SECTION 1.0 - IDENTIFICATION

1.1 - Product Identifier
Product Form: Fused multi-component sheathing panel.
Product Identifier: ArmorWall VP Structural Insulated Sheathing™

1.2 - Product Use
Multi-component Structural Integrated Sheathing with Vapor Permeable Coating for Interior/Exterior wall assembly.

1.3 - Product Supplier
Manufacturing and Distribution: Max-Life LLC dba MaxLife Industries
Address: 4995 South Main Street Salisbury, North Carolina 28147
Website: www.maxlifeindustries.com
Customer Support Email: cs@maxlifeindustries.com
Office Telephone Number: 1-844-MAX4YOU (1-844-629-4968)

1.4 - Emergency Contact
Emergency Telephone: Contact your local emergency services.

SECTION 2.0 - HAZARDS IDENTIFICATION

2.1 - Urethane Insulation Component
2.1.1 - Classification of the Substance Mixture
Classification (GHS-US)
Skin Irritation Category 4
Eye Irritation Category 3

2.1.2 - Label Elements
GHS-US Labeling
Hazard Statements (GHS-US)
- H20 - Dust may cause eye irritation.
- H355 - Dust may cause respiratory irritation.
Precautionary statements (GHS-US)
- P260 - Do not breathe dust.
- P282 - Wear protective gloves/eye protection/face protection.
- P303 - If on Skin: Wash with plenty of soap and water.
- P305 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.1.3 - Other hazards
- Rigid foam dust from fabricating operations is an irritant and is flammable. Dust should be collected at the point of generations and stray dust should be regularly swept up.
- Large amounts of rigid polyurethane foam assembled in one place, such as for processing into finished products or in storage, present a potential fire hazard. Once ignited, these foams may spread flame rapidly and produce intense heat, dense smoke, and toxic gases. Raw foam and fabricated items should be stored indoors, away from fabricating operations, and be protected by automatic sprinklers. Access aisles should be maintained between foam piles.

2.1.4 - Unknown acute toxicity (GHS-US)
No data available.

2.2 - Magnesium Oxide Sheathing Component
2.2.1 - Mixture Classification
Carc.

2.2.2 - Label Elements
Eyes
Inhalation
Skin
Ingestion
Carc.
Emergency Overview
- Not classified as carcinogen. No known toxicity effects.

2.2.3 - Other Hazards
No data available.

2.2.4 - Unknown Acute Toxicity (GHS-US)
No data available.

2.3 - Vapor Permeable Coating Component
2.3.1 - Mixture Classification
Classification (GHS-US)
Carc.
Category IA Carcinogenicity

2.3.2 - Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US)

Signal word (GHS-US)
Hazard Statements (GHS-US)
- Danger
- H350 - May cause cancer

Section continued on page 2
### ArmorWall VP Structural Insulated Sheathing™

**Safety Data Sheet (SDS)**

### SECTION 2.0 - HAZARDS IDENTIFICATION

#### 2.3 - Vapor Permeable Coating Component

#### 2.3.2 - Label Elements

Section continued from page 1

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Viscous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight Ammonia</td>
</tr>
</tbody>
</table>

**Precautionary statements (GHS-US)**

P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P281 - Use personal protective equipment as required.

**Precautionary statements (GHS-US)**

P308+P333 - IF exposed or concerned: Get medical advice/attention.

**Response**

**Precautionary statements (GHS-US)**

P405 - Store locked up

**Storage**

**Precautionary statements (GHS-US)**

P501 - Dispose of contents/container to an approved waste disposal plant

### SECTION 3.0 - COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 - Urethane Insulation Component

#### 3.1.1 - Substance

Not applicable.

#### 3.1.2 - Mixture

Not applicable.

#### 3.2 - Magnesium Oxide Sheathing Component

#### 3.2.1 Substance

Not applicable.

#### 3.2.2 Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Oxide (MgO)</td>
<td>42-61.5</td>
</tr>
<tr>
<td>Magnesium Chloride (MgCl₂)</td>
<td>35-56</td>
</tr>
<tr>
<td>Perlite</td>
<td>1-6</td>
</tr>
<tr>
<td>Recycled Filtered Wood Shavings</td>
<td>2-7</td>
</tr>
<tr>
<td>Phosphate (P₂O₅)</td>
<td>1-3</td>
</tr>
<tr>
<td>Fiberglass Mesh</td>
<td>1-3</td>
</tr>
</tbody>
</table>

### SECTION 3.3 - Vapor Permeable Coating Component

#### 3.3.1 - Substance

Not applicable.

