Section 1 - Product and Company Identification

Product Name: LiquaTile 1172 Resin (All Versions)

toll manufacturer/formulator: Wolverine Coatings Corporation
140 Metro Drive
Spartanburg, SC 29303

Emergency Contact:
ChemTel 24 Hr. US Emergency Number: 1-800-255-3924
ChemTel 24 Hr. Worldwide Emergency Number: +1-813-248-0585

Product Use: Coatings
Not recommended for: None Identified

Section 2 - Hazards Identification

GHS Ratings
Skin Corrosive 2 Reversible adverse effects in dermal tissue, Draize score: >= 2.3<4.0 or persistent inflammation
Eye corrosive 2A Eye irritant: Subcategory 2A, Reversible in 21 days
Skin sensitizer 1 Skin sensitizer
Aquatic toxicity A3 Acute toxicity <= 10.0 but < 100 mg/l

GHS Hazards
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H402 Harmful to aquatic life

GHS Precautions
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P264 Wash thoroughly after handling
P272 Contaminated work clothing should not be allowed out of the workplace
P273 Avoid release to the environment
P280 Wear protective gloves/protective clothing/eye protection/face protection
P321 Specific treatment (see label)
P362 Take off contaminated clothing and wash before reuse
P363 Wash contaminated clothing before reuse
P302+P352 IF ON SKIN: Wash with soap and water
P305+P351+P338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P332+P313 If skin irritation occurs: Get medical advice/attention
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
P337+P313 Get medical advice/attention
P501 Dispose of contents/container in accordance with all local, regional, national, and international regulations.

Signal Word: Warning
### Section 3 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer</td>
<td>25068-38-6</td>
<td>40.00% - 50.00%</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>10.00% - 20.00%</td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>5.00% - 10.00%</td>
</tr>
<tr>
<td>Hydrous magnesium silicate</td>
<td>14807-96-6</td>
<td>5.00% - 10.00%</td>
</tr>
<tr>
<td>Trade Secret</td>
<td></td>
<td>5.00% - 10.00%</td>
</tr>
<tr>
<td>Potassium Aluminum Silicate</td>
<td>12001-26-2</td>
<td>1.00% - 5.00%</td>
</tr>
<tr>
<td>Kaolin (Calcined)</td>
<td>92704-41-1</td>
<td>1.00% - 5.00%</td>
</tr>
<tr>
<td>Aluminum Oxide</td>
<td>1344-28-1</td>
<td>1.00% - 5.00%</td>
</tr>
</tbody>
</table>

### Section 4 – First Aid Measures

**Inhalation:** If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

**Eye Contact:** Immediately flush eyes for at least fifteen minutes with running water. Hold eyelids apart to ensure rinsing of the entire eye surface and lids with water. If eye irritation persists: Get medical advice/attention.

**Skin contact:** Immediately remove contaminated clothing and shoes. Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

**Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. If a person vomits when lying on his back, place him in the recovery position. Get immediate medical attention.

### Section 5 – Fire Fighting Measures

**Flash Point:** 113°C (235°F)
**LEL:** Not Available
**UEL:** Not Available

**Extinguishing Media:** Use carbon dioxide, foam, dry chemical, dry sand, water fog, or limestone powder extinguishing systems.

**Hazardous combustion products:** Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See section 10 (Stability and Reactivity) for additional information.

**Special Fire Fighting Procedures:** Firefighters should be equipped with self-contained breathing apparatus.

### Section 6 - Accidental Release Measures

**Spill and Leak Procedures:** Avoid all personal contact. Ensure cleanup personnel wear all appropriate Personal Protective Equipment (PPE), including respiratory protection. Spills should be contained, solidified, and placed in suitable containers for disposal.

### Section 7 - Handling and Storage

**Handling Precautions:** Use good laboratory/workplace procedures. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Avoid eye and skin contact. Avoid inhalation of aerosol, mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse. Discard shoes contaminated with this product. Storage Requirements: Keep away from heat, sparks, and open flames. Store cool and dry, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use.
### Section 8 – Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name / CAS No.</th>
<th>OSHA Exposure Limits</th>
<th>ACGIH Exposure Limits</th>
<th>Other Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-Isopropylidenediphenol-Epichlorohydrin Copolymer 25068-38-6</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Titanium Dioxide 13463-67-7</td>
<td>TWA: 15 mg/m3</td>
<td>TWA: 10 mg/m3</td>
<td>Not Established</td>
</tr>
<tr>
<td>Quartz 14808-60-7</td>
<td>TWA30 mg/m3 / %SiO2+2 total dust TWA: 10 mg/m3 /%SiO2+2 respirable fraction</td>
<td>TWA: 0.025 mg/m3</td>
<td>Not Established</td>
</tr>
<tr>
<td>Hydrous magnesium silicate 14807-96-6</td>
<td>TWA: 20 million particles per ft3</td>
<td>TWA: 2 mg/m3</td>
<td>Not Established</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>Potassium Aluminum Silicate 12001-26-2</td>
<td>TWA: 3 mg/m3</td>
<td>TWA: 3 mg/m3</td>
<td>Not Established</td>
</tr>
<tr>
<td>Kaolin (Calcined) 92704-41-1</td>
<td>TWA 5 mg/m3 respirable dust TWA 15 mg/m3 total dust</td>
<td>TWA: 2 mg/m3 respirable dust</td>
<td>Not Established</td>
</tr>
<tr>
<td>Aluminum Oxide 1344-28-1</td>
<td>TWA: 15 mg/m3 total dust TWA: 5 mg/m3 Respirable fraction</td>
<td>TWA: 1 mg/m3</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

Ventilation: Good general mechanical ventilation and local exhaust is recommended.

