NOTE: This product meets the definition of “article” under the OSHA Hazard Communication Regulations in 29 CFR 1910.1200(c) and is exempt from the requirement to provide a Safety Data Sheet per 29 CFR 1910.1200(b)(6)(v). This Article Information Sheet is provided on a voluntary basis to provide additional information to customers.

SECTION 1. IDENTIFICATION

Product Name: FiberTite® FTR-VALUE Roof Insulation
Trade Names: FiberTite® FTR-VALUE Roof Insulation
Recommended Use: Roofing insulation

Manufacturer: SEAMAN CORPORATION
1000 Venture Blvd.
Wooster, OH 44691 USA
PHONE: (330) 262-1111
INTERNET: www.seamancorp.com
24-HR EMERGENCY: (800) 424-9300 (Chemtrec)

SECTION 2. HAZARDS IDENTIFICATION

This material does not meet any hazard classification under the HCS.

Under normal use and handling, the product is not expected to create any physical or health hazards.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Exposure to individual components is not expected under normal conditions of use. Listing of major components and exposure limits are given for reference only.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyisocyanurate</td>
<td>none</td>
<td>&gt;70%</td>
</tr>
<tr>
<td>Proprietary additives</td>
<td>**</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>n-pentane</td>
<td>109-66-0</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Isopentane</td>
<td>78-78-4</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>Fibrous glass</td>
<td>None</td>
<td>&lt;10%</td>
</tr>
</tbody>
</table>

** Specific chemical identity is withheld as a trade secret under 29 CFR 1910.1200(i).

SECTION 4. FIRST AID MEASURES

Inhalation: If exposed to fumes from overheating or combustion, move to fresh air. Seek medical attention if symptoms persist.

Skin Contact: Wash exposed skin with soap and water. If irritation develops or persists, seek medical attention.

Eye Contact: Flush eyes with plenty of water for at least 15 minutes. Seek medical attention.

Ingestion: Not applicable

SECTION 5. FIRE FIGHTING MEASURES

Flammable Properties: Material will burn if exposed to an external combustion source and yield carbon monoxide, carbon dioxide, and potentially toxic thermal decomposition products.
Suitable Extinguishing Media: Water fog, CO₂, foam or dry chemical (CAUTION: CO₂ will displace air in confined spaces and may cause an oxygen deficient atmosphere.)

Products of Combustion: Carbon dioxide, carbon monoxide, potentially toxic decomposition products

Protection of Firefighters: Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear. No special procedures are expected to be necessary for this product.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: No special procedures necessary

Methods for Containment: No special procedures necessary

Methods for Clean-up: No special procedures necessary

SECTION 7. HANDLING AND STORAGE

Handling: No special equipment required.

Storage: Protect from moisture.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls: Sufficient ventilation when cutting to minimize nuisance dust exposure.

Eye/Face: Wear safety glasses during processing

Skin: Wear general purpose gloves during prolonged handling

Respiratory: Provide adequate local ventilation. If exposure limits are exceeded, NIOSH approved respiratory protection must be provided.

General Hygiene: Wash hands with soap and water after handling material.

EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>OSHA (PEL)</th>
<th>ACGIH (TLV)</th>
<th>NIOSH (REL)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyisocyanurate</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>None established</td>
</tr>
<tr>
<td>n-pentane (109-66-0)</td>
<td>1000 ppm (2950 mg/m³) TWA</td>
<td>1000 ppm (2950 mg/m³) TWA</td>
<td>120 ppm (350 mg/m³) TWA; 610 ppm (1800 mg/m³) CEILING (15-min)</td>
<td></td>
</tr>
<tr>
<td>Isopentane (78-78-4)</td>
<td>1000 ppm (2950 mg/m³) TWA</td>
<td>1000 ppm (2950 mg/m³) TWA</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Fibrous glass</td>
<td>-</td>
<td>1 fiber/cc (respirable)</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Foam board sheets</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>NA</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>NA</td>
</tr>
<tr>
<td>Flash Point</td>
<td>NA</td>
</tr>
<tr>
<td>Flammability</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>NA</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>NA</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>NA</td>
</tr>
<tr>
<td>LFL/UFL</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>NA</td>
</tr>
</tbody>
</table>
Relative Density: NA  
Solubility: none  
Partition Coefficient $K_{ow}$: NA  
Auto-Ignition Temp.: Not available  
Decomposition Temp.: Not available  
Viscosity: NA

