



Product Name:

Por-A-Kast Mark 2 Curative

I. Basic Information:

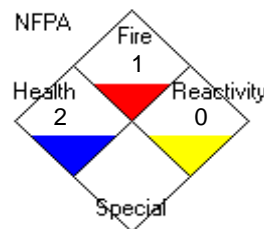
Supplier: PUMA Polymers

Address: 2003 Curtain Pole Rd, P.O. Box 5413

City, ST Zip: Chattanooga, TN 37406

Emergency Phone: 423-697-0499

Transportation Emergency Phone: Chem-trec 1-800-424-9300



Chemical State: [X] Liquid [ ] Gas [ ] Solid Chemical Type: [ ] Pure [X] Mixture

II. Ingredients:

Table with columns: CAS No., Chemical Name, % Range, EHS, NTP, IARC, SUB Z, SARA 313, OSHA PEL, ACGIH TLV, Other Limits. Rows include N,N,N',N'-Tetrakis(2-hydroxypropyl)ethylenediamine and 2,2,4-Trimethyl-1,3-pentenediol diisobutyrate.

III. Hazardous Identification:

Hazard Category: ACUTE CHRONIC

Hazardous Identification Information:

Warning!

Clear liquid with a slight fruity odor.

May cause eye and skin irritation.

IV. First Aid Measures:

Route(s) of Entry: Skin and eye contact.

Health Hazards (Acute and Chronic):

Acute (Short-term)

Exposure to this product may cause irritation of eyes, nose, throat and lungs. Skin contact may cause minor irritation.

Chronic (Delayed)

Repeated or prolonged skin contact may cause skin rash and other skin complications.

Signs and Symptoms:

Skin and eye irritation.

Medical Conditions Generally Aggravated by Exposure: Repeated contact may cause skin and eye irritation.

Emergency and First Aid Procedures:

SKIN CONTACT: Remove contaminated clothing and wash affected area with isopropyl alcohol followed by soap and water.

EYE CONTACT: Flush eyes with water for at least 15 minutes and contact a physician.

INGESTION: Do NOT induce vomiting. Take 1-2 glasses of water and contact a physician. Do not give anything by mouth to an unconscious person.

INHALATION: Remove person to fresh air. If person is not breathing give mouth-to-mouth resuscitation and contact a physician.

Other Health Warnings

Wash hands thoroughly after handling this material, before eating, smoking, etc.



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**V. Fire Fighting Measures:**

**Flash Point:** >275°F      **Lower Explosive Limit:** NE      **Upper Explosive Limit:** NE

**Fire Extinguishing Media:**

Foam, water fog, carbon dioxide or dry chemical extinguishers.

**Special Fire Fighting Procedures:**

Firefighters should wear a self-contained breathing apparatus and protective clothing.

**Unusual Fire and Explosion:**

None known

**VI. Accidental Release Measures:**

**Steps to be Taken in Case Material is Released or Spilled:**

Cover liquid with an absorbent material (sawdust, vermiculite or wet sand). After the material is absorbed scoop up and place in containers for disposal.

**VII. Handling and Storage:**

**Precautions to be Taken:**

Store in a cool dry place in tightly sealed containers. Protect from heat and moisture contamination.

**Other Precautions:**

Avoid skin and eye contact.

**VIII. Exposure Controls/Personal Protection:**

**Ventilation Requirements:**

Local Exhaust: Use in a ventilated area.

Mechanical (General): Recommended.

**Personal Protective Equipment:**

RESPIRATORY PROTECTION: None needed at normal temperatures. Use a self-contained breathing apparatus under emergency conditions.

PROTECTIVE GLOVES: Impervious rubber gloves.

EYE PROTECTION: Wear safety glasses or goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: An apron or suitable clothing to prevent skin contact.

**IX. Physical and Chemical Properties:**

**Boiling Point:** >300°F      **Melting Point:** NA      **Evaporation Rate:** NE

**Vapor Pressure (mm Hg.):** NE      **Vapor Density (AIR = 1):** NE

**Solubility In Water:** Slight

**Appearance and Odor:** Clear liquid, slight fruity odor.

**Other Information:** VOLATILITY @75°F: Very Low

PERCENT VOLATILE BY VOLUME(%): Negligible

SPECIFIC GRAVITY: 0.99

**X. Stability and Reactivity:**

**Stability:**

Stable

**Incompatibility (Materials to Avoid):**

Strong oxidizers

**Decomposition/By Products:**

High temperatures and burning conditions may release incompletely burned carbon products, carbon monoxide and nitrogen



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oxides.

