W. R. GRACE
MATERIAL SAFETY DATA SHEET

Product Name: Perm-A-Barrier VP
MSDS ID Number: M-85828            MSDS Date: 03/13/2009

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Perm-A-Barrier VP
MSDS Number: M-85828
Cancelled MSDS Number: M-85751
MSDS Date: 03/13/2009
Chemical Family Name: Aqueous Polymer solution
Product Use: Waterproofing Products
Chemical Formula: Mixture-NA
CAS # (Chemical Abstracts Service Number): Mixture-NA

Manufactured by:
W.R.Grace & Co.-Conn.        Grace Canada, Inc.
62 Whittemore Avenue         294 Clements Road West
Cambridge, MA 02140           Ajax, Ontario L1S 3C6

In Case of Emergency Call:
In USA: (617) 876-1400    In Canada: (905) 683-8561

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS#</th>
<th>Percent (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid ethenyl ester, polymer with ethenol</td>
<td>025213-24-5</td>
<td>1-10</td>
</tr>
<tr>
<td>Magnesium Aluminum Silicate</td>
<td>012174-11-7</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>013463-67-7</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:
Caution!
Causes eye irritation.
Causes skin irritation.
Causes respiratory irritation

HMIS Rating:
Health: 1
Flammability: 0
Reactivity: 0
Personal Protective Equipment: B,G (See Section 8)

Potential Health Effects:
Inhalation: Inhalation of vapor or spray mist causes irritation to the respiratory tract, eyes, nose and throat.
Eye Contact: Eye contact causes irritation.
Skin Contact: Skin contact causes irritation.
Skin Absorption: Not expected to be harmful if absorbed through the skin.
Ingestion: If ingested causes irritation to the digestive track.

SECTION 4 - FIRST AID MEASURES:

Skin Contact: In case of skin contact, clean fingernails and wash skin with soap and water. If residue remains, clean with waterless handcream or abrasive soap. Never use solvents. If discomfort or irritation persists, consult a physician. Remove contaminated clothing and wash before reuse.
Eye Contact: Flush eyes with water for at least 15 minutes while holding eyelids open. If discomfort or irritation persists, consult a physician.
Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If discomfort or irritation persists, consult a physician.
Inhalation: If symptoms develop, get fresh air. If symptoms persist, consult a physician.
If breathing has stopped, give artificial respiration then oxygen if needed.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Water based solution
Flash Point Method: Not Applicable
Lower Explosion Limit: Not Available
Upper Explosion Limit: Not Available
Auto-Ignition Temperature: Not Available

NFPA Rating:
Health: 1
Flammability: 0
Reactivity: 0

Extinguishing Media: In case of fire, use water spray, dry chemical, Carbon dioxide or foam.
Special Fire Fighting Procedures: Firefighters should be equipped with Self-contained Breathing Apparatus (SCBA) to prevent inhalation of hazardous decomposition products. (See Section 10.)
Unusual Fire and Explosion Hazards: None unless noted below.

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Spills/Leaks: Use proper personal protective equipment. Do not flush to sewer or allow to enter waterways. Keep unnecessary people away.

SECTION 7 - HANDLING AND STORAGE

Precautionary Measures: Avoid contact with eyes, skin and clothing.
Do not take internally.
Practice good personal hygiene to avoid ingestion.
Use appropriate respiratory protection.
Wash clothing before reuse.
To avoid skin contact, use gloves or barrier creams. Promptly cleanse hands with waterless hand cleaner, clean fingernails and wash with soap and water after handling.
FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

EXPOSURE GUIDELINES (US)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>STEL</td>
<td>Ceiling</td>
</tr>
<tr>
<td>Acetic acid ethenyl ester, polymer with ethenol</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m3 TWA</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

EXPOSURE GUIDELINES (CANADA)

Employers should consult local Provincial regulatory limits for exposure guidelines which may vary locally.

Engineering Controls: Not generally required.