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Not reactive  
Chemical Stability: Stable at normal temperatures  
Hazardous Reactions: Will not occur  
Conditions to Avoid: Open flame  
Incompatible Materials: acetone, methyl ethyl ketone, tetrahydrofuran, chlorine chloroform, hydrogen peroxide, ethylene dichloride, dimethyl sulfoxide, dimethyl formamide  
Hazardous Decomposition: Thermal decomposition products: carbon dioxide, carbon monoxide, toxic smoke or vapors

SECTION 11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS:
Summary: Smoke generated from burning the product or inhalation of dust are primary health effects.  
Inhalation: Irritation of the upper respiratory tract may occur from dust or smoke  
Skin Contact: Prolonged handling may cause mechanical irritation  
Eye Contact: Dust may cause irritation and redness  
Ingestion: Not an expected route of entry  
Target Organs: Lungs/respiratory tract, eyes

ACUTE TOXICITY
General Information: No data available for this product as a whole. Adverse health effects would not be anticipated with normal use. Dust from this product is a mechanical irritant, which may cause temporary irritation or scratching of the throat and/or itching of the eyes and skin.  
n-pentane and isopentane may be released at very low concentrations (well below their lower flammability limits) when the material is cut or crushed. These pentanes are non-toxic at levels below their lower flammability limits.

Component Analysis: Due to the physical form of the product, exposure to the chemical components of the fabric and coating is not expected.  
n- pentane (109-66-0):  
LD50 (oral, mouse): 12800 mg/kg

CARCINOGENICITY
General Information: This product has not been evaluated by OSHA, NTP, ACGIH, or IARC. No specific data available.

Component Analysis: Continuous filament glass fibers:  
IARC: Group 3 – Not Classifiable (Vol. 81, 2002)  
ACGIH: A4 – Not Classifiable

CHRONIC TOXICITY
Polyisocyanurate Foam: There is no evidence that dust from this material causes disease in humans. There are no known animal studies of the chronic effects of breathing dust from polyisocyanurate foam. A subchronic inhalation study showed no adverse respiratory effects in rats as a result of breathing 9 mg/m$^3$ of dust from a similar foam (polyurethane foam) for 3 months (Thyssen et al., 1978). In 1987, IARC designated polyurethane as Group 3, not classifiable as to carcinogenicity in humans (Monograph 19).

Continuous filament glass fiber: No chronic health effects are known to be associated with exposure to continuous filament glass fiber. Long-term epidemiologic studies do not show and increases in respiratory cancer or other disease among employees who manufacture this product. In 1987, IARC classified continuous filament fiber glass as a Group 3
substance (not classifiable as to carcinogenicity to humans). In 2001 IARC reaffirmed this designation. Because of the large diameter of continuous filament fibers, these fibers are not considered respirable.

SECTION 12. ECOLOGICAL INFORMATION

No data is available on the adverse effects of this product on the environment. Toxicity is expected to be low based on insolubility in water.

Component Analysis:
- n-pentane (109-60-0): 48-hr EC50 Daphnia magna: 10.5 mg/L
- isopentane (78-78-4): 48-hr EC50 Daphnia magna: 2.3 mg/L

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of waste in accordance with Federal, State, and local environmental control regulations. This material is not hazardous in its manufactured form under the Resource Conservation and Recovery Act. (40 CFR 261)

SECTION 14. TRANSPORTATION INFORMATION

This product is not classified as hazardous for transportation.

SECTION 15. REGULATORY INFORMATION

<table>
<thead>
<tr>
<th>SARA Title III:</th>
<th>Health:</th>
<th>Acute NO</th>
<th>Chronic NO</th>
<th>EHS NO</th>
<th>Physical:</th>
<th>Fire NO</th>
<th>Reactivity NO</th>
<th>Pressure NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA 313 (TRI):</td>
<td>This product is considered an “article” under SARA Title III Section 313 and is not subject to reporting under normal conditions of use.</td>
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<tr>
<td>California Proposition 65:</td>
<td>none</td>
<td></td>
<td></td>
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<tr>
<td>WHMIS (Canada):</td>
<td>This product meets the definition of “manufactured article” under the Hazardous Products Act</td>
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</tr>
</tbody>
</table>

SECTION 16. OTHER INFORMATION

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. No warranty of merchantability or any other warranty, expressed or implied, is given. In no case shall the information provided herein be considered a part of the terms and conditions of sale. Seaman Corporation assumes no obligation or liability for the information given or results obtained. All materials may present unknown hazards and should be used with caution. Final determination of suitability of any material is the sole responsibility of the user.

For questions related to the safety of this product, e-mail msds@seamancorp.com or call (330) 262-1111

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FTR-VALUE™ is a trademark of Seaman Corporation