

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATIONS AND OF THE COMPANY UNDERTAKING**

**Product Name** Powercrete Part B  
**Product Description** Epoxy Hardener  
**Manufacturer/Supplier** Berry Plastics Corporation, Corrosion Protection Group  
**Address** 11010 Wallisville Rd.  
 Houston, TX 77013  
**Phone Number** (713) 676-0085 (Monday – Friday 8:00 am to 5:00 pm)  
**Chemtrec Number** (800) 424-9300  
**Revision Date:**  
**MSDS Date:** July 15, 2008

*Safety Data Sheet according to EC directive 2001/58/EC and OSHA's Hazcom Standard (29 CFR 1910.1200)*

**2. HAZARDS IDENTIFICATION**

EU Main Hazards  
 R20/21/22 Harmful by inhalation, in contact with skin and if swallowed  
 R34 Causes burns.  
 R43 May cause sensitization by skin contact.  
 R62 Possible risk of impaired fertility.  
 R68 Possible risk of irreversible effects.

**Routes of Entry**

- Eye contact - Ingestion - Skin contact – Inhalation - Absorption

**Carcinogenic Status**

Not considered carcinogenic by NTP, IARC, and OSHA.

**Target Organs**

Skin - Eye - Respiratory System – Reproductive System – Liver – Kidney – Spleen - Adrenal

**Health Effects - Eyes**

Corrosive to eyes. Contact may cause severe damage including blindness. Vapors may be irritating.

**Health Effects - Skin**

Corrosive to skin. Contact causes severe irritation, dermatitis and chemical burns. May cause allergic skin reaction. Material can be absorbed through the skin and cause effects similar to those resulting from inhalation.

**Health Effects - Ingestion**

Swallowing may cause severe burns and permanent damage to the mouth, throat and stomach. May be harmful if swallowed. Aspiration into the lungs may occur during ingestion or vomiting causing lung damage.. May cause central nervous system effects such as headache, nausea dizziness, and confusion and breathing difficulties. Large doses can result in liver, kidney, spleen and adrenal damage and adverse reproductive effects.

**Health Effects - Inhalation**

Inhalation of vapors may be severely irritating and may cause chemical burns to the respiratory tract. Repeated exposure may cause lung damage. Repeated, prolonged exposure may cause adverse effects to the central nervous system causing headache, nausea, dizziness, confusion and breathing difficulties, as well as adverse effects to the liver, kidney, spleen, adrenals and adverse reproductive effects.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#/Codes	Concentration	R Phrases	Classification
Diethylenetriamine	111-40-0 203-865-4	30 - 70%	R21/22, R34, R43	C
Isophoronediamine	2855-13-2	5 -10%	R36/38, R43	Xi
Amine Compounds	Proprietary	<25%	R43,R62	Xi
4,4'- Isopropylidenebisphenol	80-05-7 2039506	<35%	Repro Cat.3, R37,R41,R43,R62	Xn

### 4. FIRST AID MEASURES

#### Eyes

Immediately flood the eye with plenty of water for at least 20 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

#### Skin

Immediately flood the skin with large quantities of water for at least 20 minutes, preferably under a shower. Remove contaminated clothing and continue washing. Contaminated clothing should be washed or dry-cleaned before re-use. Obtain medical attention if blistering occurs or redness persists.

#### Ingestion

Do not induce vomiting unless directed to do so by medical personnel. Have victim drink 1-3 glasses of water to dilute stomach contents. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

#### Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

### 5. FIRE- FIGHTING MEASURES

#### Extinguishing Media

Use foam, dry chemical or carbon dioxide.

#### Unusual Fire and Explosion Hazards

Decomposition and combustion products may be toxic.

#### Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

### 6. ACCIDENTAL RELEASE MEASURES

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Wear appropriate protective clothing. Prevent the material from entering drains or watercourses. Notify authorities if spill has entered watercourse or sewer or has contaminated soil or vegetation. Dispose in accordance with federal, state and local regulations.

### 7. HANDLING AND STORAGE

Use in well ventilated area. Use local exhaust ventilation. Use appropriate protective clothing. If this product is sprayed, aerosolized or applied to hot surfaces, wear appropriate protective clothing to prevent contact with skin, eyes and respiratory system. Consider the use of respiratory protection, especially during application to hot surfaces as volatile organic chemicals may be released. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.

Storage area should be: - cool - dry - well ventilated - away from incompatible materials - out of direct sunlight – away from sources of ignition

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Occupational Exposure Standards

Exposure limits are listed below, if they exist

#### Isophoronediamine

None established.

#### Diethylenetriamine

ACGIH TLV: 1 ppm (4.2 mg/m<sup>3</sup>) TWA, Can be absorbed through the skin.

#### 4,4'- Isopropylidenebisphenol

None established.

#### Amine Compounds

None established.

### Engineering Control Measures

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

### Respiratory Protection

Wear respiratory protection if there is a risk of exposure to high vapor concentrations, aerosols or if applied to hot surfaces. A NIOSH approved full face respirator may be worn. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

### Hand Protection

Butyl gloves and gauntlets are recommended.

### Eye Protection

Chemical goggles or safety glasses with side shields and a face shield.

