

EnergyGuard™ Fiberglass Roof Insulation

Information Sheet

Updated: 6/09



*Quality You Can Trust Since 1886...
From North America's Largest Roofing Manufacturer™*

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Description

EnergyGuard™ Fiberglass Roof Insulation is a rigid roof insulation composed of inorganic glass fibers, bonded by a resinous binder. The board top surface is kraft paper bonded with asphalt using fiber glass scrim reinforcement.

Advantages

- Impact resistant surface
- Excellent dimensional stability, resists warping and shrinkage
- Flexible enough to conform to minor deck irregularities.
- Withstands normal deck traffic during and after construction.
- Stable "R" value.
- Suitable for retrofit over gravel surfaces.

Uses

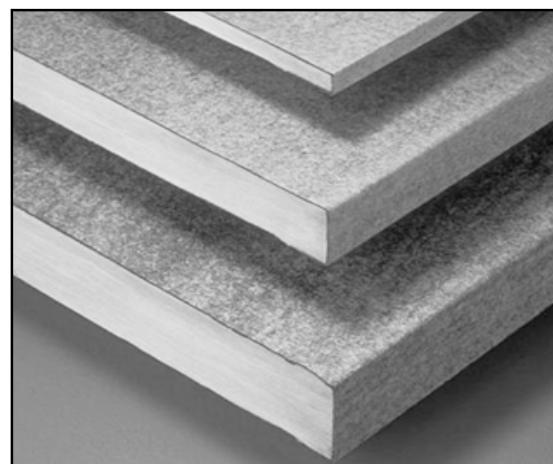
- EnergyGuard™ Fiberglass roof insulation is designed for use over structural roof decks where "R" values of 6.0 or higher are required, along with comprehensive UL, ULC and FM approvals.
- When properly installed, it is suitable for use under built-up and mop modified bitumen systems.

Limitations and Potential Fire Hazard

- EnergyGuard™ Fiberglass roof insulation is a non-structural, non-load bearing material. It is not designed for direct traffic usage unless adequately protected.
- EnergyGuard™ Fiberglass roof insulation should be stored dry and protected from the elements. Once properly loaded at the job site, remove factory wraps and cover with a breathable tarp.
- As unprotected fiberglass will burn, fire safety precautions should be observed whenever insulation product is used.
- Direct torching of modified bitumen roofing to EnergyGuard™ Fiberglass roof insulation will present a **fire hazard**. A properly installed fiberglass base sheet must be used over the insulation.

Code Compliance

- Listed by UL, ULC for use under Class A, B, or C Roof Covering. See UL, ULC Inc. *Roofing Materials and Systems Directory* for details, meets CAN/ULC-S126, CAN/ULC-S107.
- Subject to the conditions of Approval as a roof insulation when installed as shown in the current edition of the *FM Approvals Guide*.
- Mechanical attachment of roof insulation is the most dependable method of attachment to steel decks since it minimizes lateral movement and wind blow-off.
- For details, consult current Factory Mutual Loss Prevention Sheet 1-28, 1-29, 1-28R, 1-29R and current Approvals Guide.



EnergyGuard™ Regular Fiberglass Roof Insulation

Thermal Performance

| Thickness (nom.) in | mm | C-Value (Conductance) | | R-Value (Resistance) | |
|------------------------|----|------------------------------|----------------------|------------------------------|----------------------|
| | | BTU/(hr-ft ² -°F) | W/m ² -°C | (hr-ft ² -°F)/BTU | m ² -°C/W |
| 3/4 | 19 | 0.36 | 2.04 | 2.78 | 0.49 |
| 15/16 | 24 | 0.27 | 1.53 | 3.70 | 0.65 |
| 1 1/16 | 27 | 0.24 | 1.36 | 4.17 | 0.74 |
| 1 5/8 | 41 | 0.15 | 0.85 | 6.67 | 1.18 |
| 2 | 51 | 0.125 | 0.71 | 8.00 | 1.41 |
| 2 1/4 | 57 | 0.11 | 0.62 | 9.09 | 1.61 |
| 3 | 76 | 0.08 | 0.45 | 12.50 | 2.22 |

Size

Fiberglass Roof Insulation is available in board sizes 48" x 48" (1220 m x 1220 m) and 48" x 96" (1.22 m x 2.44 m).

Typical Physical Properties

| | Values | Test Method |
|--------------------------|-------------------|-------------|
| Compressive Strength | | |
| 25% Deformation | 12 psi (83 kPa) | ASTM C 165 |
| Tensile Strength | 100 psf (4788 Pa) | ASTM C 209 |
| (Perpendicular to Board) | | |
| Break Load (min.) | 20 lbf. (89 N) | ASTM C 203 |
| Water Absorption | 10% | ASTM C 209 |
| (% Vol. max.) | | |
| Flame Spread | 20* | ASTM E 84 |
| Smoke developed | 20* | ASTM E 84 |

For Use Over Metal Decks

The minimum thicknesses of Fiberglass Roof Insulation over metal decks are as follows:

| Width of Rib Opening | Up to 2 1/2" (64 mm) | Up to 3" (76 mm) |
|---|-------------------------|---------------------|
| Thickness of Insulation (Minimum) | 3/4" (19 mm) | 1 1/16" (27 mm) |

