



Extruded Polystyrene Insulation
FOAMULAR®



February 1999

Ventilation of Unheated Attics or Cathedral Ceiling Rafter Cavities

Owens Corning's Raft-R-Mate product is a polystyrene sheet shaped to prevent attic or rafter cavity insulation, batt or blown, from covering eave or soffit vents, or expanding to fill cavity airways, and restricting air flow. Typically building codes require that every enclosed attic or insulated rafter cavity space be provided with a minimum amount of ventilation. Ventilation is typically provided by some combination of gable, ridge and soffit vents. Inadequate ventilation may lead to excess heat and humidity in the attic or rafter cavity. Those conditions may lead to deterioration of the roofing materials and deck, insulation, structural framing members, or interior ceiling finishes.

Required Vent Area

For attics, codes typically specify required vent area as a percentage, or ratio, of the attic area, often in the range of 1/150. The required vent area can often be reduced if the vent area provided is divided between high and low vents such as at the roof ridge (high), and at the soffit (low). The reduction is often in the range of 1/300. Check local building codes for specific ventilation requirements.

For rafter cavity spaces, codes typically specify a required minimum air space, often 1", between the insulation and the roof sheathing. Check local building codes for specific requirements.

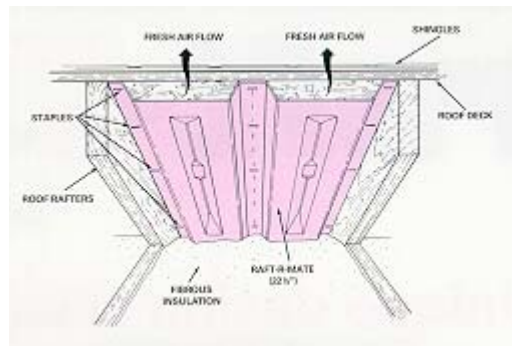
Installation

Installed properly against the underside of the roof deck, between roof trusses or rafters, Raft-R-Mate will provide in excess of a 1" air space. Fibrous insulation can be installed directly against the surface of Raft-R-Mate and Raft-R-Mate will maintain a free air flow channel from the eave vent to the ridge or gable vents. Due to its symmetrical design, Raft-R-Mate can be split in half for 12" o.c. rafter spacing, or if required for retrofit or cathedral ceiling applications.

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Installing loose fill or batt insulation on attic floors

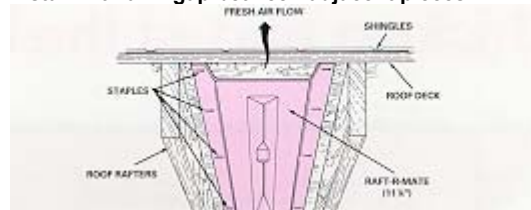
A single 4' length of Raft-R-Mate should be installed in each rafter or truss space, at the ceiling line, to insure that the airway between soffit and attic space remains open. The vent should extend some distance beyond the top of the horizontal fibrous insulation.



Installing rafter cavity insulation in cathedral ceilings

Raft-R-Mate should be installed in each rafter cavity beginning at the soffit area, to assure the vent remains open, and continuing up the cavity to the ridge vent or to a common air space. Raft-R-Mate should be installed with an approximate 2" gap between the ends of adjacent pieces to allow moisture to escape more readily into the air channel. Install cavity batt insulation such that the ends of the batt do not occur in the area of the 2" gap. This precaution minimizes the potential of the batt expanding into the air channel and restricting air flow.

Install with a 2" gap between adjacent pieces.



Note: When prolonged outdoor cold temperatures, or higher interior humidity conditions are expected, a vapor retarder, such as 4 mil sheet polyethylene, should be installed on the warm side of the rafter batt to reduce the intrusion of moisture into the attic or rafter cavity.

NOTE TO BUILDERS and CONSUMERS: Always check with your local building department for required ventilation area in attics and rafter cavities, requirements for vapor retarders, and the acceptability of Raft-R-Mate for the planned application.