### Body Protection

Wear overall or apron.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Physical State</b>	Liquid
<b>Color</b>	Clear to Light brown
<b>Odor</b>	Amine odor
<b>pH</b>	Not determined.
<b>Relative Density (at 20 °C)</b>	1.0 -1.02
<b>Boiling Range/Point (°C/F)</b>	Not determined.
<b>Melting Point (°C/F)</b>	Not determined.
<b>Flash Point (PMCC) (°C/F)</b>	> 93/199
<b>Vapor Pressure (°C/F)</b>	Not determined.
<b>Evaporation Rate</b>	Not determined.
<b>Solubility in Water</b>	Partially soluble
<b>Vapor Density (Air = 1)</b>	Heavier than air.
<b>VOC (g/l)</b>	100%

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## 10. STABILITY AND REACTIVITY

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### Stability

Stable under normal conditions.

### Conditions to Avoid

- Heat, sparks, flames - contact with incompatible chemicals

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## 10. STABILITY AND REACTIVITY

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### Materials to Avoid

- strong oxidizing agents - strong Lewis acids – strong mineral acids – strong mineral bases – strong organic bases

### Hazardous Polymerization

Will not occur.

### Hazardous Decomposition Products

- oxides of carbon - nitrogen oxides – organic compounds

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

Isophoronediamine: Oral LD50: 400 – 2000 mg/kg

Diethylenetriamine: Oral LD50(rat): 1080 mg/kg

4,4'- Isopropylidenebisphenol: Oral LD50(rat, male): 4100 mg/kg Oral LD50(rat, female): 3300 mg/kg

Amine Compounds: Oral LD50 >2000 mg/kg. Dermal LD50: 400 - 2000 mg/kg

### Chronic Toxicity/Carcinogenicity

This product contains components that have shown histopathological effects of the kidney, liver, spleen and adrenals in two lifetime rat feeding studies.

### Genotoxicity

This product contains components that have shown positive test results for mutagenicity in the AMES assay and in the unscheduled DNA assay, but negative results in microbial tests and in vitro gene mutation assays.

### Reproductive/Developmental Toxicity

This product contains components in which studies in laboratory animals have shown adverse reproductive effects.

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## 12. ECOLOGICAL INFORMATION

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### Mobility

No relevant studies identified.

### Persistence/Degradability

This product contains components that have shown resistance to biodegradation in biological waste treatment plants.

### Bio-accumulation

No relevant studies identified.

### Ecotoxicity

This product contains components that may be toxic to fish.

4,4'- Isopropylidenebisphenol: LC50 (Fathead minnow): 4.6 mg/l 96hr.

EC50 (Daphnia Magna) 10.200 mg/l 48hr

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## 13. DISPOSAL CONSIDERATIONS

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For disposal of residual product, mix (by weight) 100 parts of Powercrete Part A with 6 parts Powercrete Part B, thoroughly mix and allow to solidify in well ventilated area. Dispose of in accordance with all applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care.

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## 14. TRANSPORT INFORMATION

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### DOT CFR 172.101 Data

Amines, liquid, corrosive, n.o.s. (Diethylenetriamine, Isophoronediamine) (8) UN2735, PGII

### UN Proper Shipping Name

Polyamines, liquid, corrosive, n.o.s. (Diethylenetriamine, Isophoronediamine)

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**14. TRANSPORT INFORMATION**

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<b>UN Class</b>	8 (corrosive)
<b>UN Number</b>	UN2735
<b>UN Packaging Group</b>	II
<b>Classification for AIR Transportation (IATA)</b>	Consult current IATA Regulations prior to shipping by air.

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**15. REGULATORY INFORMATION**

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**EU Label Information**

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments(2001/60/EC and 2006/8/EC)

**EU Hazard Symbol and Indication of Danger**

C – Corrosive

**R phrases**

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R34 Causes burns.

R42/43 May cause sensitization by inhalation and skin contact.

R62 Possible risk of impaired fertility.

R68 Possible risk of irreversible effects.

**S phrases**

S23 Do not breathe vapour.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/38 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice.

**US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS****TSCA Listing**

All ingredients have been verified for inclusion on the EPA Toxic Substance Control Act Chemical Substance Inventory.

**EINECS Listing**

This product contains components that are not listed on the European Inventory of Existing Commercial Chemical Substances (EINECS).

**DSL (Canadian) Listing**

All ingredients in this product have been verified for inclusion on the Domestic Substance List (DSL).

**California Proposition 65**

This product does not contain any materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

**SARA Title III Sect. 311/312 Categorization**

Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

**SARA Title III Sect. 313**

This product contains a chemical that is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: 4,4'- Isopropylidenebisphenol

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**16. OTHER INFORMATION**

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**NFPA Ratings**

NFPA Code for Flammability - 1

NFPA Code for Health - 3

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards – None

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**16. OTHER INFORMATION**

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**HMIS Ratings**

HMIS Code for Flammability - 1

HMIS Code for Health - 3

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

**Abbreviations**

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk

C: Corrosive

Xn: Harmful

F: Highly Flammable

S: Safety

Xi : Irritant

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