The ORIGINAL Nail Base Roof Insulation

For Shingles and Metal Roofing

- Single layer of sheathing

- Fully machined composite panel
- Sheathing pre-spaced for thermal expansion
- 7/16” OSB standard; 5/8” or 3/4” OSB/plywood optional

DATA TABLE
Nom. Size 4’ x 8’ (32 s.f./panel)
1215 mm x 2430mm (2.95M²)

<table>
<thead>
<tr>
<th>APPROX. OVERALL THICKNESS</th>
<th>WEIGHT P.S.F.</th>
<th>LTTR R-VALUE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0”</td>
<td>51 mm</td>
<td>1.7</td>
</tr>
<tr>
<td>2.5”</td>
<td>64 mm</td>
<td>1.8</td>
</tr>
<tr>
<td>3.0”</td>
<td>75 mm</td>
<td>1.9</td>
</tr>
<tr>
<td>3.5”</td>
<td>89 mm</td>
<td>2.0</td>
</tr>
<tr>
<td>4.0”</td>
<td>102 mm</td>
<td>2.1</td>
</tr>
<tr>
<td>4.5”</td>
<td>114 mm</td>
<td>2.2</td>
</tr>
<tr>
<td>5.0”</td>
<td>127 mm</td>
<td>2.3</td>
</tr>
<tr>
<td>5.5”</td>
<td>140 mm</td>
<td>2.4</td>
</tr>
<tr>
<td>6.0”</td>
<td>152 mm</td>
<td>2.5</td>
</tr>
<tr>
<td>6.5”</td>
<td>165 mm</td>
<td>2.6</td>
</tr>
<tr>
<td>7.0”</td>
<td>178 mm</td>
<td>2.7</td>
</tr>
<tr>
<td>7.5”</td>
<td>190 mm</td>
<td>2.8</td>
</tr>
<tr>
<td>8.0”</td>
<td>203 mm</td>
<td>2.9</td>
</tr>
</tbody>
</table>

*Long Term Thermal Resistance (LTTR) R values are determined in accordance with CAN/ULC-S770. This is a 15 year time-weighted average value and was adopted by U.S. polyisocyanurate manufacturers on January 1, 2003. The nominal foam thickness is 1/2” less than the overall panel thickness.
**CODE ACCEPTABILITY CERTIFICATION**

**CODES** - OSB is approved by CABO, ICBO, BOCA, SBC, ARMA and the APA as roof sheathing. The foam used in ThermaCal® has a Flame Spread Rating of 25** or less. Foam with Factory Mutual Class 1 approval per FMRC Standard 4450/4470 is used.

Plastic foam must be protected from flame on the inside by a suitable barrier. Generally, wood decking or drywall is acceptable and plywood is allowed in certain roofing applications. CHECK LOCAL CODES.

**UNDERWRITERS LABORATORIES**

ThermaCal® is classified under U.L. as a roof covering accessory (TGDY) per ANSI/UL 790 (ASTM E-180) and as a Building Unit (tiar) per UL 1256 for construction No. 120 and No. 123.

**CODES AND COMPLIANCES**

**FEDERAL SPECIFICATION** - meets the physical property requirements of HH-I-1972/GEN. The foam meets ASTM C1289-95.

**MODEL CODES** - foam insulation is in compliance with:
- BOCA- Section 2603.0
- ICBO- Section 2602
- SBCCI- Section 2603.2
- IBC- Section 2603

**TECHNICAL SUPPORT DESIGN CONSIDERATIONS**

**VAPOR RETARDERS**

The designer should determine if a vapor retarder is required between the deck and the insulation. A vapor retarder should always be specified in buildings with high humidity conditions, such as swimming pools.

**DRAFT SPECIFICATION**

This spec is usually placed in Section 07220. It can be downloaded from our website www.cornellcorporation.com.

**THERMACAL® NAIL BASE ROOF INSULATION**

1. DESCRIPTION OF SYSTEM
   - The insulated sheathing shall be ThermaCal®, a non-vented nail base roof insulation consisting of a 7/16” oriented strand board top surface (optional 5/8” or 3/4” OSB / plywood available - architect to choose) bonded to _____ thick isocyanurate foam.
   - The Long Term Thermal Resistance (LTTR) R-Value of the non-vented roof insulation shall be not less than ______.
   - Wood panel edges shall be rabbeted to allow the foam edges to fit together while providing clearance between the wood sheathing on adjoining panels.
   - Foam sides and ends shall have a tongue and groove profile to reduce heat loss at the joints.

2. SUBMITTALS
   - A. The following will be submitted to the architect for approval: Copies of the manufacturer’s product information and installation instructions. A sample with the edge profile specified.

3. PRODUCTS
   - A. Products shown below are acceptable provided they meet the requirements of this specification.

ThermaCal® by Cornell Corporation, Cornell, WI
Tele: (715) 239-6411   Fax: (800) 267-8368

**OTHER PRODUCTS**

If ventilation below the sheathing is required by the roofing manufacturer, we recommend our ventilated roof insulations, Vent-Top ThermaCal® 1 or 2. For these products see our catalog in Sweets or our web page www.cornellcorporation.com.

**CORNELL CORPORATION**

50 YEARS OF EXPERIENCE!

Cornell Corporation has been a leading roof insulation manufacturer since 1955. In response to the need for nailable insulation above the structural roof deck in cathedral or vaulted ceiling applications, Cornell Corporation introduced ThermaCal® in 1979, which started the nail base roof insulation industry.