1. Product And Company Identification

Manufacturer
HENRY COMPANY
2270 Castle Harbor Place
Ontario, CA  91761
Company Contact:  R&D Dept.
Telephone Number:  909-947-7224
Web Site:  www.resintech.com

Issue Date:  10/17/2006
Product Name:  Part A Foam (TAP Flexible Expanding Foam Side A)
MSDS Number:  51

2. Composition/Information On Ingredients

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent Of Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>diphenylmethane diisocyanate (MDI) Mixed Isomers</td>
<td>26447-40-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>4-4’-diphenylmethane diisocyanate (MDI)</td>
<td>101-68-8</td>
<td>35 - 45</td>
</tr>
<tr>
<td>polymeric diphenylmethane diisocyanate (pMDI)</td>
<td>9016-87-9</td>
<td>100 - 100</td>
</tr>
</tbody>
</table>

EMERGENCY OVERVIEW

WARNING: Respiratory Sensitizer, Skin Sensitizer, Very Toxic, Reacts with Water

Aerosol may be fatal if inhaled. May cause severe allergic respiratory and skin reactions. Permanent sensitization can occur from either skin or respiratory contact.

Appearance/Odor: Brown liquid, musty odor

3. Hazards Identification

Primary Routes(s) Of Entry
Skin Contact, Inhalation

Eye Hazards
Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor or aerosol may cause irritation with symptoms of burning and tearing. Prolonged contact may cause conjunctivitis.

Skin Hazards
Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove. May cause skin discolorization. Prolonged contact can cause reddening, swelling, rash, and, in some cases, skin sensitization. Animal tests indicate skin contact alone may lead to an allergic respiratory reaction.

Ingestion Hazards
May cause irritation of the mouth, throat, and digestive tract. Symptoms may include abdominal pain, nausea,
3. Hazards Identification - Continued

**Ingestion Hazards - Continued**

vomiting, and diarrhea.

**Inhalation Hazards**

Short-term inhalation exposure to isocyanates can cause respiratory and mucous membrane irritation. Symptoms include eye and nose irritation, dry or sore throat, runny nose, shortness of breath, wheezing and laryngitis. Coughing with chest pain or tightness may also occur. These symptoms may occur during exposure or may be delayed several hours. High aerosol concentrations could cause inflammation of the lung tissue (chemical pneumonitis), chemical bronchitis with severe asthma-like wheezing, severe coughing spasms and accumulation of fluid in the lungs (pulmonary edema), which could prove fatal. Symptoms of pulmonary edema may not appear until several hours after exposure and are aggravated by physical exertion. Prolonged or repeated overexposure or a single large dose may cause certain individuals to develop sensitization to diisocyanates (asthma or asthma-like symptoms). Sensitization can be permanent. Chronic overexposure may cause lung damage (including fibrosis, decrease in lung function) that may be permanent.

4. First Aid Measures

**Eye**

In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

**Skin**

Remove contaminated clothing and shoes. Wash clothing before reuse. Wash affected areas with soap and water. Get medical attention immediately if irritation (redness, rash, blistering) develops and persists.

**Ingestion**

DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious victim. Have victim rinse mouth thoroughly with water. If victim is fully conscious, give 1-2 cups of water to dilute material in stomach. Get medical attention immediately.

**Inhalation**

Remove the person from the contaminated area to fresh air. If breathing is difficult, give oxygen. Do not allow victim to move about unnecessarily. Symptoms of pulmonary edema or asthmatic symptoms may develop and may be immediate or delayed up to several hours. Get medical attention immediately.

5. Fire Fighting Measures

**Flash Point:** >230 °F

**Flash Point Method:** closed cup

**Lower Explosive Limit:** not available

**Upper Explosive Limit:** not available

**Fire And Explosion Hazards**

This material can burn if strongly heated. Thermal decomposition (burning) may release irritating, toxic gases, vapors and fumes, and nitrogen oxides and hydrogen cyanide may be generated. Reacts vigorously with water above 50°C. Closed containers may rupture violently when heated.

**Extinguishing Media**

Carbon dioxide, dry chemical powder, protein foam, water spray (for large fires). Alcohol resistant foams are preferred for large fires.

**Fire Fighting Instructions**

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and helmet, hood, boots, and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. If material is spilled or released and exposure likely, evacuate area and fight fire from a safe distance or a protected location.
6. Accidental Release Measures

Evacuate non-emergency personnel. Isolate the area and prevent access. Eliminate all ignition sources. Use appropriate personal protective equipment (PPE). Ventilate area. Contain and/or absorb spill with inert material (e.g. sand, vermiculite). Avoid runoff to waterways and sewers.

For small spills, cover with earth, sand or non-reactive sorbent material. Carefully pour decontaminating solution (see below) onto spill. Let stand 10 minutes. Weight of decontaminant used should be greater than the weight of spilled material. Shovel residues into containers. Carefully add further amounts of decontaminant solution. Wash down spill area and emergency equipment with decontaminant solution. Do not get water inside containers or on spilled material.

For large spills, contact fire and emergency services. The CERCLA RQ for this material is 5000 pounds.

Decontaminant Solution: Prepare a solution of concentrated ammonium hydroxide (4-8%) and liquid detergent (2%) and water (90-94%).

