Structural Thermal Isolation Blocks for Construction

STRUCTURAL INSULATION FROM BELOW GROUND TO THE BUILDING ROOF

The LAST-A-FOAM® R-9300 Continuous Insulation Series for cold storage and industrial buildings couples a thermal barrier with high-strength structural support.

These high-density polyurethane foams extend building insulation from below ground to the building’s roof. A wide range of compressive strengths are offered to address industrial thermal construction applications.
Product Overview
The LAST-A-FOAM® Continuous Insulation Blocks are made of high-density rigid polyurethane material. It has insulating qualities which reduce thermal bridging through adjoining materials, making it ideal for most applications. The foam also combines high compressive strength with minimal deflection.

The cold, hard truth: Not all thermal block solutions are created equal.

Here’s why:

• Greater value
  They’re priced right, offer lower cost over a longer life, and cut utility costs.

• Energy Efficiency
  Foam’s insulating qualities reduce thermal bridging through adjoining materials.

• Guaranteed Performance
  The enduring physical properties of our blocks are guaranteed with certified testing.

• Fast Turnaround
  Most orders will ship within 10 working days of approved shop drawings – the best ship times in the industry.

• Smooth Installation
  Blocks arrive ready to use, with holes pre-drilled if desired.

• Solid Track Record
  Our thermal column-bearing blocks have been sold and remained stable in continuous use for 20-plus years.

BENEFITS AT A GLANCE:
• Ensures minimal energy loss to cooler/warmer earth at the foundation
• Blocks have high compressive strength to support roof-column loads
• Creep resistant – blocks resist distortion under load over time up to 2,100 psi
• Locks out moisture – closed-cell material does not absorb water
• Chemically and biologically inert – products will not rot or decompose
• Does not promote steel corrosion
• Does not attract or support insects or vermin
• Will not release chemicals into surrounding soil
• Compatible with most grouts, adhesives and concrete
• Contributes to LEED certification

FEATURES AT A GLANCE:
• Custom-manufactured for specific job requirements
• Most orders produced as single-piece blocks with no field assembly required
• Custom-cut blocks provided with optional pre-drilled anchor-bolt holes
• Blocks are marked for easy placement at the job site

All blocks are custom-cut and can be provided with pre-drilled anchor-bolt holes.
PRODUCT APPLICATIONS

**Tank Isolation Protection Block**
These custom-shaped insulating blocks securely support chiller equipment outside cold-storage facilities, thereby reducing the possibility of condensation on the supporting structure.

**Equipment Support Block**
Placed on top of the building’s roof, these insulating blocks support HVAC and other heavy equipment while preventing radiant heat transfer to the building’s interior. This added insulation keeps the building interior cooler and reduces the load on cooling equipment, lowering utility costs.

**Floor Reinforcement Block**
R-9320 blocks are used inside the floor panels of insulated walk-in coolers and freezers. Lower-density blocks cost-effectively support shelving and provide a valuable thermal break to prevent the transfer of thermal energy between the floor and ground. These insulating qualities minimize costly energy losses.

**Perimeter Fall-Protection Block**
These sturdy blocks are a key component of a commercial or industrial roof safety system. The high-density material provides greater load-bearing ability and durability than wood.

**Canopy/Mansard Isolation for Residential/Commercial Use**
Our LAST-A-FOAM® R-9300 high-density polyurethane foam blocks provide a thermal barrier for metal canopy or mansard supports where they penetrate the building exterior walls.

**Structural Thermal Column-Bearing Block**
The R-9300 Series are designed to support heavy and structural loads while maintaining thermal control within industrial building interiors. Made of proven, high-density rigid polyurethane material, these blocks are ideal for cold-storage facilities. They combine high compressive strength with little deflection and extraordinary thermal insulation.

**Precast/Tilt-Up Concrete Wall Panel Block**
R-9300 Series prevents thermal energy transfer between the building and ground when installed under precast and tilt-up concrete walls. Because these insulating construction blocks offer excellent load-bearing ability and durability, only a few are required to support each wall. This eliminates wasted material while preventing costly energy loss.

**POLYURETHANE OUTPERFORMS OTHER MATERIALS – EVERY TIME**
High-density polyurethane will not rot or dissolve in subgrade application. It is inert, so it will not promote corrosion of steel components placed in contact with it. The material provides nothing for vermin or insects to feed upon, nor does it release any chemical compounds into surrounding soil. Its closed-cell structure prevents absorption of water into the material.

