THINK POLYISO INSULATION CAN’T HANDLE THE ELEMENTS? THINK AGAIN.

POLYISO INSULATION

High-performing, cost-efficient polyiso insulation delivers the highest R-value per inch in real-world conditions, making it the smartest investment you can make when insulating your roof.

Firestone Building Products is proud to offer ISO 95+™ GL Insulation, Tapered ISO 95+ Insulation and RESISTA™ Insulation—four outstanding polyiso insulation products that will keep your building totally covered no matter the season.

R-VALUES AND TEMPERATURES

Data presented in Professional Roofing Magazine

HIGH PERFORMANCE INSULATION = HUGE COST SAVINGS

- Reduced blocking thickness
- Shorter fasteners
- Thinner, lighter boards that ease contractor labor and associated costs
- Need for fewer pallets of insulation, resulting in reduced handling and crane fees

PRODUCT BENEFITS

- Easy to install
- Does not require thermal barrier because it acts as one (per IECC 2012 ASHRAE 90.1)
- Will not soften or melt when exposed to extreme temperatures
- Excellent compressive strength allows insulation to stand up to foot traffic from routine maintenance
- Requires less embodied energy to manufacture

SEE FULL DETAILS ON OTHER SIDE >
Let’s Get Real About R-Values.

A 2010 National Roofing Contractor Association (NRCA) study used applicable ASTM standards to test fifteen 2-inch samples of polyiso roof insulation against four mean temperatures: 110°F, 75°F, 40°F and 25°F.

In a recent bulletin, the NRCA recommended that to calculate design R-value,* roof designers should use a value of R-5.0 in all climates, based on the assumption that the appropriate reference temperature should be somewhere between 25°F and 45°F.

However, based on actual climate data evaluated by the Polyisocyanurate Insulation Manufacturers Association (PIMA) (See Chart A), the most suitable mean winter heating reference temperature for testing roof insulation R-value should be:

**NO LESS THAN 45°F FOR THE COLDEST CLIMATES, AND UP TO 70°F FOR THE WARMEST CLIMATES.**

After previously published average R-value data is applied to the 45- to 70-degree mean reference temperature range, the R-values calculated do not vary significantly (See Chart B)—and the notion of a design temperature of 5.0 is rendered unrealistic.

*The design R-value is the R-value multiplied by the inches of insulation needed.*

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### Chart A. Mean Winter Reference Temperatures

<table>
<thead>
<tr>
<th>Climate Zone</th>
<th>Mean Ambient Temperature</th>
<th>Mean Reference Temperature</th>
<th>Mean Indoor Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>71°F</td>
<td>70°F</td>
<td>68°F</td>
</tr>
<tr>
<td>2</td>
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<tr>
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<td>39°F</td>
<td>54°F</td>
<td>68°F</td>
</tr>
<tr>
<td>5</td>
<td>36°F</td>
<td>52°F</td>
<td>68°F</td>
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<tr>
<td>6</td>
<td>28°F</td>
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<td>68°F</td>
</tr>
<tr>
<td>7</td>
<td>22°F</td>
<td>45°F</td>
<td>68°F</td>
</tr>
</tbody>
</table>

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### Chart B. Average Polyiso R-Value by Climate Zone

Uses 2010 data rounded to 0.1 R-value as published by PIMA

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In real-world conditions, **Firestone polyiso insulation outperforms, every time!**