**Hazardous Polymerization:**

Will not occur

***XI. Toxicological Information:***

None Available

***XII. Ecological Information:***

None Available

***XIII. Disposal Considerations:***

Waste must be disposed of in accordance with federal, state and local environmental regulations. Incinerate or bury in a licensed facility. Containers may be disposed of or reclaimed in a routine manner.

***XIV. Transport Information:***

Not regulated by DOT

***XV. Regulatory Information:***

TSCA Inventory Status: This product, or its components, are listed on, or are exempt from the Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

SARA 313 INFORMATION: This product doesn't contain the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

***XVI. Other Information:***

In this document the following abbreviations were used:

NA: Not Applicable NE: Not Established



# Material Safety Data Sheet

No. 002811

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Printed:

06/01/2009

Last Update:

05/28/2009

Product Name:

## Por-A-Kast Mark 2 Prepol

### I. Basic Information:

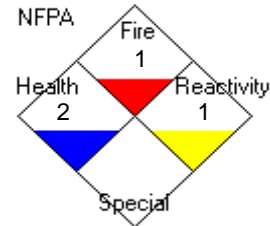
Supplier: PUMA Polymers

Address: 2003 Curtain Pole Rd, P.O. Box 5413

City, ST Zip: Chattanooga, TN 37406

Emergency Phone: 423-697-0499

Transportation Emergency Phone: Chem-trec 1-800-424-9300



Chemical State:  Liquid  Gas  Solid Chemical Type:  Pure  Mixture

### II. Ingredients:

| CAS No.  | Chemical Name                                 | % Range | EHS | NTP | IARC | SUB Z | SARA 313 | OSHA PEL | ACGIH TLV | Other Limits |
|----------|---|---------|-----|-----|------|-------|----------|----------|-----------|--------------|
| 101688   | 4,4' -Diphenylmethane Diisocyanate (MDI)      | 40-55   |     |     |      |       | X        | 0.02 ppm | 0.005 ppm | NE           |
| 6846500  | 2,2,4-Trimethyl-1,3-pentanediol diisobutyrate | 25-50   |     |     |      |       |          |          |           |              |
| 39310059 | Diphenylmethane Diisocyanate (Homopolymer)    | 10-20   |     |     |      |       |          | NE       | NE        | NE           |
| 78400    | Triethyl Phosphate                            | <2      |     |     |      |       |          | NE       | NE        | NE           |

### III. Hazardous Identification:

Hazard Category: ACUTE CHRONIC REACTIVE

#### Hazardous Identification Information:

Warning!

Contains 4,4' -Diphenylmethane Diisocyanate (4,4'-MDI)

Straw to light yellow liquid with a slight musty odor.

May cause eye, skin and respiratory tract irritation.

### IV. First Aid Measures:

Route(s) of Entry: Inhalation, Ingestion, Skin and Eye contact.

#### Health Hazards (Acute and Chronic):

Acute (Short-Term)

Inhalation of the vapors may cause irritation of the mucous membranes in the respiratory tract, running nose and sore throat. Contact may cause slight irritation of the skin and eyes (tearing).

Chronic (Delayed)

Repeated or prolonged inhalation of MDI vapors above TLV of 0.02 ppm can cause immediate or delayed respiratory sensitization and asthma-like conditions. Prolonged skin contact can cause reddening, swelling or skin sensitization in susceptible individuals.

#### Signs and Symptoms:

Skin, eye and respiratory tract irritation.

Medical Conditions Generally Aggravated by Exposure: Prolonged skin contact can cause reddening, swelling or skin sensitization

#### Emergency and First Aid Procedures:



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SKIN CONTACT: Remove contaminated clothing and wash affected area with isopropyl alcohol followed by soap and water.

EYE CONTACT: Flush eyes with water for at least 15 minutes and contact a physician.

INGESTION: Do NOT induce vomiting and contact a physician. Do NOT give anything by mouth to an unconscious person.

