

# THERMACAL® 1 VENTILATED ROOF INSULATION SPECIFICATION



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ThermaCal® 1 Ventilated Roof Insulation Panels (with one layer of oriented strand board). See company literature or website [www.gaf.com](http://www.gaf.com) and [www.cornellcorporation.com](http://www.cornellcorporation.com). This spec is usually placed in Section 07 22 00 under the heading Composite Roof Panels and is a component of the shingle system spec.

## 1. General

### 1.01. WORK INCLUDES

- A. The work shall consist of covering all areas shown on the drawings with ventilated roof insulation

### 1.02. RELATED WORK

- A. Specified elsewhere:  
Section 07 --- Asphalt shingles, metal roofing or other roofing system over the ventilated insulation. Ridge vents and eave vents.

### 1.03 SYSTEM DESCRIPTION

- A. Description of system:
  - 1. The ventilated roof insulation shall be a preassembled panel consisting of one layer of 7/16" oriented strand board (FSC or standard), built-in ventilation space maintained by 1" wood spacers blocks, and isocyanurate insulation on the bottom.  
~ Architect's option for top surface: 5/8" or 3/4" OSB or Plywood. FSC or Standard  
~ Architect's option for spacer blocks 1-1/2" or 2"
  - 2. **The Long Term Thermal Resistance (LTTR) R-Value of the ventilated roof insulation shall be no less than \_\_\_\_\_ for foam only.**
  - 3. Wood panel edges shall be rabbetted to allow the foam edges to fit together while providing clearance between the wood sheathing on adjoining panels.
  - 4. Foam sides and ends shall have a machined tongue and groove profile to reduce heat loss at the joints.
- B. Performance Requirements:
  - 1. The wood spacer blocks shall not exceed 8% of the panel area and shall leave 50% open for lateral (across the slope) ventilation. Spacer blocks shall not be over 12" apart in either direction.
  - 2. The vent space shall provide a minimum of 10 sq. in. of Net Free Area per lineal foot of insulation along the 8' edge after deducting for the spacer blocks.

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3. The foam insulation shall have a Flame Spread Rating of 40-60.

### 1.04. QUALITY ASSURANCE

- A. The ventilated insulation shall be classified by Underwriters Laboratories Inc. as a shingle decking accessory for use with any Class A, B or C asphalt glass mat or asphalt organic shingle. Each bundle of ventilated panels shall bear an Underwriter Laboratory's label. If applicable FSC Chain-of-Custody procedure will apply.

### 1.05. 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 and large enough to show the actual lateral spacing of the vent space supports. A manufacturer's dimensioned drawing showing how the 50% lateral ventilation is achieved. Calculations of spacer block percentage of panel area and the Net Free Area per Lin. Ft. of insulation after deducting for spacers.

### 1.06. DELIVERY AND STORAGE

- A. The ventilated insulation shall be protected in the transit by plastic covers and by truck tarps. When material is stored at the jobsite, a reasonably level, drained storage area shall be provided. The insulation shall rest on firm blocking and shall be covered with tarps.

### 1.07. SEQUENCING/SCHEDULING

- A. Erection of the ventilated insulation shall be coordinated with the roofing subcontractor so the roofing is applied as soon as possible after insulation is in place.

## 2. PRODUCT

- 2.01. Products shown below are acceptable provided they meet the requirements of this specification:

- A. **ThermaCal® 1 Ventilated Roof Insulation Panels** by GAF Cornell,  
Tele: (800)766-3411 or (800)522-9224 Fax: 877-271-6588  
[www.gaf.com](http://www.gaf.com) and [www.cornellcorporation.com](http://www.cornellcorporation.com)
- B. **ThermaCal® Fasteners** as required per the appropriate fastener pattern.

## 3. EXECUTION

### 3.01. PREPARATION

- A. The structural roof deck shown in the plans shall be smooth and level and free of water or debris before the ventilated insulation is installed. Apply vapor retarder if required.

NOTE: GAF Cornell recommends that the designer carefully considers the need for a vapor/air retarder.

### 3.02. SUBSTRATE INSTALLATION

- A. Installation shall follow the manufacturer's written installation instructions.
- B. Fasten with ThermaCal® Fasteners to the supporting roof deck shown in the plans.

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- C. Protect ventilated insulation work from exposure to moisture damage and deterioration, primarily by prompt installation of the roofing, sheet metal and waterproofing work.