



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.

Code Compliance



Thermal Performance⁽¹⁾

| Thickness* (nominal) | | R-Value (Resistance) | |
|----------------------|------|------------------------------|----------------------|
| Inches | mm | (hr·ft ² ·°F)/BTU | m ² ·°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/m ³) | 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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