#### 3.3.2 - Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight - %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>30 - 60</td>
<td>--</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>15 - 40</td>
<td>--</td>
</tr>
<tr>
<td>Proprietary - Acrylic Polymer</td>
<td>Undisclosed</td>
<td>10 - 30</td>
<td>--</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>1 - 5</td>
<td>--</td>
</tr>
<tr>
<td>Propylene Glycol</td>
<td>25322-69-4</td>
<td>1-5</td>
<td>--</td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-60-7</td>
<td>0.1 - 1</td>
<td>--</td>
</tr>
<tr>
<td>Dipheryl Ketone</td>
<td>119-61-9</td>
<td>0.1 - 1</td>
<td>--</td>
</tr>
</tbody>
</table>

-- The exact percentage (concentration) of composition has been withheld as a trade secret

### SECTION 4.0 - FIRST-AID MEASURES

#### 4.1 - Urethane Insulation Component

#### 4.1.1 - Description of first-aid measures

**First-aid measures after inhalation**

Move to fresh air if symptoms develop. If breathing is difficult, give oxygen and call physician.

**First-aid measures after eye contact**

Flush with water for at least 15 minutes. See a physician if irritation develops.

**First-aid measures after ingestion**

Rinse mouth.

**First-aid measures after skin contact**

Wash with soap and water.

#### 4.1.2 - Most important symptoms and effects, both acute and delayed

Acute eye or respiratory irritation, characterized by eye watering, coughing or sneezing. Treat symptomatically.

**4.1.3 - Indication of any immediate medical attention and special treatment needed**

No additional information available.

Section continued on page 3
SECTION 4.0 - FIRST-AID MEASURES

4.2 - Magnesium Oxide Sheathing Component

4.2.1 Description of first-aid measures

First-aid measures after inhalation: Move to fresh air environment. Contact physician if irritation persists.

First-aid measures after skin contact: Wash with soap and water.

First-aid measures after eye contact: Check for and remove any contact lenses. Immediately flush eyes with clean water. Contact physician if irritation persists.

First-aid measures after ingestion: Rinse mouth and seek medical attention if symptoms occur.

4.2.2 Most important symptoms and effects, both acute and delayed

Medical Conditions Generally Aggravated by Exposure: Asthma; Inhalations of dust.

4.2.3 Indication of any immediate medical attention and special treatment required

No additional information available.

4.3 - Vapor Permeable Coating Component

4.3.1 - Description of first-aid measures

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact: Wash skin with soap and water.

Inhalation: Remove to fresh air.

Ingestion: Clean mouth with water and drink afterwards plenty of water. Call a physician.

4.3.2 - Most important symptoms and effects, both acute and delayed

Symptoms: May cause skin irritation.

4.3.3 - Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

SECTION 5.0 - FIRE-FIGHTING MEASURES

5.1 - Urethane Insulation Component

5.1.1 - Extinguishing media

Suitable extinguishing media: Water, dry chemicals, CO₂.

Unsuitable extinguishing media: None.

5.1.2 - Special hazards arising from the substance or mixture

No additional information available.

5.1.3 - Advice for firefighters

Firefighting instructions: A self-contained breathing apparatus should be worn to protect against toxic and irritating vapors.

5.2 - Magnesium Oxide Sheathing Component

5.2.1 - Extinguishing Media

Extinguishable Media: Product does not ignite. Use fire extinguishing media appropriate for surrounding materials.

5.2.2 - Special Hazards Arising from the Substance or Mixture

Special Fire Fighting Procedures: Local surfaces may be cooled with water, but product will not be hot to the touch even after intense heat exposure.

5.2.3 - Advice for firefighters

Panel is non-flammable and non-combustible.

5.3 - Vapor Permeable Coating Component

5.3.1 - Extinguishing media

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: Caution: Use of water spray when fighting fire may be inefficient.

5.3.2 - Special hazards arising from the chemical

No information available.

5.3.3 - Protective equipment and precautions for firefighters

Firefighting instructions: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6.0 - ACCIDENTAL RELEASE MEASURES

6.1 - Urethane Insulation Component

6.1.11 - For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.12 - For emergency responders

Protective equipment: Wear eye and respiratory protection from dust.

Emergency procedures: Remove ignition sources.

6.1.2 - Environmental precautions

None.

6.1.3 - Methods and material for containment and cleaning up

Methods for cleaning up: Waste material should be disposed of under conditions which meet federal, state, and local environmental regulations.