Personal Protective Equipment:

Respiratory Protection: During spray applications, a dust/mist respirator is recommended. At a minimum a model N-95 dust/mist respirator should be used. For additional protection, a NIOSH approved organic vapor respirator with pre-filter for dust/mist is suggested for use due to the added protection it provides. Work and job site conditions need to be evaluated when determining appropriate respirator use.
Skin Protection: Wear chemical resistant protective gloves, neoprene is recommended.
Eye Protection: At minimum, safety glasses with side shields should be worn where exposure to excessive dust or spray is likely.
Work/Hygienic Practices: Use good personal hygiene practices.
None beyond those noted above.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance/Odor: Not Available
Odor Threshold: (ppm) Not Determined
pH: Not Available
Vapor Pressure: (Mm Hg) Unknown
Vapor Density: (Air = 1) Unknown
Solubility In Water: Unknown
Specific Gravity: (Water = 1) Not Available
Evaporation Rate: (Butyl Acetate = 1) Unknown
Boiling Point: >212°F/100°C
Viscosity: Unknown
Bulk Density: (Pounds/Cubic Foot)(Pcf) Not Applicable
% Volatiles: (70°F) (21°C) ~18% as water

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions To Avoid: None known for this product.
Hazardous Polymerization: Will not polymerize.
Hazardous Decomposition Products: None known for this product.

SECTION 11 - TOXICOLOGICAL INFORMATION

Carcinogenicity:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>IARC Group 1</th>
<th>IARC Group 2A</th>
<th>IARC Group 2B</th>
<th>NTP Known</th>
<th>NTP Suspect</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid ethenyl ester, polymer with ethenol</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Magnesium Aluminum Silicate</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

* Titanium Dioxide and Magnesium Aluminum Silicate have been associated with lung disease (lung cancer). However due to the physical nature of this product (liquid) exposures are not expected unless after product dries it is abraded and air borne dust is create

Mutagenicity: Not applicable.
Teratogenicity: Not applicable.
Reproductive Toxicity: Not applicable.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate: No data available for product.
Ecotoxicity: No data available for product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Procedures: Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Not Applicable
UN/NA Number: Not Applicable
Domestic Hazard Class: Nonhazardous
Surface Freight Classification: Not Applicable
Label/Placard Required: Not Applicable
### SECTION 15 - REGULATORY INFORMATION

#### REGULATORY CHEMICAL LISTS:

**CERCLA (Comprehensive Response Compensation and Liability Act):**
(No present unless listed below)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Wt %</th>
<th>CERCLA RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SARA Title III (Superfund Amendments and Reauthorization Act)**

- Health Immediate (acute): Yes
- Health Delayed (chronic): No
- Flammable: No
- Reactive: No
- Pressure: No

**302 Reportable Ingredients (Identification Threshold 1%).**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Wt %</th>
<th>SARA 302 TPQ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Wt %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>007664-41-7</td>
<td>.018</td>
</tr>
<tr>
<td>Methyl alcohol</td>
<td>000067-56-1</td>
<td>.0494</td>
</tr>
</tbody>
</table>

**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

- Volatile Organic Content: \((\text{gr/L})\) 18 g/l

**WHMIS Classification(s):**

- D2 B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

**State Regulatory Information:**

- **California Proposition 65:** This product does not contain substances known to the state of California to cause cancer, birth defects or other reproductive harm.

- **Massachusetts Hazardous Substance List (Identification threshold 0.0001% (1ppm)):**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Wt %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>007664-41-7</td>
<td>.018</td>
</tr>
</tbody>
</table>

- **New Jersey Hazardous Substance List (Identification threshold 0.1%):**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Wt %</th>
</tr>
</thead>
</table>

- **Pennsylvania Hazardous Substance List (Identification threshold 0.01%):**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Wt %</th>
</tr>
</thead>
</table>

#### CHEMICAL INVENTORY STATUS:

All chemicals in this product are listed or exempt from listing in the following countries:

<table>
<thead>
<tr>
<th>US</th>
<th>CANADA</th>
<th>EUROPE</th>
<th>AUSTRALIA</th>
<th>JAPAN</th>
<th>KOREA</th>
<th>PHILIPPINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>DSL</td>
<td>NDSL</td>
<td>EINECS/ELINCS</td>
<td>AICS</td>
<td>ENCS</td>
<td>ECL</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Not Determined</td>
<td>Not Determined</td>
<td>Not Determined</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>

### SECTION 16 - OTHER INFORMATION

**Non-Hazardous Ingredient Disclosure:**

- **Chemical Name**: Water
- **CAS Number**: 007732-18-5

- **Chemical Name**: Polymer Dispersion
- **CAS Number**: NJ801416024

**Prepared by:** EH&S Department

**Approved by:** EH&S Department

**Approved Date:** 03/13/2009
Disclaimer:
"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."