

# THERMACAL® 2 VENTILATED ROOF INSULATION SPECIFICATION



1 Campus Drive, Parsippany, NJ 07054  
Tele: (800)766-3411 Fax: 877-271-6588

ThermaCal® 2 Ventilated Roof Insulation Panels (with two layers of oriented strand board). See company literature or website [www.gaf.com](http://www.gaf.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, slate, tile or other roofing system over the ventilated insulation. Ridge vents and eave/intake vents.

### 1.03. SYSTEM DESCRIPTION

#### A. Description of system:

- 1. The ventilated roof insulation shall be a preassembled panel consisting of **two layers** of 7/16" oriented strand board, built-in ventilation space maintained by 1" wood spacers blocks, and polyisocyanurate insulation on the bottom.  
~ Architect's option for top wood surface: 5/8" or 3/4" OSB or Plywood (Standard or Fire-Treated). **NOTE:** Bottom wood layer is always standard 7/16" oriented strand board.  
~ 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 and first sheathing layer 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.
- 3. The foam insulation shall have a Flame Spread Rating of 55 (ASTM E84).

## THERMACAL® 2 VENTILATED ROOF INSULATION SPECIFICATION

### 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 or metal shingles. Each bundle of ventilated panels shall bear an Underwriter Laboratory's label.

### 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® 2 Ventilated Roof Insulation Panels** by GAF,  
Tele: (800)766-3411, (800)522-9224, and [www.gaf.com](http://www.gaf.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.  
**NOTE:** GAF 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.
- C. Protect ventilated insulation work from exposure to moisture damage and deterioration, primarily by prompt installation of the roofing, sheet metal and waterproofing work.