PERMAX 1.8 R - B Component
by Henry Company

CLASSIFICATION: 07 27 36.00
PRODUCT DESCRIPTION: PART B OF A TWO COMPONENT, POLYURETHANE, SPRAY FOAM SYSTEM.

Section 1: Summary

CONTENT INVENTORY

<table>
<thead>
<tr>
<th>Residuals and impurities considered in 1 of 1 materials</th>
<th>1,000 ppm</th>
<th>Per GHS SDS</th>
<th>Per OSHA MSDS</th>
<th>Other</th>
</tr>
</thead>
</table>

Based on the selected Content Inventory Threshold:

Characterized....................................................
Are the Percent Weight and Role provided for all substances? Yes No

Screened.........................................................
Are all substances screened using Priority Hazard Lists with results disclosed? Yes No

Identified......................................................
Are all substances disclosed by Name (Specific or Generic) and Identifier? Yes No

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY | GREENSCREEN SCORE | HAZARD TYPE
--- | --- | --- | --- | ---
PERMAX 1.8 R - B COMPONENT | 1,3-BENZENEDIAMINE, AR-METHYL-, POLYMER WITH OXIRANE | LT-UNK (DIMETHYLAMINO)CYCLOHEXANE | LT-UNK | 1,1,1,3,3-PENTAFLUOROPROPANE | LT-UNK | TRIS(1-CHLORO-2-PROPYL)PHOSPHATE (TCPM, TMCP) | BM-1 | END | PBT | MUL | 1,2-BENZENEDICARBOXYLIC ACID, 3,4,5,6-TETRABROMO-, MIXED ESTERS WITH DIETHYLENE GLYCOL AND PROPYLENE GLYCOL | BM-1 | END | MUL | 1.2-ETHANEDIAMINE, POLYMER WITH 2-METHYLOXIRANE AND OXIRANE | LT-UNK | POLY(OXY(METHYL-1,2-ETHANEDIYL)), ALPHA,ALPHS'- (OXYDI-2,1-ETHANEDIYL)BIS(OMEGA-HYDROXY- | LT-UNK | WATER | BM-4 | DIETHYLTOLUENEDIAMINE | LT-P1 | MAM | EYE | AQU | MUL | 2,4,6-TRI(DIMETHYLAMINOMETHYL)PHENOL | LT-UNK | MAM | EYE | SKI | ETHYLENE GLYCOL | BM-1 | MAM | DEV | END |

INVENTORY AND SCREENING NOTES:

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE

No certifications have been added to this HPD.

VERIFIER: SCREENING DATE: January 17, 2017 EXPIRY DATE*: January 17, 2020

* or within 3 months of significant change in product contents

Self-Published* VERIFICATION #: Self-Published* **See HPDC website for details

PERMAX 1.8 R - B Component Health Product Declaration Page 1 of 6 created via: HPDC Online Builder www.hpd-collaborative.org
Section 2: Content in Descending Order of Quantity

This section lists materials in a product and the substances in each material based on the Inventory Threshold for each material. If residuals or impurities from the manufacturing or extraction processes are considered for a material, these are inventoried and characterized to the extent described in the Material and/or General Notes. Chemical substances are screened against the HPD Priority Hazard Lists for human and environmental health impacts. Screening is based on best available information; "Not Found" does not necessarily mean there is no potential hazard associated with the product or its contents. More information about Priority Hazard Lists and the GreenScreen can be found online: www.hpd-collaborative.org and www.greenscreenchemicals.org.

<table>
<thead>
<tr>
<th>Material Notes: 1,3-BENZENEDIAMINE, AR-METHYL-, POLYMER WITH OXIRANE</th>
<th>Inventory Threshold: 100 ppm</th>
<th>Residuals Considered: Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 20.0000 - 40.0000</td>
<td>GS: LT-UNK</td>
<td>RC: None</td>
</tr>
<tr>
<td>ID: 63641-64-5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HAZARDS:  
AGENCY(IES) WITH WARNINGS:  
None Found  
No warnings found on HPD Priority lists

SUBSTANCE NOTES:

(DIMETHYLAMINO)CYCLOHEXANE  
%: 10.0000 - 15.0000 | GS: LT-UNK | RC: None | NANO: NO | ROLE: Catalyst |
| ID: 98-94-2 |

HAZARDS:  
AGENCY(IES) WITH WARNINGS:  
None Found  
No warnings found on HPD Priority lists

SUBSTANCE NOTES:

1,1,1,3,3-PENTAFLUOROPROPANE  
%: 10.0000 - 15.0000 | GS: LT-UNK | RC: None | NANO: NO | ROLE: Blowing agent |
| ID: 460-73-1 |

HAZARDS:  
AGENCY(IES) WITH WARNINGS:  
GLOBAL WARMING  
US EPA - Global Warming Potentials  
Global Warming Potential greater than 1,000

