EnergyGuard™ Perlite Roof Insulation

Updated: 7/17

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

ENERGYGUARD™
PERLITE ROOF INSULATION

Description

EnergyGuard™ Perlite Roof Insulation is a homogenous board composed of expanded perlite particles, selected binders, and cellulose fibers, which give EnergyGuard™ Perlite Roof Insulation its insulating efficiency. The surface is treated to reduce bitumen absorption, ensuring proper adhesion of roof membranes.

EnergyGuard™ Perlite Roof Insulation is available in 2' x 4' (610 mm x 1.22 m) and 4' x 4' (1.22 m x 1.22 m) boards in standard thicknesses of 3/4", 1", 1 1/2", 2", and 3" (19 mm, 25 mm, 38 mm, 51 mm, and 76.2 mm).

Uses

- EnergyGuard™ Perlite Roof Insulation is designed to be used directly over structural roof decks.
- Meets requirements of ASTM C728, Type 1.
- It is also widely used as a separation board over existing roofs in re-cover installations. In re-cover applications, all wet areas of the old roof must be removed. All loose and protruding gravel must also be removed.
- Properly installed, EnergyGuard™ Perlite Roof Insulation is suitable for use under built-up and modified bitumen roofing systems.
- Refer to the application specifications in the current membrane manufacturer's application and specifications manual for proper installation procedures for EnergyGuard™ Perlite Roof Insulation.

Advantages

- Stable insulating properties.
- Exceptional fire resistance.
- Excellent dimensional stability.
- Resists damage due to normal deck traffic during and after construction.
- Fast and easy to apply.
- Average 32% recycled content.

Limitations

- EnergyGuard™ Perlite Roof Insulation is a non-structural, non-load-bearing material.
- EnergyGuard™ Perlite Roof Insulation should be stored dry and be protected from the elements. Once properly loaded at the job site, remove factory wraps and cover with a breathable tarp.
- No more insulation should be applied than can be completely covered with the finished roofing on the same day.
- Do **NOT** use under fully adhered single-ply systems or with direct torch application of modified bitumen.
- If torch-grade modified bitumen roofing is to be installed over EnergyGuard™ Perlite, a fiberglass base sheet **MUST** first be installed.

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

EnergyGuard™ Perlite Roof Insulation

Code Compliance

CLASSIFIED c UL us

FM APPROVED

Thermal Performance[1]

Thickness* (nominal)		R-Value (Resistance)	
Inches	mm	(hr•ft²•°F)/BTU	m²•°C/W
3/4"	19.1	2.0	0.35
1"	25.4	2.7	0.48
1 1/2"	38.1	4.1	0.72
2"	51	5.4	0.95
3"	76	8.1	1.47

For Use Over Metal Decks

The minimum thickness of EnergyGuard™ Perlite insulation over metal decks is as follows:

	Narrow	Intermediate	Wide
Width of Rib Opening	Up to 1" (25 mm) maximum	Up to 1 3/4" (44 mm) maximum	Up to 2 1/2" (64 mm) maximum
Thickness of Insulation (minimum)	3/4" (19 mm)	1" (25 mm)	1 1/2" (38 mm)

Avoid concentrating loads on insulation. Minimum bearing on flat surface: 2" (51 mm).

Note: All sizes are nominal.

Typical Physical Properties

Property	Value	Test Method
Water Absorption, % by Volume – 2 hours	1.5 max.	ASTM C209
Compression Resistance 5% Consolidation— psi (kPa)	30 (207) nom.	ASTM C165
Laminar Tensile Strength — psi (kPa)	8 (55)	ASTM C209
Flexural Strength — psi (kPa)	65 (448)	ASTM C203
Product Density — pcf (kg/m³)	8 (128)	ASTM C209
Dimensional Stability	0.5%	ASTM C209
Flame Spread	25	ASTM E84
Smoke Developed	10	ASTM E84

[1] Note: Physical and thermal properties shown are based on data obtained under controlled laboratory conditions and are subject to normal manufacturing tolerances.

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