* Unsurfaced board

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

EnergyGuard™

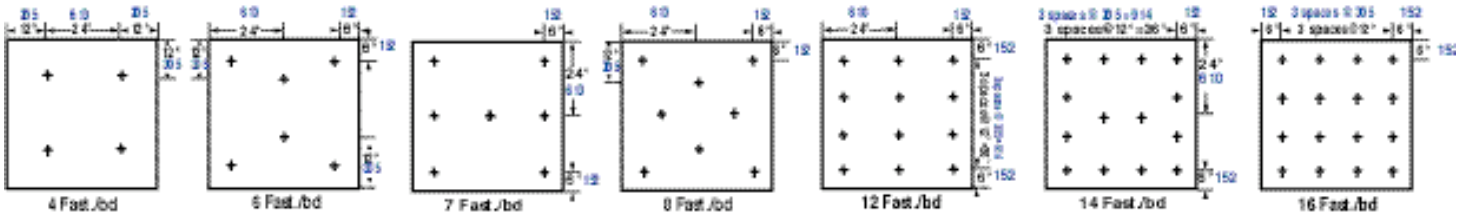
Fiberglass

Roof Insulation

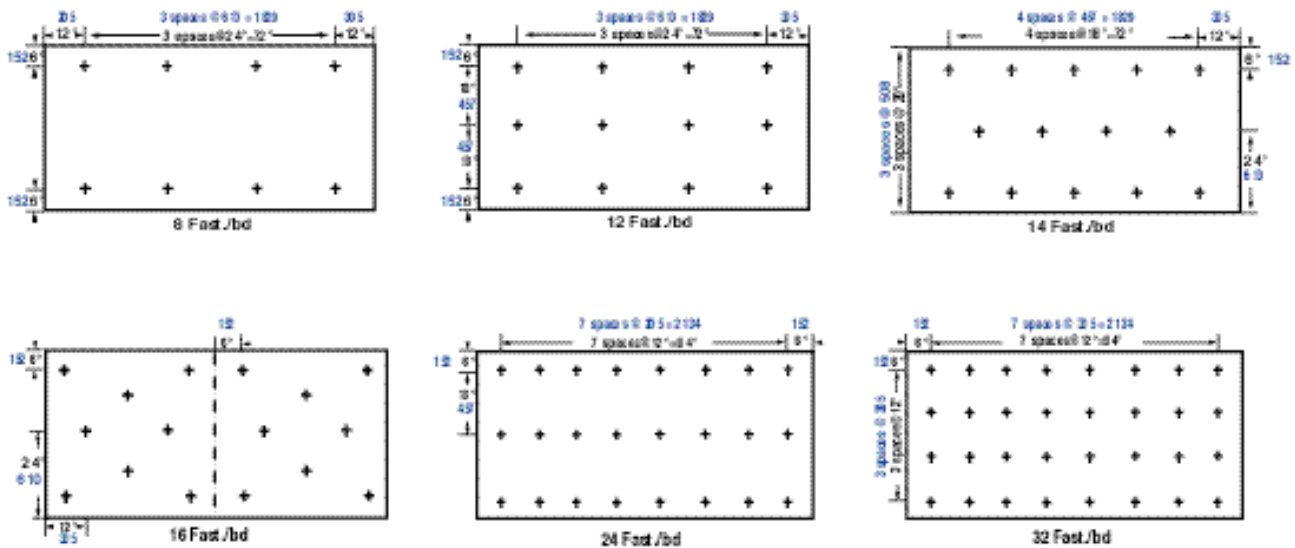
Design Considerations – Suggested Insulation Fastener Patterns

Measurements in BLUE are in millimeters

4' x 4' (1220 x 1220) Boards



4' x 8' (1220 x 2440) Boards



Note: These patterns are for FM Approved decks utilizing appropriate FM Approved screws and plates. ** (In organic BUR systems only)

Consult FM Loss Prevention Data Sheets 1-29 for specific perimeter and corner fastening details. For proper attachment, fasteners must penetrate the flange or the metal deck a minimum of 3/4 inch (19.05 mm).

Due to ongoing testing programs and changes in FM Global requirements, the number of fasteners and their placement are subject to change without notice.

Consult current FM Approvals Guide and Loss Prevention Data Sheets 1-28, 1-29 and 1-29R for approved fastener density for EnergyGuard™ Roof Insulations.

If your fastener pattern is not listed, please contact **Contractor Services Hotline at 1-800-766-3411**.

LIMITED WARRANTY

BMCA warrants that, at the time of delivery, the product contained herein shall conform to BMCA's specifications therefor. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS AND REPRESENTATIONS, WHETHER BY STATUTE, AT LAW OR IN EQUITY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Recommendations made by BMCA are believed to be reliable, but BMCA makes no warranty of results to be obtained. BUYER'S SOLE AND EXCLUSIVE REMEDY, regardless of the theory on which a claim may be based, including, without limitation, negligence, contract, breach of warranty, strict product liability or misrepresentation, IS THE REPLACEMENT OF THIS PRODUCT. In NO event shall BMCA be liable for INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT, OR OTHER SIMILAR PUNITIVE DAMAGES OF ANY KIND, INCLUDING DAMAGE TO THE INTERIOR OR EXTERIOR OF ANY BUILDING.

Contractor Services Hotline GAF: 1-800-ROOF-411 or U.S. Intec: 1-800-624-6832

Regional Sales Information

| | |
|--------------|----------------|
| MID-ATLANTIC | 1-866-579-7900 |
| CENTRAL | 1-800-847-0841 |
| SOUTH | 1-800-356-1602 |
| WEST | 1-800-445-9330 |
| SOUTHWEST | 1-214-637-1060 |
| CANADA | 1-800-555-1852 |

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