6.1.4 - Reference to other sections

None.
Armoral Wall VP Structural Insulated Sheathing™

SECTION 6.0 - ACCIDENTAL RELEASE MEASURES

6.2 - Magnesium Oxide Sheathing Component

6.2.11 - For Non-emergency Personnel
See Section 8 of the SDS for Personal Protective Equipment.

6.2.12 - For emergency responders
See Section 8 of the SDS for Personal Protective Equipment.

6.2.2 - Environmental Precautions
No specific clean-up procedure noted.

6.2.3 - Methods and material for containment and cleaning up
Dust and chips may be swept, scooped, and/or vacuumed for removal.

6.2.4 - Reference to Other Sections
No additional references.

6.3 - Vapor Permeable Coating Component

6.3.11 - For non-emergency personnel
Emergency procedures Evacuate unnecessary personnel.

6.3.12 - For emergency responders
Use personal protective equipment as required. Avoid contact with eyes and skin.

6.3.2 - Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

6.3.3 - Methods and material for containment and cleaning up
Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleanup Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

6.3.4 - Reference to other sections
See Section 12 for additional ecological information.

SECTION 7.0 - HANDLING AND STORAGE

7.1 - Urethane Insulation Component

7.1.1 - Precautions for safe handling
Precautions for safe handling None.

7.1.2 - Conditions for safe storage, including any incompatibilities
Storage conditions None.
Incompatible products No additional information.
Incompatible materials No additional information.

7.1.3 - Specific end use(s)
No Additional information available.

7.2 - Magnesium Oxide Sheathing Component

7.2.1 - Precautions and Safe Handling
Use work methods that minimize the creation of dust. Try to avoid the inhalation of dust wherever possible. Wear appropriate personal protective equipment. Wash hands after use. Observe good industrial hygiene practices. Ensure that forklift or similar equipment is rated as capable of lifting and moving loads. Forks should extend completely under the entire load. Forks should be extended as wide as practical.

Boards are heavy, awkward loads and pose the risk of severe back injury. Always use proper lifting techniques.

7.2.2 - Conditions of Safe Storage, including any Incomaptibilities
Board should be stored in a cool dry environment and should remain in the manufacturer's packaging bearing the brand name and manufacturer's logo and Listing Number until ready for use. Board should be stored on the manufacturer's pallets off the ground and away from standing water. Cover with a waterproof material when stored outdoors or on site to protect against weather, direct sunlight, surface contamination and construction traffic.

7.2.3 - Specific end use(s)
No additional information available.

7.3 - Vapor Permeable Coating Component

7.3.1 - Precautions for safe handling
Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

7.3.2 - Conditions for safe storage, including any incompatibilities
Storage conditions Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place.
Incompatible materials No known based on information supplied.

SECTION 8.0 - EXPOSURE CONTROLS/PERSOAL PROTECTION

8.1 - Urethane Insulation Component

8.1.1 - Exposure Limits
Polyurethane Foam
Not listed as a carcinogen (NTA, IARC, OSHA).

8.1.2 - Control Parameters
None.
**ArmorWall VP Structural Insulated Sheathing™**

**Safety Data Sheet (SDS)**

**SECTION 8.0 – EXPOSURE CONTROLS/PERSONAL PROTECTION**

Section continued from page 4

### 8.1.3 - Exposure Controls

**Respiratory Protection**

Dust mask when fabricating or cutting.

**Hand, Eye, Skin, and Body Protection**

Wear goggles or chemical safety glasses and chemically resistant rubber or plastic gloves. Avoid eye and skin contact. Eye wash system and showers should be available.

### 8.2 - Magnesium Oxide Sheathing Component

#### 8.2.1 - Exposure Limits

**Occupational Exposure Limits US OSHA Table Z-1 Limits for Air Contaminants**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>OSHA PEL Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Oxide</td>
<td>1309-48-4</td>
<td>15 mg/m³</td>
<td>Nuisance particulate</td>
</tr>
<tr>
<td>Perlite</td>
<td>130885-09-5</td>
<td>5 mg/m³</td>
<td>Nuisance dust</td>
</tr>
<tr>
<td>Fiberglass Mesh</td>
<td>65997-17-3</td>
<td>15 mg/m³</td>
<td>Total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³</td>
<td>Respirable fraction</td>
</tr>
</tbody>
</table>

**US ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>ACGIH-TLV Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Oxide</td>
<td>1309-48-4</td>
<td>10 mg/m³</td>
<td>Nuisance particulate</td>
</tr>
<tr>
<td>Perlite</td>
<td>130885-09-5</td>
<td>10 mg/m³</td>
<td>Total nuisance dust</td>
</tr>
<tr>
<td>Fiberglass Mesh</td>
<td>65997-17-3</td>
<td>5 mg/m³</td>
<td>11/µg/cc</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Inhalable</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Respirable fibers</td>
</tr>
</tbody>
</table>

#### 8.2.2 - Control Parameters

**Ventilation**

General under standard conditions. Local exhaust/extraction is recommended in high dust environments.