Eye wash must be easily accessible. Wear protective clothing as necessary to prevent contact. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Gloves must be inspected regularly and prior to each use. Replace if necessary.

Personal Protective Equipment:
Wear impervious protective gloves. Wear OSHA, NIOSH approved organic vapor respirator if ventilation is inadequate. Wear appropriate protective eyewear such as splash-proof, chemical resistant safety goggles.

Take off all contaminated clothing immediately. Wash contaminated clothing before reuse.

### Section 9 - Physical and Chemical Properties

This mixture typically exhibits the following properties under normal circumstances:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>0.045mm Hg</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Density (g/cm3):</td>
<td>1.56</td>
</tr>
<tr>
<td>Freezing Point:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Range:</td>
<td>150°C</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Autoignition Temperature:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odor:</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>113°C, 235°F</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water):</td>
<td>Not Available</td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Grams VOC less water:</td>
<td>Nil</td>
</tr>
</tbody>
</table>
Section 10 – Stability and Reactivity

Stability: STABLE

Components of this mixture are incompatible with the following materials:

- Strong Acids
- Strong oxidizers
- Strong Bases

This mixture is likely to exhibit the following combustion products:

- Metal Oxides
- Carbon Dioxide, Carbon Monoxide
- Halogenated Compounds

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Mixture Toxicity

Inhalation Toxicity LC50: 640mg/L

Component Toxicity

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>% Weight</th>
<th>Carcinogen Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>Titanium Dioxide</td>
<td>Inhalation LC50: 7 mg/kg (Rat)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Routes of Entry:

- Inhalation
- Skin Contact
- Eye Contact
- Ingestion

Exposure to this material may affect the following organs:

- Lungs
- Respiratory System

The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA (mandatory listing), or ACGIH (optional listing):

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Description</th>
<th>% Weight</th>
<th>Carcinogen Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 12 - Ecological Information

Component Toxicity

- 4,4'-Isopropylidenediphenol-Epichlorohydrin Copolymer
  - LC50 3.1 mg/l fish 96 h; EC50 1.7 mg/l water flea 48 h; EC50 11 mg/l algae 72 h;
  - LC50 >42.6 mg/l bacteria 18h

- Titanium Dioxide
  - LC50 >1000 mg/l fish 96h; EC50 >1000 mg/l water flea 48h; EC50 >100 mg/l algae 72h

- Hydrous magnesium silicate
  - LC50 >100 g/l fish

Section 13 - Disposal Considerations

Waste disposal Methods: Dispose in accordance with Federal, State and Local regulations.

Section 14 - Transport Information

This material is classified for transport as follows: DOT Not Regulated
**Section 15 - Regulatory Information**

Additional regulatory listings, where applicable

**State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):** WARNING! This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

- Hydrous magnesium silicate 14807-96-6
- Quartz 14808-60-7
- Titanium Dioxide 13463-67-7

**Materials not included on the Canada DSL inventory:**
- None

**Commonwealth of Massachusetts "Right to Know":** This product contains the following toxic or hazardous substances which appear on the Massachusetts Substance List:

- Aluminum Oxide 1344-28-1
- Hydrous magnesium silicate 14807-96-6
- Quartz 14808-60-7
- Titanium Dioxide 13463-67-7

**NJ "Right to Know":** This product contains the following toxic or hazardous substances which appear on the New Jersey Substance List:

- Aluminum Oxide 1344-28-1
- Hydrous magnesium silicate 14807-96-6
- Quartz 14808-60-7
- Titanium Dioxide 13463-67-7
- 4,4’-Isopropylidenediphenol-Epichlorohydrin Copolymer 25068-38-6

**Pennsylvania "Right to Know":** This product contains the following toxic or hazardous substances which appear on the Pennsylvania Substance List:

- Aluminum Oxide 1344-28-1
- Hydrous magnesium silicate 14807-96-6
- Quartz 14808-60-7
- Titanium Dioxide 13463-67-7
- 4,4’-Isopropylidenediphenol-Epichlorohydrin Copolymer 25068-38-6

**EPA SARA Title III Section 313 (40 CFR 372) components above 'de minimum' level:**
- Aluminum Oxide 1344-28-1

**Toxic Substances Control Act (TSCA):** All chemicals except those listed below appear in the Toxic Substances Control Act Chemical Substance Inventory:
- None

**Section 16 - Other Information**

For further information, please contact the Product Safety director. The information and recommendations contained herein are, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Final determination of suitability of the chemical is the sole responsibility of the user. Users of any chemical should satisfy themselves that the conditions and methods of use assure that the chemical is used safely. No representations or warranties, either expressed or implied of merchantability, fitness for a particular purpose, or any other nature, are made hereunder with respect to the information contained herein, or to the chemical to which the user refers.

Date Revised: 6/10/15  
Reviewer Revision 1  
Date Prepared: 6/10/2015