INHALATION: Remove person to fresh air. If person is not breathing give mouth-to-mouth resuscitation and contact a physician.

### **Other Health Warnings**

Due to the low volatility of MDI vapors, high exposures are not anticipated unless the material is overheated or sprayed as an aerosol in the air.

### ***V. Fire Fighting Measures:***

**Flash Point:** >500°F      **Lower Explosive Limit:** NE      **Upper Explosive Limit:** NE

### **Fire Extinguishing Media:**

Foam, carbon dioxide, dry chemical and Halon 1211. If water is used, it should be used in very large quantities.

### **Special Fire Fighting Procedures:**

Firefighters must wear a full face self-contained breathing apparatus and protective clothing.

### **Unusual Fire and Explosion:**

Contamination of isocyanates with water releases carbon dioxide which may result in a dangerous amount of pressure build-up in closed containers. Do NOT reseal contaminated containers. Personnel must be evacuated. Use cold water to cool fire exposed containers.

### ***VI. Accidental Release Measures:***

#### **Steps to be Taken in Case Material is Released or Spilled:**

Cover liquid with an absorbent material (sawdust, vermiculite or wet sand). After the material is absorbed scoop up and place in open containers. Treat material with the prepared decontamination solution and leave the container open in a well ventilated area for 48 hours. Spill area should also be decontaminated with the following decontamination solution: 90% water, 2% detergent and 8% concentrated ammonia or sodium carbonate.

### ***VII. Handling and Storage:***

#### **Precautions to be Taken:**

Store in tightly closed containers at 70-90°F in a dry ventilated area away from sources of heat, moisture and incompatibles. Do NOT reseal containers if water contamination is suspected.

#### **Other Precautions:**

Avoid contact with skin and eyes. Avoid breathing vapors.

### ***VIII. Exposure Controls/Personal Protection:***

#### **Ventilation Requirements:**

Local Exhaust: Provide mechanical (general) and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

#### **Personal Protective Equipment:**

RESPIRATORY PROTECTION: None needed at normal temperatures. Use a self-contained breathing apparatus for high concentrations and under emergency conditions.

PROTECTIVE GLOVES: Impervious rubber gloves.

EYE PROTECTION: Wear safety glasses or goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: An apron or suitable clothing to prevent skin contact.



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IX. Physical and Chemical Properties:

Boiling Point: >500°F Melting Point: NA Evaporation Rate: NE  
Vapor Pressure (mm Hg.): NE Vapor Density (AIR = 1): NE  
Solubility In Water: Reacts slowly to liberate CO2 gas.  
Appearance and Odor: Light yellow; slight musty odor.  
Other Information: VOLATILITY @75°F: Very Low  
PERCENT VOLATILE BY VOLUME(%): Negligible  
SPECIFIC GRAVITY @ 77°F: 1.10

X. Stability and Reactivity:

Stability:

Stable

Incompatibility (Materials to Avoid):

Water, acids, bases, alcohols, amines and other materials which react with isocyanates.

Decomposition/By Products:

High temperatures and burning conditions may release isocyanate vapors, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.

Hazardous Polymerization:

Hazardous polymerization may occur. Temperatures above 120°F will accelerate reactions with water. Polymerization may occur above 400°F.

XI. Toxicological Information:

None Available

XII. Ecological Information:

None Available

XIII. Disposal Considerations:

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Incineration is the preferred method.

XIV. Transport Information:

Contains Diphenylmethane-4,4'-diisocyanate (MDI).  
Single containers less than 5000 lbs are not regulated.  
Single containers with > 5000 lbs are regulated as:  
Other Regulated Substances, Liquid, N.O.S Diphenylmethane-4,4'-diisocyanate (MDI)  
Class 9  
UN 3082  
PG III

XV. Regulatory Information:

TSCA Inventoty Status:

This product, or its components, are listed on, or are exempt from the Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372:

| CHEMICAL NAME                           | CAS NUMBER | CONCENTRATION |
|---|------------|---------------|
| Diphenylmethane-4,4'-diisocyanate (MDI) | 101-68-8   | 40-55 %       |

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under



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applicable definitions, to meet the following categories:

An immediate health hazard; A delayed health hazard; A reactive hazard.

***XVI. Other Information:***

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In this document the following abbreviations were used:

NA: Not Applicable NE: Not Established