FOAMULAR® XPS PIPE INSULATION
EXTRUDED POLYSTYRENE FABRICATION BILLET

FOAMULAR® Extruded Polystyrene (XPS) Fabrication Billets are manufactured from rigid sheets of foam made using Owens Corning’s Hydrovac® process technology. The unique closed-cell structure of FOAMULAR® XPS insulation makes it highly resistant to moisture, and thus low in water absorption but high in insulating capability.

FOAMULAR® XPS Fabrication Billets are factory laminated using a specially formulated polyurethane-based adhesive under strict process controls for performance.

The primary function of the FOAMULAR® XPS Fabrication Billet product is to provide raw stock to commercial pipe fabricators from which individual pipe insulation parts can be cut.

FOAMULAR® XPS Fabrication Billets can be pre-fabricated by our value-add distribution network into pipe shells, fittings (elbows, strainers, valves, etc.), as well as engineered systems for tanks and vessels of any size and shape.

**Physical Properties**

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>ASTM METHOD</th>
<th>SI/METRIC</th>
<th>ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Conductivity</td>
<td>ASTM C518</td>
<td>0.029 W/mK</td>
<td>0.20 BTU •in/hr • °F • ft²</td>
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<tr>
<td>Compressive Strength</td>
<td>ASTM D1621</td>
<td>≥ 173 kPa</td>
<td>≥ 25 psi</td>
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<tr>
<td>Water Absorption</td>
<td>ASTM C272</td>
<td>≤ 0.15</td>
<td>≤ 0.15</td>
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<tr>
<td>Water Vapor Permeance</td>
<td>ASTM E96</td>
<td>≤ 1.1 ng/Pa • s • m²</td>
<td>≤ 0.019 perm</td>
</tr>
<tr>
<td>Dimensional Stability</td>
<td>ASTM D2126</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Surface Burning Characteristics</td>
<td>ASTM E84</td>
<td>Flame Spread Index 10 Smoke Developed Index 75</td>
<td></td>
</tr>
<tr>
<td>Service Temperature</td>
<td></td>
<td>-196 to 74°C</td>
<td>-320 to 165°F</td>
</tr>
<tr>
<td>Linear Coefficient of Thermal Expansion</td>
<td>ASTM E228</td>
<td>6.3 • 10⁻⁵/K</td>
<td>3.5 • 10⁻⁵/°F</td>
</tr>
</tbody>
</table>

1. Sample modified as required to meet applicable test method.
2. XPS foam core values meet ASTM C578 TYPE IV.
3. k means the apparent thermal conductivity. The lower the value, the greater the insulation power.
4. Values at yield or 10% deflection, whichever occurs first.
5. Data ranges from 0.00 to value shown due to the level of precision of the test method.
6. Water vapor permeance decreases as thickness increases.
7. These laboratory tests are not intended to describe the hazard presented by this material under actual fire conditions.
8. Fire performance of FOAMULAR® 4” thick product only. Thicker products may have different fire performance characteristics. Due to limits on the equipment used to test per ASTM E84, Owens Corning® FOAMULAR® XPS Fabrication Billets have not been tested.

**Formats**
- Thickness: 1”–5” in 1/2” increments
- Pipe Sizes: 1/2” NPS to 14” NPS
- Length: 36”
- Made to order

**Applications**
- Ammonia piping and equipment
- Refrigeration piping and equipment
- Food and beverage service processing
- Other cold service applications

**Technical Information**

Owens Corning has developed an Installation Guide for Low Temperature Pipe Insulation to assist engineers, architects, and contractors with the proper installation of pipe insulation made from FOAMULAR® XPS Fabrication Billets. This guide is available at www.owenscorning.com/xpspipe.

FOAMULAR® XPS Pipe insulation is available from Owens Corning fabricators from across North America. For more information, call 1-800-GET-PINK®, or contact your local area sales manager.

Technical questions can be submitted to: foamglastechnical@owenscorning.com or 1-800-327-6126
**Certificates and Sustainable Features**

- Certified by SCS Global Services to contain a minimum of 20% recycled content pre-consumer
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg
- Environmental Product Declaration (EPD) has been certified by UL Environment
- Utilizing FOAMULAR® XPS insulation can help builders achieve green building certifications including the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) certification

10. The above certifications apply only to pre-laminated FOAMULAR® Extruded Polystyrene (XPS) Boards that make up Fabrication Billets.

**Disclaimer of Liability**

Technical information contained herein is furnished without charge or obligation and is given and accepted at recipient’s sole risk. Because conditions of use may vary and are beyond our control, Owens Corning makes no representation about, and is not responsible or liable for the accuracy or reliability of data associated with particular uses of any product described herein. SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit www.SCSglobalservices.com.

LEED® is a registered trademark of the U.S. Green Building Council.

**Warranty**

FOAMULAR® XPS Fabrication Billets are made from FOAMULAR® XPS insulation. FOAMULAR® XPS insulation limited lifetime warranty maintains 90% of its R-value for the lifetime of the building and covers all ASTM C578 properties. See actual warranty for complete details, limitations and requirements at www.owenscorning.com/xpspipe or http://sustainability.owenscorning.com.

**Environmental and Sustainability**

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services.

Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and extending lives. More information can be found at www.owenscorning.com.