#### 8.2.3 - Exposure Controls

**Skin Protection**

Protective gloves and/or clothing.

**Industrial Hygiene Practices**

It is a good industrial hygiene practice to minimize direct skin contact for extended periods of time wherever possible.

**Eye Protection**

Safety glasses or goggles.

**Respiratory Protection**

Approved dust mask or respirator.

**Other Protective Clothing or Equipment**

None.

**Work/Hygiene Practices**

General clean-up after exposure. Score and snap generates less dust than sawing, thus minimizing nuisance dust.

### 8.3 - Vapor Permeable Coating Component

#### 8.3.1 - Control Parameters

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td></td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction</td>
<td>TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td></td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust</td>
</tr>
<tr>
<td>Quartz</td>
<td></td>
<td>TWA: 0.025 mg/m³ respirable fraction (vacated) TWA: 0.1 mg/m³ respirable dust : (30)/(%SiO₂+2) mg/m³ TWA total dust : (250)/(%SiO₂+2) mppcf TWA respirable fraction</td>
<td>IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust</td>
</tr>
</tbody>
</table>

NIOSH IDLH: Immediately Dangerous to Life or Health

**Other Information**

Vacated limits revoked by Court of Appeals decision in ALF-CIO vs. OSHA, 965 F.2d 962 (11th Cir., 1992).

#### 8.3.2 - Appropriate Engineering Controls

**Engineering Controls**

None under normal use conditions

#### 8.3.3 - Individual Protection Measures, such as Personal Protective Equipment

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin and body protection**

Gloves

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced. NIOSHA/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.
### ArmorWall VP Structural Insulated Sheathing™

**Safety Data Sheet (SDS)**

**SECTION 9.0 - PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 - Urethane Insulation Component**

**9.1.1 - Information and basic physical and chemical properties:**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Structure</td>
</tr>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>Tan or other characteristic color.</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
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</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>Slower than Ether</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>&gt;700°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt;500°F</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>0.005–0.23g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Log Kow</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**9.1.2 - Other information**

None.

**9.2 - Magnesium Oxide Sheathing Component**

**9.2.1 - Information and basic physical and chemical properties:**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid sheet material</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Form</td>
<td>Board/Panel</td>
</tr>
<tr>
<td>Color</td>
<td>White/Off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>Non-Soluble</td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Initial Boiling Point and Boiling Range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper/Lower Flammability or Explosive Limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limit - Lower (%)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limit - Upper (%)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive Limit - Lower (%)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive Limit - Upper (%)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>50–60 lb/ft</td>
</tr>
<tr>
<td>Solubility (Water)</td>
<td>Non-soluble</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Unknown</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>55–60 lb/ft</td>
</tr>
<tr>
<td>Particle Size</td>
<td>Varies</td>
</tr>
<tr>
<td>VOC (Weight %)</td>
<td>0%</td>
</tr>
</tbody>
</table>

**9.2.2 - Other information**

None.

---

Section Continued on page 7
**SECTION 9.0 - PHYSICAL AND CHEMICAL PROPERTIES**

**9.3 - Vapor Permeable Coating Component**

**9.3.1 - Information and basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Viscous</td>
</tr>
<tr>
<td>Color</td>
<td>Light purple</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight ammonia</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>9.14</td>
</tr>
<tr>
<td>Melting point / Freezing point °F</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 212°F (100°C)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.4</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
</tr>
</tbody>
</table>

**SECTION 10.0 - STABILITY AND REACTIVITY**

**10.1 - Urethane Insulation Component**

**10.1.1 - Reactivity**

No additional information available.

**10.1.2 - Chemical stability**

Stable.

**10.1.3 - Possibility of hazardous reactions**

Not applicable.

**10.1.4 - Conditions to avoid**

Avoid temperatures above 800°F.

**10.1.5 - Incompatible materials**

Not applicable.