7. Handling And Storage

Handling And Storage Precautions
Avoid breathing aerosols, mists and vapors. Keep containers tightly closed. Store in a cool, dry, well-ventilated area away from flammables and other non-compatible materials. Keep contents away from moisture. Inspect containers regularly for leakage or expired shelf life. Replace defective containers.

8. Exposure Controls/Personal Protection

Engineering Controls
Use with adequate ventilation. When used outdoors, stay well away from building air intakes or close the intakes to prevent product from entering building.

Eye/Face Protection
Safety glasses with side shields or goggles recommended. If there is a potential for splashing, use full face shield over safety glasses or goggles.

Skin Protection
Use with chemical-protective gloves to prevent excessive skin contact. Chemical-resistant gloves made of neoprene, nitrile rubber or butyl rubber can be used.

Respiratory Protection
The level of respiratory protection needed should be based on the evaluation of chemical exposures by a health or safety professional. If required, use a NIOSH-approved full face piece air purifying respirator with organic vapor cartridge or supplied air respirator.

Occupational Exposure Limits for individual ingredients (if available) are listed below.

Ingredient(s) - Exposure Limits
4,4’-diphenylmethane diisocyanate (MDI)
ACGIH TLV-TWA 0.005 ppm
OSHA PEL-CEILING 0.02 ppm

9. Physical And Chemical Properties

Appearance
Brown liquid

Odor
Slightly musty

Chemical Type: Mixture
Physical State: Liquid
Boiling Point: 392-406 °F 200-208 °C
Specific Gravity: 1.24@25°C
Vapor Pressure: <0.0001mmHg@25°C
Vapor Density: 8.5
### 9. Physical And Chemical Properties - Continued

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH Factor</strong></td>
<td>not determined</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Insoluble. Reacts with water.</td>
</tr>
</tbody>
</table>

### 10. Stability And Reactivity

**Stability:** Normally stable

**Hazardous Polymerization:** May Occur

**Conditions To Avoid (Stability):**
- May cause heat and pressure build-up in closed containers. Avoid moisture, heat, direct sunlight.

**Incompatible Materials**
- Avoid contact with water, amines, alcohols, acids, bases, metal compounds, amides, phenols, mercaptans, urethanes, ureas, and surface active compounds. The reaction with water is very slow under 50ºC but is accelerated at higher temperatures. Some reactions may be violent.

**Hazardous Decomposition Products**
- By Fire and High Heat: Toxic and irritating gases, vapors or fumes of hydrogen cyanide, carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, isocyanate, isocyanic acid may be produced. By Reaction with Water: 4,4’-Methylene diianiline may be formed.

### 11. Toxicological Information

**Miscellaneous Toxicological Information**
- Toxicological testing has not been conducted for this product overall. Available toxicological data for individual ingredients are summarized below.

**Ingredient(s) - Toxicological Data**
- 4,4’-diphenylmethane diisocyanate (MDI)
  - oral-rat LD50: >10000 mg/kg
  - oral-mouse LD50: 2200 mg/kg
  - dermal-rabbit LD50: >10000 mg/kg
  - inhal-rat LC50: 369-380 mg/m³ 4-hr exposure
- polymeric diphenylmethane diisocyanate (pMDI)
  - oral-rat LD50: >10000 mg/kg
  - dermal-rabbit LD50: >6200 mg/kg
  - rat LC50: 490 mg/m³, 4-hr exposure

### 12. Ecological Information

No specific information available.

### 13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations. Incineration is the preferred method.

### 14. Transport Information

**Proper Shipping Name**
- Other Regulated Substances, Liquid, N.O.S. (Methylene Diphenyl Diisocyanate)

**Hazard Class**
- 9 PGIII

**DOT Identification Number**
- NA3082

**Additional Shipping Paper Description**
- Methylene Diphenyl Diisocyanate CERCLA RQ=5000 pounds
- When in individual containers of less than the RQ, this material ships as non-regulated.
15. Regulatory Information

**SARA Hazard Classes**
- Acute Health Hazard
- Chronic Health Hazard

**SARA Section 304 Reportable Quantity:** 5000

**Ingredient(s) - U.S. Regulatory Information**
- 4-4'-diphenylmethane diisocyanate (MDI)
  - SARA Title III - Section 313 Form "R"/TRI Reportable Chemical
- Polymeric diphenylmethane diisocyanate (pMDI)
  - SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

**Ingredient(s) - State Regulations**
- 4-4'-diphenylmethane diisocyanate (MDI)
  - New Jersey - Workplace Hazard
  - New Jersey - Environmental Hazard
  - Pennsylvania - Workplace Hazard
  - Massachusetts - Hazardous Substance
  - New York City - Hazardous Substance

**Canadian Regulatory Information**
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. WHMIS Classification: D1A - Very Toxic, D2A - Very Toxic and D2B - Toxic

**Ingredient(s) - Canadian Regulatory Information**
- 4-4'-diphenylmethane diisocyanate (MDI)
  - WHMIS - Ingredient Disclosure List

**WHMIS - Canada (Pictograms)**

**NFPA**

<table>
<thead>
<tr>
<th></th>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
<th>PERSONAL PROTECTION</th>
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<td>1</td>
<td>2</td>
<td>1</td>
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16. Other Information

**Revision/Preparer Information**
This MSDS Supersedes A Previous MSDS Dated: 11/11/2005

**Disclaimer**

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