**READY WHEN YOU ARE – EFFORTLESS INSTALLATION**
R-9300 Continuous Insulation Blocks are supplied cut-to-size to your specifications. If you prefer, anchor-bolt holes can be pre-drilled at the factory with supplied drawing or templates. This makes on-site block placement fast and easy. R-9300 blocks are delivered ready to install.

Guaranteed with certified testing, blocks that have been in use for over twenty years have remained stable. Products ship within 10 working days of approved shop drawings – the best ship time in the industry.

We offer a wide range of compressive strengths to address industrial thermal construction applications: 350, 500, 1,000, 1,500, 1,800, and 2100 psi.
### TECHNICAL DATA FOR THERMAL ISOLATION BLOCKS

<table>
<thead>
<tr>
<th>Property</th>
<th>R-9320</th>
<th>R-9325</th>
<th>R-9330</th>
<th>R-9335</th>
<th>R-9340</th>
<th>R-9340 HP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEST METHOD</strong></td>
<td></td>
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<tr>
<td>Density (pcf) (kg/m³)</td>
<td>20 320</td>
<td>25 400</td>
<td>30 481</td>
<td>35 561</td>
<td>40 641</td>
<td>40 641</td>
</tr>
<tr>
<td>Compressive Strength (psi) (kPa) Vertical loads parallel to rise - min. value</td>
<td>350 2,413</td>
<td>500 3,448</td>
<td>1,000 6,895</td>
<td>1,500 10,343</td>
<td>1,800 12,411</td>
<td>2,100 14,480</td>
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<tr>
<td>2% Deflection @ 75°F mean min. values*</td>
<td>8,400 57,918</td>
<td>12,000 82,740</td>
<td>16,000 110,320</td>
<td>20,000 137,900</td>
<td>27,000 186,165</td>
<td>27,000 186,165</td>
</tr>
<tr>
<td>Shear Modulus (psi) (kPa)</td>
<td>0.39 0.06</td>
<td>0.45 0.06</td>
<td>0.51 0.07</td>
<td>0.57 0.08</td>
<td>0.63 0.09</td>
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</tr>
<tr>
<td>Thermal Conductivity <em>K-Value</em> (BTU<em>in/ft²</em>°F<em>h)/(W/m</em>K)</td>
<td>0.09 0.28</td>
<td>0.34 0.18</td>
<td>0.31 0.17</td>
<td>0.31 0.17</td>
<td>0.31 0.17</td>
<td>0.31 0.17</td>
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<tr>
<td>&quot;R-Value&quot; per inch</td>
<td>2.58 0.45</td>
<td>2.22 0.39</td>
<td>1.95 0.34</td>
<td>1.74 0.31</td>
<td>1.57 0.28</td>
<td>1.57 0.28</td>
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<tr>
<td>Water Absorption (lbs./ft²) (kg/m²)</td>
<td>0.009 0.044</td>
<td>0.007 0.036</td>
<td>0.006 0.029</td>
<td>0.005 0.023</td>
<td>0.004 0.018</td>
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<tr>
<td>Fire Safety</td>
<td>*S/E</td>
<td>*S/E</td>
<td>*S/E</td>
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*Note: Compressive strengths shown are minimum values*

*S/E: Self-extinguishing via test method below

**Consult structural engineer for deflection measurement.

** Tested vertically on 1/2" thick specimen using 12-second and 60-second ignition with Bunsen burner.

### PLACING AND CUSTOMIZING ORDERS

General Plastics’ LAST-A-FOAM® R-9300 Continuous Insulation Block Series is available through CSI of Virginia, Inc. As our distributor, CSI is responsive and knowledgeable in the application of these products for their intended use, with staff possessing solid backgrounds in civil engineering. Please contact CSI for technical service and sales assistance.

**CSI also offers the following services:**

- Material take-off assistance for qualified buyers
- Creation of material shop drawings from AutoCAD templates for customer approval and manufacturing

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CSI of Virginia, Inc. is General Plastics’ exclusive distributor of the R-9300 thermal isolation block. Please contact CSI for technical service and sales assistance.

General Plastics is certified according to ISO 9001:2008/AS9100C and meets such demanding quality systems as NQA-1, MIL-I-45208A and The Boeing Company D6-82479
www.generalplastics.com

All General Plastics products are manufactured in the United States, and are free of CFCs and VOCs.