Material Safety Data Sheet

1. PRODUCT IDENTIFICATION
Product Name: 21426 FAST CURE EPOXY PART 1
Item No: 150345F
Product Type: Epoxy

2. COMPOSITION/ INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Weight Percent</th>
<th>ACGIH TLV:</th>
<th>OSHA PEL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALUMINUM HYDROXIDE</td>
<td>40-50</td>
<td>10 mg/m^3 dust</td>
<td>15 mg/m^3 dust; 5 mg/m^3 respir.</td>
</tr>
<tr>
<td>BISPHENOL A/EPICHLOROHYDRIN BASED EPOXY RESIN</td>
<td>30-60</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>TITANIUM DIOXIDE</td>
<td>1-10</td>
<td>10 mg/m^3 TWA ACGIH</td>
<td>15 mg/m^3 TWA (total dust)</td>
</tr>
<tr>
<td>EPOXY RESIN</td>
<td>1-10</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>CARBON BLACK</td>
<td>0.1-1.0</td>
<td>3.5 mg/m^3 TWA</td>
<td>3.5 mg/m^3 TWA</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye, skin and respiratory irritation. May cause skin sensitization. Contact at elevated temperatures can cause permanent damage to eyes including blindness. 

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure:

- Eyes: Exposure to liquid or vapor causes mild eye irritation. Symptoms may include burning, tearing, redness, stinging, blurred vision and corneal injury. Repeated skin contact may cause allergic skin reactions. Ingestion may cause nausea and vomiting.

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. If not breathing, give artificial respiration. Obtain medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.

Eye Contact: Flush eyes with clean water for at least 20 minutes while gently holding eyelids open, lifting upper and lower lids. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): >400°F Method: PMCC

Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.

Special Fire-Fighting Procedures: Material will not burn unless preheated. Firefighters should wear self-contained breathing apparatus and protective clothing to prevent all skin and eye contact.
5. **FIRE FIGHTING MEASURES**

**Hazardous Products of Combustion:**
When heated to decomposition it emits fumes of Cl-, carbon monoxide, other fumes and vapors varying in composition and toxicity.

**Unusual Fire/Explosion Hazards:**
Heating above 300°F in the presence of air may cause slow oxidation decomposition and above 500°F may cause polymerization.

**Lower Explosive Limit:** Not determined
**Upper Explosive Limit:** Not determined

6. **ACCIDENTAL RELEASE MEASURES**

**Spill Procedures:**
Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Prevent from entering waterways or sewers.

7. **HANDLING AND STORAGE**

**Storage:**
Store away from heat.

**Handling:**
Avoid contact with skin and eyes. Use only in a well ventilated area. Avoid contact with vapors from heated material. Wash hands before eating and smoking. Discard contaminated leather gloves and shoes.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Eyes:**
Safety glasses

**Skin:**
Rubber or plastic gloves.

**Ventilation:**
General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

**Respiratory Protection:**
An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance:</strong></td>
<td>Clear viscous liquid</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Slight</td>
</tr>
<tr>
<td><strong>Boiling Point:</strong></td>
<td>&gt;500°F</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>Neutral</td>
</tr>
<tr>
<td><strong>Solubility in Water:</strong></td>
<td>Negligible</td>
</tr>
<tr>
<td><strong>Specific Gravity:</strong></td>
<td>1.53</td>
</tr>
<tr>
<td><strong>VOC Content(Wt.%):</strong></td>
<td>&lt;1% by weight</td>
</tr>
<tr>
<td><strong>Vapor Pressure:</strong></td>
<td>0.03 mm Hg @ 171°F</td>
</tr>
<tr>
<td><strong>Vapor Density (Air=1):</strong></td>
<td>&gt;1</td>
</tr>
<tr>
<td><strong>Evaporation Rate:</strong></td>
<td>&lt;1 (butyl acetate = 1)</td>
</tr>
</tbody>
</table>

10. **STABILITY AND REACTIVITY**

**Chemical Stability:**
Stable at normal conditions

**Hazardous Polymerization:**
Will not occur.

**Incompatibilities:**
Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (esp. primary and secondary aliphatic amines)

**Conditions to Avoid:**
Heat

**Hazardous Products of Combustion:**
When heated to decomposition it emits fumes of Cl-, carbon monoxide, other fumes and vapors varying in composition and toxicity

11. **TOXICOLOGICAL INFORMATION**

**Oral LD50 (rat):** 11.4 g/kg
**Dermal LD50 (rabbit):** >20 ml/kg
**Eye irritation:** Draize = 2 (rabbit)

12. **ECOLOGICAL INFORMATION**

No data available

13. **DISPOSAL CONSIDERATIONS**

**Recommended Method of Disposal:**
Disposal should be made in accordance with federal, state and local regulations.

**US EPA Waste Number:**
NH - Not a RCRA Hazardous Waste Material

14. **TRANSPORTATION INFORMATION**

**DOT (49CFR 172):**

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15. REGULATORY INFORMATION
SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

CALIFORNIA PROP 65:
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION
Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 1, REACTIVITY 1
Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 1, PHYSICAL HAZARD 0
NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager
Company: Permatex. Inc. 10 Columbus Blvd. Hartford, CT USA 06106
Revision Date: June/01/2006
Revision Number: 3
Material Safety Data Sheet