**10.1.6 - Hazardous decomposition products**

When foam burns it produces a large volume of dense smoke that presents a major hazard in that it can cause panic and disorientation and inhibit ability to escape.

**10.2 - Magnesium Oxide Sheathing Component**

**10.2.1 - Reactivity**

No information available.

**10.2.2 - Chemical Stability**

Material is stable under normal conditions.

**10.2.3 - Possibility of hazardous reactions**

Hazardous polymerization does not occur.

**10.2.4 - Conditions to Avoid**

No known conditions.

**10.2.5 - Incompatible Materials**

No known substances.

**10.2.6 - Hazardous Decomposition Products**

No known conditions.

**10.3 - Vapor Permeable Coating Component**

**10.3.1 - Reactivity**

No data available

**10.3.2 - Chemical stability**

Stable under recommended storage conditions

**10.3.3 - Possibility of hazardous reactions**

None under normal processing

**10.3.4 - Conditions to avoid**

None known based on information supplied
10.0 - STABILITY AND REACTIVITY

Section Continued from page 7

10.3 - Vapor Permeable Coating Component

10.3.5 - Incompatible materials

None known based on information supplied

10.3.6 - Hazardous decomposition products

None known based on information supplied

11.0 - TOXICOLOGICAL INFORMATION

11.1 - Urethane Insulation Component

Acute toxicity: May cause skin irritation or respiratory irritation.
Chronic toxicity: No data available.
Likely routes of exposure: Skin or inhalation of dust.
Symptoms related to physical, chemical and toxicological characteristics: May cause skin irritation or respiratory irritation.
Delayed and immediate effects and chronic effects from short and long-term exposure: Watering eyes, irritation; coughing or sneezing from dust.
Numerical toxicity measures: No data available.

11.2 - Magnesium Oxide Sheathing Component

Acute Toxicity: Non-Hazardous.
Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Under normal conditions of intended use, this material does not pose a risk to health.
Information on Likely Routes of Exposure:
- Ingestion: Not likely due to form of product.
- Inhalation: Mechanical sawing may generate dust. Dust has an irritant action on mucous membranes of the upper respiratory tract and eyes.
- Skin Contact: Under normal conditions of intended use, this material does not pose a skin hazard.
- Eye Contact: Mechanical sawing may generate dust. Direct contact with eyes may cause temporary irritation.
- Under normal conditions of intended use, this material does not pose a risk to health.

11.3 - Vapor Permeable Coating Component

11.3.1 - Information on likely routes of exposure

Product information: No data available
Inhalation: Avoid breathing vapors or mists.
Eye contact: Avoid contact with eyes.
Skin contact: Avoid contact with skin.
Ingestion: Do not taste or swallow.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>&gt; 90 mL/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>&gt; 10000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polypropylene glycol</td>
<td>&gt; 2 g/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartz</td>
<td>= 500 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diphenyl Ketone</td>
<td>&gt; 10 g/kg (Ra)</td>
<td></td>
<td>3535 mg/kg (Rabbit)</td>
</tr>
</tbody>
</table>

11.3.2 - Information on toxicological effects

Symptoms: May cause irritation

11.3.3 - Delayed and immediate effects as well as chronic effects from short-term and long-term exposure

Sensitization: No information available
Germ cell mutagenicity: No information available
Carcinogenicity: The table below indicates whether each agency has listed any ingredients as a carcinogen. *Titanium Dioxide has been associated with lung cancer where the exposure is to the respirable, dry powder form of the material. However, due to the physical nature of this product (liquid), exposures are not expected unless after product dries it is abraded and airborne dust is created.

Section Continued on page 9
ArmorWall VP Structural Insulated Sheathing™

Safety Data Sheet (SDS)

SECTION 11.0 - TOXICOLOGICAL INFORMATION

Section Continued from page 10

11.3.3 - Delayed and immediate effects as well as chronic effects from short-term and long-term exposure

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide (13463-67-7)</td>
<td>--</td>
<td>Group 2B</td>
<td>--</td>
<td>X</td>
</tr>
<tr>
<td>Quartz</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>Diphenyl Ketone 119-61-9</td>
<td>--</td>
<td>Group 2B</td>
<td>--</td>
<td>X</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)
Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity No information available
STOT - single exposure No information available
STOT - repeated exposure No information available
Aspiration hazard No information available

11.3.4 - Numerical measures of toxicity - Product Information

Unknown acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 9122 mg/kg
ATEmix (dermal) 5977 mg/kg

SECTION 12.0 - ECOLOGICAL INFORMATION

12.1 - Urethane Insulation Component

12.1.1 - Toxicity
Not a marine pollutant.

