

EnergyGuard™ Composite Board Roof Insulation

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*Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™*



ENERGYGUARD™ COMPOSITE BOARD ROOF INSULATION

Description

EnergyGuard™ Composite Board Roof Insulation consists of an isocyanurate foam core integrally bonded to 1/2" (12.7 mm) thick EnergyGuard™ Perlite on one side and a strong organic glass facer sheet on the other.

Uses

- EnergyGuard™ Composite Board Roof Insulation is designed for use over structural roof decks where "R" values of 7.4 or higher are required, along with moderate insulation thickness for roof edge detailing, and where comprehensive UL and FM approvals are necessary.
- When properly installed, it is suitable for use under built-up or modified bitumen roofing systems.
- Refer to the application specifications in the current membrane manufacturer's application and specifications manual for proper installation procedures.
- EnergyGuard™ Composite Board Roof Insulation, installed perlite side up, is an ideal insulation surface to receive solid-mopped, built-up, or modified bitumen roof systems.

Advantages

- The excellent insulating qualities of isocyanurate foam are combined with the strong surface characteristics of high density fiberboard or perlite.
- The perlite side is able to receive hot-mopped roof membranes that comply with NRCA bulletin #9.
- Subject to the conditions of approval as a roof insulation when installed as shown in the current edition of the *Factory Mutual Approvals Guide*.
- Fast and easy to apply — light in weight — can be applied to metal decks with mechanical fasteners such as the FM-approved Drill-Tec™ roof insulation fastener system.
- Bonded components — possibility of delamination virtually eliminated.
- High resistance to compression — not easily damaged by imposed loads, construction traffic, shipping, or handling.

Limitations and Potential Fire Hazard

- EnergyGuard™ Composite Board Roof Insulation is normally installed with the facer sheet side down.
- EnergyGuard™ Composite Board Roof Insulation is non-structural, non-load-bearing material. It is not designed for direct traffic usage unless adequately protected.
- EnergyGuard™ Composite Board Roof Insulation with perlite is not designed to be used with fully adhered single-ply membranes.
- EnergyGuard™ Composite Board Roof Insulation should be stored dry and protected.

Limitations and Potential Fire Hazard (Continued)

from the elements. No more insulation should be installed than can be completely covered with roofing on the same day.

- As unprotected composite board will burn, **fire safety precautions must be observed** wherever insulation products are used.
- Direct torching of modified bitumen roofing to EnergyGuard™ Composite Board Roof Insulation will present a **fire hazard**. A properly installed fiberglass base **MUST** be used over the insulation.

WARNING: DO NOT EXPOSE TO OPEN FLAME OR EXCESSIVE HEAT. MAY SMOLDER IF IGNITED. IF IGNITED, EXTINGUISH COMPLETELY.

Code Compliance



Thermal and Physical Characteristics¹

Inches	Thickness*		R-Value**
	Inches	mm	
1.5		38.1	7.0
1.8		45.7	8.7
2.0		51	9.9
2.3		60	11.6
2.5		64	12.7
2.6		66	13.3
2.8		71	14.5
3.0		76	15.7
3.5		89	18.7
3.7		94	19.9
4.0		102	21.8

*Other thicknesses available upon request.

**Long Term Thermal Resistance Values provide a 15-year time-weighted average in accordance with CAN/ULC S770.

¹Note: Physical and thermal properties shown are based on data obtained under controlled laboratory conditions and are subject to normal manufacturing tolerances. Values are based on 1/2" fiberboard.

Note: All sizes are nominal.

Typical Physical Properties

Property	Value	Test Method
Water Absorption, % by Volume — 2 hours	<1.5 max.	ASTM C209
Dimensional Stability Change, 7 days @158°F (70°C), 90-100% RH		ASTM D2126
• Lengthwise	<2%	Grade 2
• Crosswise	<2%	
Compression Resistance 10% Consolidation— psi (kPa)	20 (138) nom.	ASTM D1621
Laminar Tensile Strength — psi (kPa)	4 (28)	ASTM C209
Moisture Vapor Transmission ⁽¹⁾	<1 perm (57.5ng/(Pa•s•m ²))	ASTM E96
Flame Spread ⁽¹⁾⁽²⁾	20-30 <75	ASTM E84
Service Temperature	-100 to 250 °F (-73 to 93 °C)	ASTM D1623

⁽¹⁾Foam core only.

⁽²⁾These numerical ratings are not intended to reflect hazards presented by these or any other material under actual fire conditions.

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