1. PRODUCT IDENTIFICATION
Product Name: 21426 FAST CURE EPOXY PART 2
Item No: 150445F
Product Type: Epoxy

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Weight Percent</th>
<th>ACGIH TLV:</th>
<th>OSHA PEL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYMERCAPTAN CURING AGENT MIXTURE</td>
<td>20-40</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL B0-72-2</td>
<td>5-10</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>BENZYL ALCOHOL 100-51-6</td>
<td>1-10</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>STYRENE 100-42-5</td>
<td>3-7</td>
<td>20 ppm TWA</td>
<td>100 ppm TWA</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Toxicity: Corrosive Severe irritation or burns, necrosis, blistering and permanent injury. Product can be absorbed through the skin and may cause nausea, headache and general discomfort. May cause lacrimation, conjunctivitis, corneal damage and may cause permanent injury (i.e. blindness). If the hardener is poorly ventilated, strongly heated or atomized, the vapor or mist can cause severe irritation of the respiratory tract, damage contacted tissue and produce scarring. Coughing and chest pain may result, nausea and vomiting in severe cases. Causes severe damage to mucous membranes if swallowed. May cause malaise, headache, discomfort, bleeding and vomiting of blood.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation.

Signs and Symptoms of Exposure: Overexposure may cause eye and skin redness, difficulty breathing and vomiting. Contact with product at elevated temperatures can result in thermal burns.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Weight Percent</th>
<th>NTP</th>
<th>ACGIH Carcinogens</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZYL ALCOHOL 100-51-6</td>
<td>1-10</td>
<td>male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STYRENE 100-42-5</td>
<td>3-7</td>
<td>male rat-negative; female rat-negative; male mice-equivocal; female mice-negative</td>
<td>A4 - Not Classifiable as a Human Carcinogen</td>
<td>Group 2B; Vol. 60, pg. 233, 1994; Monograph 82, 2002</td>
</tr>
</tbody>
</table>

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. If spontaneous vomiting occurs, hold the victim’s head lower than hips to prevent aspiration.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin Contact: Immediately remove contaminated clothing and excess contaminant. Flush with water for at least 15 minutes. Wash thoroughly with soap and water. Consult a physician if irritation develops.

Eye Contact: Flush eyes with clean water for at least 20 minutes while gently holding eyelids open, lifting upper and lower lids. Get immediate medical attention.
5. **FIRE FIGHTING MEASURES**

Flash Point (°F/C): >200°F Method: Estimated

Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.

Special Fire-Fighting Procedures: Firefighters shoud wear self-contained breathing apparatus and protective clothing to prevent all skin and eye contact. Use water spray to cool exposed containers.

Hazardous Products of Combustion: Acrid and toxic fumes with organic amines, ammonia, oxides of carbon and nitrogen.

Unusual Fire/Explosion Hazards: Sudden reaction and fire may result if product is mixed with an oxidizing agent.

Lower Explosive Limit: Not determined

Upper Explosive Limit: Not determined

6. **ACCIDENTAL RELEASE MEASURES**

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Prevent from entering waterways or sewers.

7. **HANDLING AND STORAGE**

Storage: Store away from heat. Do not store in reactive metal containers. Keep away from acids and oxidizers.

Handling: Avoid prolonged skin contact. Keep away from eyes. Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Wash thoroughly with soap and water after handling. Discard contaminated leather gloves and shoes. Do not mix with sodium nitrite or other nitrosating agents as cancer-causing nitrosamines could be formed.

8. **EXPOSURE CONTROLS/PERSOAL PROTECTION**

Eyes: Wear safety glasses or goggles to protect against exposure.

Skin: Neoprene, rubber or butyl rubber gloves.

Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Black paste

Odor: Mercaptan

Boiling Point: >300°F

pH: Does not apply

Solubility in Water: Slight

Specific Gravity: 1.4

VOC Content(Wt. %): Not determined

Vapor Pressure: <5 mm Hg @ 77°F

Vapor Density (Air=1): >1

Evaporation Rate: <1 (butyl acetate = 1)

10. **STABILITY AND REACTIVITY**

Chemical Stability: Stable at normal conditions

Hazardous Polymerization: Will not occur


Conditions to Avoid: Excessive heat. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Hazardous Products of Combustion: Acrid and toxic fumes with organic amines, ammonia, oxides of carbon and nitrogen.

11. **TOXICOLOGICAL INFORMATION**

See Section 3

12. **ECOLOGICAL INFORMATION**

No data available
13. DISPOSAL CONSIDERATIONS
Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION
DOT (49CFR 172)

**Domestic Ground Transport**
- DOT Shipping Name: CONSUMER COMMODITY
- Hazard Class: ORM-D
- UN/ID Number: None
- Marine Pollutant: None

**IATA**
- Proper Shipping Name: Amines, liquid, corrosive, n.o.s., (Tris-2,4,6-(dimethylaminomethyl)phenol), Limited Quantity
- Class or Division: Class 8, Packing Group III
- UN/NA Number: UN 2735

**IMDG**
- Proper Shipping: Amines, liquid, corrosive,n.o.s., (Tris-2,4,6-(Dimethylaminomethyl) Phenol), Limited Quantity
- Hazard Class: Class 8 PGIII
- UN Number: UN 2735

15. REGULATORY INFORMATION
SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

**STYRENE**

**CALIFORNIA PROP 65:**
WARNING: This product contains a chemical known to the State of California to cause cancer.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION
Estimated NFPA Rating: HEALTH 3, FLAMMABILITY 1 , REACTIVITY 1
Estimated HMIS Classification: HEALTH 3, FLAMMABILITY 1, PHYSICAL HAZARD 0
NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager
Company: Permatex Inc. 10 Columbus Blvd. Hartford, CT USA 06106
Revision Date: 01/16/2006
Revision Number: 1