**Product Data Sheet**

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**Energy-Saving, Moisture Resistant XPS Insulation**

Foundation Drainage Insulation with Filter Fabric Protection

ASTM C 578 Type IV, 25 psi minimum

**Description**

INSUL-DRAIN® board is a FOAMULAR® extruded polystyrene (XPS) product that incorporates the features of insulation, drainage and protection board in a single product. It’s easy to install, without the need for special tools or equipment, and the product’s compressive strength and long-term moisture resistance properties mean years of reliable performance on below grade foundation walls even under extremely harsh conditions. Precision-cut channels drain water from vertical foundation walls while completing total insulation envelope.

- Durable filtration fabric prevents soil from clogging channels
- 48” x 96” size covers more square footage faster and minimizes joints between boards
- Acts as protection course for waterproofing membrane
- Tongue & groove edges provide proper board alignment and helps seal joints

**Key Features**

- Top-edge horizontal channel permits unobstructed water flow between vertical courses of boards
- High R-value, exceptional moisture resistance and high compressive strength of FOAMULAR® XPS insulation
- UL Classified foam core meets ASTM C578 Type IV specifications

**Product Installation**

1. INSUL-DRAIN® board is installed against exterior below grade foundation walls. INSUL-DRAIN® board can be installed directly over waterproofing or dampproofing membranes provided that the membrane is properly cured.

2. INSUL-DRAIN® boards should be installed vertically with the fabric side away from the wall. Align the 4 ft. dimension along the horizontal wall and place the edge flush along a corner of the wall. INSUL-DRAIN® boards should be installed so as to extend vertically from the top of the footing to several inches below finished grade. Properly sized gravel fill should be installed at least one foot above the bottom edge of the board. The fabric overhang along the bottom of the board should be tucked underneath to the backside of the board. Should the project require less than a full size 8 ft. long board, excess should be trimmed from the bottom of the board leaving a 3-inch fabric tab to tuck underneath.

3. A bead of compatible adhesive should be applied along the entire top edge of INSUL-DRAIN® boards to secure top fabric overhang and prevent soil penetration into the drainage channels.

4. Adjacent INSUL-DRAIN® boards are installed by engaging the tongue and groove edge to ensure a solid fit between boards.
It is suggested that a bead of waterproof sealant be applied in the edge groove area in order to retard water penetration to the foundation wall. Additional INSUL-DRAIN® boards should be installed in a similar fashion. The remaining fabric overhang on the tongue side should be overlapped onto the adjacent board and secured with a bead of compatible adhesive.

5. INSUL-DRAIN® boards can be trimmed to fit project dimensions or protrusions by scoring with a utility knife or cut with a handsaw. It is recommended that all length cutting take place on the bottom of the board.

6. At wall corners where two INSUL-DRAIN® boards intersect, one board should be trimmed flush with the wall and the second board trimmed to overhang the wall, by the thickness of the product, to produce a continuous thermal envelope. A bead of waterproof sealant should be applied vertically where the boards join each other. The fabric overhang should then be attached to the surface of the adjacent board with compatible adhesive.

7. Additional tiers of INSUL-DRAIN® boards should be installed the same as the first tier. Be certain to secure all fabric overhangs to adjacent boards with compatible adhesive.

8. Owens Corning recommends that INSUL-DRAIN® boards be at least partially backfilled the same day as installation to stabilize and secure the boards in place. The balance of the backfill should be added as soon as practical to fully secure the boards and protect them from jobsite damage and UV exposure. Care should be exercised during the backfill operation as to not allow soil penetration between INSUL-DRAIN® board and the foundation wall. As an alternative, in conjunction with partial backfilling, compatible construction adhesives can be used to temporarily secure INSUL-DRAIN® boards. Beads or spots of compatible adhesive can be dabbed to the backside of INSUL-DRAIN® board and then pressed firmly in place against the wall.

9. INSUL-DRAIN® board should not be installed unprotected above grade. In order to achieve a continuous thermal envelope, standard FOAMULAR® insulation panels should be installed against the foundation wall from the top.
FOAMULAR® INSUL-DRAIN®
Extruded Polystyrene (XPS) Insulation Board

Product Data Sheet

Product and Packaging Data
FOAMULAR® INSUL-DRAIN® Extruded Polystyrene Insulation Board

