



EnergyGuard™ RA UltraTapered Polyiso Insulation



Description:

EnergyGuard™ RA Ultra Tapered Polyiso Insulation is a closed-cell polyisocyanurate (polyiso) foam core integrally bonded to inorganic coated glass facers. EnergyGuard™ RA Ultra Tapered Polyiso Insulation is offered in a variety of slopes, to achieve positive drainage as well as long-term thermal resistance (LTTR).

Features and Benefits:

- Prevents ponding water when properly installed on a low-slope roof by providing slope via a series of both tapered and flat polyiso fill boards
- Highest R-Value per inch of any rigid board insulation
- Easy to install—lightweight, easy to cut, easy to handle
- Versatile—approved component in single-ply, BUR, modified bitumen, and ballasted systems, with a variety of attachment methods: mechanically attached, fully adhered, loose laid
- Recognized by the GREENGUARD Environmental Institute as resistant or highly resistant to mold growth, based on independent testing using GREENGUARD Test method GGTM P040 (ASTM D6329) for microbial resistance†

† GAF warranties and guarantees do not provide coverage against mold or other biological growth. Refer to gaf.com for more information on warranty and guarantee coverage and restrictions.

Panel Characteristics:

- EnergyGuard™ RA Ultra Tapered Polyiso Insulation is offered in a variety of slopes to achieve positive drainage as well as long-term thermal resistance (LTTR).
- Available in
Size: 4ft x 4ft (1.22m x 1.22m) panels
Thickness: 1/2" - 4.6" (12.7mm - 114.3 mm)
Slope: with 1/8" (3mm), 1/4" (6mm), and 1/2" (12mm) per foot slope*

* Other slopes available. Order minimum may apply.

Codes & Compliance:

- Meets the requirements of ASTM C1289, Type II, Class 2, Grade 2 (20 psi) or Grade 3 (25 psi)
- Meets the requirements of CAN/ULC-704, Type 2, Class 3 or Type 3, Class 3
- FM Approved—consult RoofNav.com for specific assemblies
- Classified by UL in accordance with ANSI/UL 1256, 790, and 263; refer to UL Product iQ for specific assemblies
- Miami-Dade County Product Control Approved
- State of Florida Approved
- For additional information, contact GAF at 877-423-7663 or designservices@gaf.com



Sustainability:

- Manufactured using CFC-, HCFC- and HFC-free foam blowing technology with zero ozone depletion potential (ODP) and virtually no (negligible) global warming potential (GWP)
- EnergyGuard™ RA Ultra Polyiso Insulation contains between 10.85% and 4.62% recycled materials by weight

Tapered Design Team:

Our Tapered Design Group specialists are available within your region to assist you in all aspects of preplanning, design, and training. Contact GAF at tdg@gaf.com or 866.207.7123.

Our services include:

- Conceptual design assistance
- Quote review and comparison
- Plan and spec review
- Alternate design recommendations
- Job startups, trainings, and presentations



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ASTM C1289 Type II, Class 2, Grade 2 (20 psi) or Grade 3 (25 psi) • CAN/ULC-704, Type 2, Class 3 or Type 3, Class 3

