1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Purmelt QR 3317 BR
Product type: Hotmelt adhesive
IDH number: 428484
Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 860.571.5100
Emergency phone: 860-571-5100
Transport: CHEMTREC 800-424-9300
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

<table>
<thead>
<tr>
<th>HMIS:</th>
<th>HEALTH:</th>
<th>FLAMMABILITY:</th>
<th>PHYSICAL HAZARD:</th>
<th>Personal Protection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state:</td>
<td>Not available</td>
<td>2</td>
<td>1</td>
<td>See MSDS Section 8</td>
</tr>
<tr>
<td>Color:</td>
<td>Not available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor:</td>
<td>Not available</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WARNING:
VAPORS ABOVE MOLTEN ADHESIVE MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
MOLTEN ADHESIVE MAY CAUSE SEVERE BURNS.
STATIC CHARGES GENERATED BY EMPTYING PACKAGE IN OR NEAR FLAMMABLE VAPORS MAY CAUSE IGNITION.
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.

Relevant routes of exposure: Skin, Eyes, Molten adhesive.

Potential Health Effects

Inhalation: Continuous breathing of vapors above molten adhesive may irritate mucous membranes. Dusts from solid adhesive may cause irritation. Fumes may be irritating and may cause an allergic respiratory reaction.

Skin contact: Molten adhesive may cause severe burns. May cause allergic skin reaction.

Eye contact: Molten adhesive in eyes will cause severe and permanent damage. Can cause mechanical irritation if dusts are generated.

Ingestion: Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: None known

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>CAS NUMBER</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane prepolymer</td>
<td>Proprietary</td>
<td>60 - 100</td>
</tr>
<tr>
<td>Diphenylmethane diisocyanate 2,4'-</td>
<td>5873-54-1</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.
Skin contact: Immediately wash skin thoroughly with soap and water. Remove contaminated clothing and footwear. Get immediate medical attention.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get immediate medical attention.

Ingestion: DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical attention.

5. FIRE FIGHTING MEASURES

Flash point: > 220 °C (> 428°F)

Autoignition temperature: Not determined

Flammable/Explosive limits - lower: Not determined

Flammable/Explosive limits - upper: Not determined

Extinguishing media: Use extinguishing measures appropriate to local circumstances and the surrounding environment.

Special firefighting procedures: Keep unnecessary personnel away. Firefighters should wear self-contained breathing apparatus. Water may be ineffective, but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.

Unusual fire or explosion hazards: Decomposition and combustion products may be toxic.


6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Do not allow product to enter sewer or waterways.

Clean-up methods: Keep unnecessary personnel away. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Dispose of contaminated material as waste according to item 13.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. For industrial use only.

Storage: Store in original container until ready to use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>AIHA WEEL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane prepolymer</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Diphenylmethane disocyanate 2,4'-</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Engineering controls: Work should be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respiratory use (29 CFR 1910.134).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact. Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical state: | Not available |
| Color: | Not available |
| Odor: | Not available |
| Odor threshold: | Not available |
| pH: | Not available |
| Vapor pressure: | < 0.03 mbar (20 °C (68°F)) |
| Boiling point/range: | Not determined |
| Melting point/ range: | Not determined |
| Specific gravity: | Not determined |
| Vapor density: | Not available |
| Flash point: | > 220 °C (> 428°F) |
| Flammable/Explosive limits - lower: | Not determined |
| Flammable/Explosive limits - upper: | Not determined |
| Autoignition temperature: | Not determined |
| Evaporation rate: | Not determined |
| Solubility in water: | Insoluble |
| Partition coefficient (n-octanol/water): | Not determined |
| VOC content: | Not determined |

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.


Conditions to avoid: None known

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA Carcinogen (Specifically Regulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane prepolymer</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Diphenylmethane disocyanate 2,4'-</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Health Effects/Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane prepolymer</td>
<td>No Data</td>
</tr>
<tr>
<td>Diphenylmethane disocyanate 2,4'-</td>
<td>Irritant, Allergen, Respiratory</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecological information: Not available
13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state and/or local regulations must be followed during treatment, storage, or disposal of waste containing this product.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

International Air Transportation (ICAO/IATA)

- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

Water Transportation (IMO/IMDG)

- Proper shipping name: Not regulated
- Hazard class or division: None
- Identification number: None
- Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

- TSCA 8(b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
- TSCA 12(b) Export Notification: None above reporting de minimus
- CERCLA/SARA Section 302 EHS: None above reporting de minimus
- CERCLA/SARA Section 311/312: Immediate Health
- CERCLA/SARA 313: None above reporting de minimus
- California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

- CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.
- WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

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