SUBSTANCE NOTES:

TRIS(1-CHLORO-2-PROPYL)PHOSPHATE (TCP, TMCP)  
%: 10.0000 - 15.0000 | GS: BM-U | RC: None | NANO: NO | ROLE: Flame retardant |
<p>| ID: 13674-84-5 |</p>
<table>
<thead>
<tr>
<th>HAZARDS:</th>
<th>AGENCY(IES) WITH WARNINGS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDOCRINE</td>
<td>TEDX - Potential Endocrine Disruptors</td>
</tr>
<tr>
<td>PBT</td>
<td>EHP - San Antonio Statement on BFRs &amp; CFRs</td>
</tr>
<tr>
<td>RESTRICTED LIST</td>
<td>US EPA - PPT Chemical Action Plans</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBSTANCE NOTES:</th>
</tr>
</thead>
</table>

**1,2-BENZENEDICARBOXYLIC ACID, 3,4,5,6-TETRABROMO-, MIXED ESTERS WITH DIETHYLENE GLYCOL AND PROPYLENE GLYCOL**

| %: 5.0000 - 10.0000 | GS: LT-1 | RC: None | NANO: NO | ROLE: Flame retardant |

<table>
<thead>
<tr>
<th>HAZARDS:</th>
<th>AGENCY(IES) WITH WARNINGS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT</td>
<td>OSPAR - Priority PBTs &amp; EDs &amp; equivalent concern</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>OSPAR - Priority PBTs &amp; EDs &amp; equivalent concern</td>
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<tr>
<th>SUBSTANCE NOTES:</th>
</tr>
</thead>
</table>

**1,2-ETHANEDIAMINE, POLYMER WITH 2-METHYLOXIRANE AND OXIRANE**

| %: 5.0000 - 10.0000 | GS: LT-UNK | RC: None | NANO: NO | ROLE: Urethane component |

<table>
<thead>
<tr>
<th>HAZARDS:</th>
<th>AGENCY(IES) WITH WARNINGS:</th>
</tr>
</thead>
</table>

| None Found | No warnings found on HPD Priority lists |

<table>
<thead>
<tr>
<th>SUBSTANCE NOTES:</th>
</tr>
</thead>
</table>

**POLY(OXY(METHYL-1,2-ETHANED(I)YL)), ALPHA,ALPHS'-(OXYDI-2,1-ETHANED(I)YL)BIS(OMEGA-HYDROXY**

| %: 5.0000 - 10.0000 | GS: LT-UNK | RC: None | NANO: NO | ROLE: Urethane component |

<table>
<thead>
<tr>
<th>HAZARDS:</th>
<th>AGENCY(IES) WITH WARNINGS:</th>
</tr>
</thead>
</table>

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### WATER

**ID:** 7732-18-5

- **%:** 1.0000 - 5.0000
- **GS:** BM-4
- **RC:** None
- **NANO:** NO
- **ROLE:** Foaming aid

**HAZARDS:**

**AGENCY(IES) WITH WARNINGS:**

None Found

**SUBSTANCE NOTES:**

**DIETHYLTOLUENEDIAMINE**

**ID:** 68479-98-1

- **%:** 1.0000 - 5.0000
- **GS:** LT-P1
- **RC:** None
- **NANO:** NO
- **ROLE:** Catalyst

**HAZARDS:**

**MAMMALIAN**

EU - R-phrases

- **R21 - Harmful in Contact with Skin**

**MAMMALIAN**

EU - R-phrases

- **R22 - Harmful if Swallowed**

**EYE IRRITATION**

EU - R-phrases

- **R36 - Irritating to eyes**

**ORGAN TOXICANT**

EU - R-phrases

- **R48: Danger of serious damage to health by prolonged exposure.**

**ACUTE AQUATIC**

EU - R-phrases

- **R50 - Very Toxic to Aquatic Organisms**

**ACUTE AQUATIC**

EU - GHS (H-Statements)

- **H400 - Very toxic to aquatic life**

**CHRON AQUATIC**

EU - GHS (H-Statements)

- **H410 - Very toxic to aquatic life with long lasting effects**

**EYE IRRITATION**

EU - GHS (H-Statements)

- **H319 - Causes serious eye irritation**

**MULTIPLE**

German FEA - Substances Hazardous to Waters

- **Class 2 - Hazard to Waters**

**SUBSTANCE NOTES:**

### 2,4,6-TRI(DIMETHYLAMINOMETHYL)PHENOL

**ID:** 90-72-2

- **%:** 1.0000 - 5.0000
- **GS:** LT-UNK
- **RC:** None
- **NANO:** NO
- **ROLE:** Catalyst

**HAZARDS:**

**MAMMALIAN**

EU - R-phrases

- **R22 - Harmful if Swallowed**

**EYE IRRITATION**

EU - R-phrases

- **R36 - Irritating to eyes**
SKIN IRRITATION
EU - R-phrases
R38 - Irritating to skin