<table>
<thead>
<tr>
<th>Material</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposed polystyrene closed-cell foam panel with fabricated drainage channels and a non-woven filtration fabric overlapping the board on three sides.</td>
<td>Shipped in poly-wrapped units with individually wrapped or banded bundles.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thickness (in)</th>
<th>Product Dimensions (in) x Length (in)</th>
<th>Pallet (Unit) Dimensions (typical Width (ft) x Length (ft) x Height (ft))</th>
<th>Square feet per Pallet</th>
<th>Board feet per Pallet</th>
<th>Bundles per Pallet</th>
<th>Pieces per Bundle</th>
<th>Pieces per Pallet</th>
<th>Edges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x 48 x 96</td>
<td>4 x 8 x 8</td>
<td>3,072</td>
<td>3,072</td>
<td>8</td>
<td>12</td>
<td>96</td>
<td>Tongue &amp; Groove</td>
</tr>
<tr>
<td>1¼</td>
<td>1.5 x 48 x 96</td>
<td>4 x 8 x 8</td>
<td>2,048</td>
<td>3,072</td>
<td>8</td>
<td>8</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>2¼</td>
<td>2.25 x 48 x 96</td>
<td>4 x 8 x 8</td>
<td>1,344</td>
<td>3,024</td>
<td>7</td>
<td>6</td>
<td>42</td>
<td></td>
</tr>
</tbody>
</table>

1. Available lengths and edge configurations vary by thickness. See www.foamular.com for current offerings. Other sizes may be available upon request. Consult your local Owens Corning representative for availability.

Technical Information
This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building code. For additional information, consult MSDS or contact Owens Corning World Headquarters at 1-800-GET-PINK®.

All construction should be evaluated for the necessity to provide vapor retarders. See current ASHRAE Handbook of Fundamentals.

FOAMULAR® insulation can be exposed to the exterior during normal construction cycles. During that time some fading of color may begin due to UV exposure, and, if exposed for extended periods of time, some degradation or “dusting” of the polystyrene surface may begin. It is best if the product is covered within 60 days to minimize degradation. Once covered, the deterioration stops, and damage is limited to the thin top surface layers of cells. Cells below are generally unharmed and still useful insulation.

Standards, Codes Compliance
- Meets ASTM C 578 Type IV
- Meets California Quality Standards and HUD UM #71a

Certifications and Sustainable Features of FOAMULAR® XPS Insulation
- FOAMULAR® XPS insulation is reusable
- FOAMULAR® XPS insulation is made with a zero ozone depletion formula
- Certified by SCS Global Services to contain a minimum of 20% recycled content
- Certified to meet indoor air quality standards under the stringent GREENGUARD Indoor Air Quality Certification Program, and the GREENGUARD Gold Certification
- Qualified as an ENERGY STAR® product, under the U.S. Environmental Protection Agency and the U.S. Department of Energy
- Approved under the Home Innovation Research Labs NGBS Green Certification Program

INSUL-DRAIN® Flow Rate Testing

![INSUL-DRAIN® Flow Rate Testing](image)

INSUL-DRAIN® System Installed on Concrete Masonry Wall

![INSUL-DRAIN® System Installed on Concrete Masonry Wall](image)
FOAMULAR® INSUL-DRAIN® Extruded Polystyrene (XPS) Insulation Board

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- Utilizing FOAMULAR® XPS insulation can help achieve green building certifications including the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) certification.
- FOAMULAR® XPS insulation may qualify for The Buy American provision of the American Recovery and Reinvestment Act (ARRA).

Architectural Notes

Waterproofing/Dampproofing INSUL-DRAIN® board should be considered a drainage enhancement mechanism. Owens Corning recommends the application of a waterproofing/dampproofing membrane at the foundation wall in addition to INSUL-DRAIN® board. The installation of a properly designed footing drainage system is also recommended.

Compatibility

Contact membrane manufacturers for specific information regarding compatibility with INSUL-DRAIN® board. INSUL-DRAIN® board should not be used in conjunction with coal-tar based membranes. Contact Owens Corning for recommendations.

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 enhancing lives. More information can be found at www.sustainability.owenscorning.com.

Warranty

FOAMULAR® XPS insulation limited lifetime warranty maintains 90% of its R-value for the lifetime of the building and covers all ASTM C 578 properties. See actual warranty for complete details, limitations and requirements at www.foamular.com or www.owenscorningcommercial.com.

Notes

1. R means the resistance to heat flow; the higher the R-value, the greater the insulating power.
2. See actual warranty for complete details, limitations and requirements.

All products described here may not be available in all geographic markets. Consult your local sales office representative for more information.

For more information on the Owens Corning family of building products, contact your Owens Corning dealer, call 1-800-GET-PINK®, or access our web sites: www.foamular.com and www.owenscorning.com.