

#### Empty Container Precautions

Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Empty containers retain product residue (dust, liquid, vapor, and / or gases) and can be dangerous. Do not heat or cut container with electric or gas torch.

### 14 TRANSPORTATION INFORMATION

14.1 Identification, UN number : UN 2735

14.2 Shipping Name : Polyamines, Liquid, Corrosive, N.O.S.

14.3 Hazard Class : 8

14.4 Packing Group : II

#### Marine Pollutant.

Technical Name (N.O.S.) : Aliphatic Polyamine

Comments: Requirements specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicles, rail cars or aircraft.

### 15 OTHER INFORMATION

Preparation Date : June 28, 2017

SDS prepared by : Polymer Science Corp. 403 287 2751

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