| Slope* | Label* | Thickness | | | thermal resistance | | Brd FT/ Piece | PCS/ unit | brd ft/ unit | sq ft/ unit | weight (lb/SF) | Recycled content | | |
|--------|--------|-----------|-----|------|--------------------|------|------------------|--------------|-----------------|----------------|-------------------|------------------|-----------------|-------|
| | | min | max | avg | avg Itr value | RSI | | | | | | Post consumer | pre consumer | total |
| 1/8" | AA | 0.5 | 1.0 | 0.75 | 4.3 | 0.76 | 12 | 64 | 768 | 1024 | 0.211 | 39.1% | 20.0% | 59.0% |
| | A | 1.0 | 1.5 | 1.25 | 7.1 | 1.25 | 20 | 38 | 760 | 608 | 0.279 | 29.6% | 18.6% | 48.2% |
| | B | 1.5 | 2.0 | 1.75 | 10.0 | 1.76 | 28 | 26 | 728 | 416 | 0.346 | 23.8% | 17.8% | 41.6% |
| | C | 2.0 | 2.5 | 2.25 | 12.9 | 2.27 | 36 | 20 | 720 | 320 | 0.414 | 19.9% | 17.3% | 37.2% |
| | D | 2.5 | 3.0 | 2.75 | 15.9 | 2.80 | 44 | 16 | 704 | 256 | 0.481 | 17.1% | 16.9% | 34.0% |
| | E | 3.0 | 3.5 | 3.25 | 18.9 | 3.33 | 52 | 14 | 728 | 224 | 0.549 | 15.0% | 16.6% | 31.6% |
| 1/4" | F | 3.5 | 4.0 | 3.75 | 22.0 | 3.87 | 60 | 12 | 720 | 192 | 0.616 | 13.4% | 16.3% | 29.7% |
| | X | 0.5 | 1.5 | 1.0 | 5.7 | 1.00 | 16 | 48 | 768 | 768 | 0.245 | 33.7% | 19.2% | 52.9% |
| | Y | 1.5 | 2.5 | 2.0 | 11.4 | 2.01 | 32 | 24 | 768 | 384 | 0.380 | 21.7% | 17.5% | 39.2% |
| | Z | 2.5 | 3.5 | 3.0 | 17.4 | 3.06 | 48 | 16 | 768 | 256 | 0.515 | 16.0% | 16.7% | 32.7% |
| 1/4" | ZZ | 3.5 | 4.5 | 4.0 | 23.6 | 4.15 | 64 | 10 | 640 | 160 | 0.650 | 12.7% | 16.3% | 28.9% |
| | G | 1.0 | 2.0 | 1.5 | 8.6 | 1.51 | 24 | 32 | 768 | 512 | 0.313 | 26.4% | 18.2% | 44.6% |
| | H | 2.0 | 3.0 | 2.5 | 14.4 | 2.53 | 40 | 18 | 720 | 288 | 0.448 | 18.4% | 17.1% | 35.5% |
| 1/2" | I | 3.0 | 4.0 | 3.5 | 20.5 | 3.61 | 56 | 12 | 672 | 192 | 0.583 | 14.2% | 16.5% | 30.6% |
| | Q | 0.5 | 2.5 | 1.5 | 8.6 | 1.51 | 24 | 32 | 768 | 512 | 0.313 | 26.4% | 18.2% | 44.6% |
| | QQ | 2.5 | 4.5 | 3.5 | 20.5 | 3.61 | 56 | 12 | 672 | 192 | 0.583 | 14.2% | 16.5% | 30.6% |
| | XX | 1.0 | 3.0 | 2.0 | 11.4 | 2.01 | 32 | 22 | 704 | 352 | 0.380 | 21.7% | 17.5% | 39.2% |

* Full bundles only. Other slopes available. Order minimum may apply.

Typical Physical Property Data:

| Property | Test Method | ASTM C1289 Value | CAN/ULC-704 value |
|------------------------------|-------------|---|---|
| Compressive Strength | ASTM D1621 | Grade 2 - min. 20 psi (138 kPa) | Type 2 - min. 140 kPa (20.3 psi) |
| | | Grade 3 - min. 25 psi (172 kPa) | Type 3 - min. 170 kPa (24.7 psi) |
| Dimensional Stability | ASTM D2126 | max. 2% (length & width) max. 4% (thickness) | max. 2% (length & width) |
| Tensile Strength | ASTM C209 | min. 500 psf (24 kPa) | |
| | ASTM D1623 | | Type 2 - 3 min. 35 kPa (731 psf) |
| Water Absorption (% by vol.) | ASTM C209 | max 1.5% | |
| | ASTM D2842 | | max. 3.5% |
| Water Vapor Permeance | ASTM E96 | max. 4 perms [228.8 ng/(Pa·s·m²)] | |
| | | | Class 3 - min. 60 ng/(Pa·s·m²) [1 perm] |

Surface Burning and Service Temperature Data:

| | Test Method | Value |
|-----------------------|-------------------|------------------------------------|
| Service Temperature | n/a | -100 to 250 °F (-73.3 to 121.1 °C) |
| Flame Spread Index | ASTM E84 / UL 723 | max. 75 |
| Smoke Developed Index | ASTM E84 / UL 723 | max. 200 |

Installation

- EnergyGuard™ RA Ultra Tapered Polyiso Insulation shall be kept dry before, during and after installation.
- Refer to product packaging and PIMA Technical Bulletin #109 for storage and handling recommendations.
- This product will burn if exposed to an ignition source of sufficient heat and intensity. Do not apply flame directly to EnergyGuard™ RA Ultra Tapered Polyiso Insulation.
- Typical field fastening requirements can be obtained from GAF membrane system manufacturer or FM Global Property Loss Prevention Data Sheets 1-29.
- Refer to the application specifications in the current GAF Membrane Installation Guide and specifications manual for proper installation procedures.



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