SKIN IRRITATION
EU - GHS (H-Statements)
H315 - Causes skin irritation

EYE IRRITATION
EU - GHS (H-Statements)
H319 - Causes serious eye irritation

SUBSTANCE NOTES:

ETHYLENE GLYCOL
ID: 107-21-1

%: Impurity/Residual
GS: BM-1
RC: None
NANO: NO
ROLE: Impurity/Residual

HAZARDS:

AGENCY(IES) WITH WARNINGS:

MAMMALIAN
EU - R-phrases
R22 - Harmful if Swallowed

DEVELOPMENTAL
CA EPA - Prop 65
Developmental toxicity

DEVELOPMENTAL
US NIH - Reproductive & Developmental Monographs
Clear Evidence of Adverse Effects - Developmental Toxicity

ENDOCRINE
TEDX - Potential Endocrine Disruptors
Potential Endocrine Disruptor

SUBSTANCE NOTES: Reacts upon use to become part of the polymer matrix.

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

PERMAX - A COMPONENT
HPD URL: No HPD link provided
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: This component is required to create a cured foam.

Section 5: General Notes
MANUFACTURER INFORMATION

MANUFACTURER: Henry Company
ADDRESS: 999 N. Sepulveda Blvd
Suite 800
El Segundo, CA 90245
USA
WEBSITE: www.henry.com

CONTACT NAME: Whitney Randall
TITLE: Director, Regulatory Compliance Systems
PHONE: 484-557-1247
EMAIL: wrandall@henry.com

KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

<table>
<thead>
<tr>
<th>AQU</th>
<th>Aquatic toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAN</td>
<td>Cancer</td>
</tr>
<tr>
<td>DEV</td>
<td>Developmental toxicity</td>
</tr>
<tr>
<td>END</td>
<td>Endocrine activity</td>
</tr>
<tr>
<td>EYE</td>
<td>Eye irritation/corrosivity</td>
</tr>
<tr>
<td>GEN</td>
<td>Gene mutation</td>
</tr>
<tr>
<td>GLO</td>
<td>Global warming</td>
</tr>
<tr>
<td>MAM</td>
<td>Mammalian/systemic/organ toxicity</td>
</tr>
<tr>
<td>MUL</td>
<td>Multiple hazards</td>
</tr>
<tr>
<td>NEU</td>
<td>Neurotoxicity</td>
</tr>
<tr>
<td>OZ0</td>
<td>Ozone depletion</td>
</tr>
<tr>
<td>PHY</td>
<td>Physical Hazard (reactive)</td>
</tr>
<tr>
<td>REP</td>
<td>Reproductive toxicity</td>
</tr>
<tr>
<td>RES</td>
<td>Respiratory sensitization</td>
</tr>
<tr>
<td>SK1</td>
<td>Skin sensitization/irritation/corrosivity</td>
</tr>
<tr>
<td>LAN</td>
<td>Land Toxicity</td>
</tr>
<tr>
<td>NF</td>
<td>Not found on Priority Hazard Lists</td>
</tr>
</tbody>
</table>

GreenScreen (GS)

| BM-1 | Benchmark 1 (avoid - chemical of high concern) |
| BM-2 | Benchmark 2 (use but search for safer substitutes) |
| BM-3 | Benchmark 3 (use but still opportunity for improvement) |
| BM-4 | Benchmark 4 (prefer-safer chemical) |
| LT-P1| List Translator Possible Benchmark 1 |
| LT-1 | List Translator Likely Benchmark 1 |
| LT-UNK| List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark) |
| UNK | Unknown (no data on List Translator Lists) |

Recycled Types

| PreC | Preconsumer (Post-Industrial) |
| PostC| Postconsumer |
| Both | Both Preconsumer and Postconsumer |
| Unk  | Inclusion of recycled content is unknown |
| None | Does not include recycled content |

Other

Nano Composed of nanoscale particles or nanotechnology

Declaration Level

Self-declared Manufacturer’s self-declaration (First Party)
Independent Lab Manufacturer’s self-declaration using results from an independent lab
Second Party Verification by trade association or other interested party
Third Party Verification by independent certifier

Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator, and when available, full GreenScreen assessments. The HPD Open Standard does not provide an assessment of health impacts throughout the product life cycle. It does not provide an assessment of exposure or risk associated with product handling or use. It also does not address potential health impacts of: (i) substances used or created during the manufacturing process unless they remain in the final product, or (ii) substances created after the product is delivered for end use (e.g., if the product burns, degrades, or otherwise changes chemical composition).

The HPD Open Standard was created and is maintained and evolved by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry. The HPD Collaborative is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

A disclosure completed in compliance with the HPD Open Standard is referred to as a “Health Product Declaration,” or “HPD.” The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD Open Standard noted.