



# MATERIAL SAFETY DATA SHEET

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## Part A Foam

### 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.resintechnology.com

**Manufacturer Emergency Contacts & Phone Number**

**CHEMTREC: 800-424-9300**

**Issue Date:** 10/17/2006

**Product Name:** Part A Foam (TAP Flexible Expanding Foam Side A)  
**MSDS Number:** 51

**Product Identification Text**

Component of a Polyurethane

### 2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
diphenylmethane diisocyanate (MDI) Mixed Isomers	26447-40-5	1 - 5
4-4'-diphenylmethane diisocyanate (MDI)	101-68-8	35 - 45
polymeric diphenylmethane diisocyanate (pMDI)	9016-87-9	100 - 100

### 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,

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### 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.

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### 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

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<p><b>9. Physical And Chemical Properties - Continued</b></p> <p><b>pH Factor:</b> not determined  <b>Solubility:</b> Insoluble. Reacts with water.</p>
<p><b>10. Stability And Reactivity</b></p> <p><b>Stability:</b> Normally stable  <b>Hazardous Polymerization:</b> May Occur</p> <p><b>Conditions To Avoid (Stability)</b>          May cause heat and pressure build-up in closed containers. Avoid moisture, heat, direct sunlight.</p> <p><b>Incompatible Materials</b>          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 50°C but is accelerated at higher temperatures. Some reactions may be violent.</p> <p><b>Hazardous Decomposition Products</b>          By Fire and High Heat: Toxic and irritating gases, vapors or fumes of hydrogen cyanide, carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke, isocyanate, isocyanic acid may be produced. By Reaction with Water: 4,4'-Methylene dianiline may be formed.</p>
<p><b>11. Toxicological Information</b></p> <p><b>Miscellaneous Toxicological Information</b>          Toxicological testing has not been conducted for this product overall. Available toxicological data for individual ingredients are summarized below.</p> <p><b>Ingredient(s) - Toxicological Data</b>          4-4'-diphenylmethane diisocyanate (MDI)              oral-rat LD50: &gt;10000 mg/kg              oral-mouse LD50: 2200 mg/kg              dermal-rabbit LD50: &gt;10000 mg/kg              inhal-rat LC50: 369-380 mg/m<sup>3</sup> 4-hr exposure          polymeric diphenylmethane diisocyanate (pMDI)              oral-rat LD50: &gt;10000 mg/kg              dermal-rabbit LD50: &gt;6200 mg/kg              rat LC50: 490 mg/m<sup>3</sup>, 4-hr exposure</p>
<p><b>12. Ecological Information</b></p> <p>No specific information available.</p>
<p><b>13. Disposal Considerations</b></p> <p>Dispose in accordance with applicable federal, state and local government regulations. Incineration is the preferred method.</p>
<p><b>14. Transport Information</b></p> <p><b>Proper Shipping Name</b>          Other Regulated Substances, Liquid, N.O.S. (Methylene Diphenyl Diisocyanate)</p> <p><b>Hazard Class</b>          9 PGIII</p> <p><b>DOT Identification Number</b>          NA3082</p> <p><b>Additional Shipping Paper Description</b>          Methylene Diphenyl Diisocyanate CERCLA RQ=5000 pounds          When in individual containers of less than the RQ, this material ships as non-regulated.</p>

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### 15. Regulatory Information

#### SARA Hazard Classes

Acute Health Hazard  
Chronic Health Hazard

**SARA Section 304 Reportable Quantity:** 5000

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

#### 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

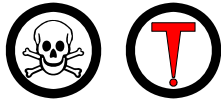
#### Canadian Regulatory Information

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

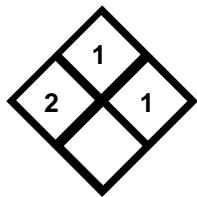
#### Ingredient(s) - Canadian Regulatory Information

4-4'-diphenylmethane diisocyanate (MDI)  
WHMIS - Ingredient Disclosure List

#### WHMIS - Canada (Pictograms)



#### NFPA



#### HMIS

HEALTH	*2
FLAMMABILITY	1
REACTIVITY	1
PERSONAL PROTECTION	

### 16. Other Information

#### Revision/Preparer Information

This MSDS Supersedes A Previous MSDS Dated: 11/11/2005

#### Disclaimer

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