12.1.2 - Persistence and degradability
No known significant effects.

12.1.3 - Bioaccumulative potential
Does not bioaccumulate.

12.1.4 - Mobility in soil
None.

12.1.5 - Other adverse effects
No additional information.

12.2 - Magnesium Oxide Sheathing Component

12.2.1 - Toxicity
Components are not classified as environmentally hazardous.

12.2.2 - Persistence and Degradability
Not Applicable.

12.2.3 - Bioaccumulative Potential
Not Applicable.

12.2.4 - Mobility in Soil
Not Applicable.

12.2.5 - Other Adverse Effects
No known effects.

12.3 - Vapor Permeable Coating Component

12.3.1 - Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/Aquatic Plants</th>
<th>Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenyl Ketone 119-61-9</td>
<td>--</td>
<td>13.2 - 15.3: 96 h Pimephales promelas mg/L LC50 flow-through</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

12.3.2 - Persistence and Degradability
No information available.
SECTION 12.0 - ECOLOGICAL INFORMATION

12.3 - Vapor Permeable Coating Component
Section Continued from page 9
12.3.3 - Bioaccumulation
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenyl Ketone</td>
<td>3.58</td>
</tr>
</tbody>
</table>

12.3.4 - Other adverse effects
No information available.

SECTION 13.0 - DISPOSAL CONSIDERATIONS

13.1 - Urethane Insulation Component
13.1.1 - Waste treatment methods
Waste disposal recommendations Landfill as ordinary industrial waste in compliance with pertinent regulations.

13.2 - Magnesium Oxide Sheathing Component
13.2.1 - Waste Treatment Methods
- Disposal Instructions: Dispose of in accordance with applicable federal, state, and local regulations. Recycle responsibly.
- Local Disposal Regulations: Dispose of in accordance with local regulations. Recycle responsibly.
- Hazardous Waste Code: Not applicable.
- Waste from Residues/Unused Products: Dispose of in accordance with local regulations. Recycle responsibly.
- Contaminated Packing: Dispose of in accordance with local regulations. Recycle responsibly.

13.3 - Vapor Permeable Coating Component
13.3.1 - Waste treatment methods
- Disposal of wastes: Disposal should be in accordance with applicable regional, national, and local laws and regulations
- Contaminated packaging: Do not reuse container

SECTION 14.0 - TRANSPORT INFORMATION

14.1 - Urethane Insulation Component
In accordance with DOT.
Not regulated for transport.

14.2 - Magnesium Oxide Sheathing Component
- IATA: Not regulated as dangerous goods. Non-hazardous.
- IMDG: Not regulated as dangerous goods. Non-hazardous.
- Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable. Product is solid, therefore bulk transport is governed by IMSBC Code.

14.3 - Vapor Permeable Coating Component
- DOT: Not regulated for all modes of transportation

SECTION 15.0 - REGULATORY INFORMATION

15.1 - Urethane Insulation Component
15.1.1 - US Federal regulations
No Additional Information available.

15.1.2 - International regulations
CANADA
No additional information available.

EU-Regulations
No additional information available.

15.1.3 - US State regulations
No Additional Information available.

15.2 - Magnesium Oxide Sheathing Component
- IATA: Not regulated as dangerous goods. Non-hazardous.
- IMDG: Not regulated as dangerous goods. Non-hazardous.
- Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable. Product is solid, therefore bulk transport is governed by IMSBC Code.

15.3 - Vapor Permeable Coating Component
- International Inventories
  - TSCA: Complies
  - DSL/NDSL: Complies

Section Continued on page 11
SECTION 15.0 - REGULATORY INFORMATION

15.3 - Vapor Permeable Coating Component

Section Continued from page 10

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 313/312 Hazard Categories

| Acute Health Hazard         | No |
| Chronic Health hazard      | Yes|
| Fire Hazard                | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard            | No |

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium Dioxide (13463-67-7)</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Silicon Dioxide (7631-86-9)</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Diphenyl Ketone (110-64-9)</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone (1317-65-5)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Titanium Dioxide (13463-67-7)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Quartz (14808-60-7)</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

SECTION 16.0 - OTHER INFORMATION

Revision date: 261118
Other information: None.

This SDS contains all the information required by ANSI Z400.1 standard (United States), by regulation 29 CFR Part 1910-1200 of the Hazard Communication Standard of OSHA and is in accordance with DOCS/88-66 of WHMIS (Canada).

The best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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