



## **GAF** EnergyGuard™ Polyiso Insulation



### Description:

EnergyGuard™ Polyiso Insulation board is made of glass fiber-reinforced cellulosic felt (GFR) facers bonded to a core of polyisocyanurate foam.

### Features and Benefits:

- Versatile — Approved component in single ply, BUR and modified bitumen systems, with a variety of attachment methods: mechanically attached, fully adhered, loose laid and ballasted
- Approved for direct application to steel decks
- High insulation value — polyiso insulation has the highest R-value per inch compared to any other type of non-polyiso insulation of equivalent thickness
- Because of its light weight, this material is easy to handle on the jobsite and installs quickly. Easy cutting in the field provides the installer with simplified fabricating on the roof deck
- Excellent dimensional stability, high moisture resistance and low water permeability

### Panel Characteristics:

- Available in a variety of thicknesses from 1.0" (25.4 mm) to 4.6" (116 mm) to best suit your specifications
- Available in 4' x 4' (1.21 m x 1.21 m) and 4' x 8' (1.21 m x 2.44 m) boards
- Flute Fill and other special sizes are available upon request
- Other EnergyGuard™ products available – tapered, CGF facer and non-halogenated. See individual data sheets for more information

### Codes & Compliance:

- Meets the requirements of ASTM C1289 Type II, Class 1, Grade 2 (20 psi) and also available in Grade 3 (25 psi)
- FM 4450 / 4470—consult RoofNav.com for specific assemblies
- UL listed to ANSI / UL 790, UL 263, UL 1256
- UL Evaluation Report UL ER1306-03
- See UL Product iQ for details
- Miami-Dade County Approved
- State of Florida Approved
- For additional information, contact GAF at 1-800-766-3411 or [designservices@gaf.com](mailto:designservices@gaf.com)



### EnergyGuard™ Polyiso Thermal Values:

Size*	R-Value**	Max Flute Span (in)
1.0" (25.4 mm)	5.7	2 5/8" (66.7 mm)
1.2" (30.5 mm)	6.8	2 5/8" (66.7 mm)
1.5" (38.1 mm)	8.6	4 3/8" (111 mm)
1.75" (44.5 mm)	10.0	4 3/8" (111 mm)
2.0" (51 mm)	11.4	4 3/8" (111 mm)
2.3" (58 mm)	13.2	4 3/8" (111 mm)
2.5" (64 mm)	14.4	4 3/8" (111 mm)
2.6" (66 mm)	15.0	4 3/8" (111 mm)
2.8" (71 mm)	16.2	4 3/8" (111 mm)
3.0" (76 mm)	17.4	4 3/8" (111 mm)
3.2" (81 mm)	18.6	4 3/8" (111 mm)
3.5" (89 mm)	20.5	4 3/8" (111 mm)
3.7" (94 mm)	21.7	4 3/8" (111 mm)
4.0" (102 mm)	23.6	4 3/8" (111 mm)
4.3" (109 mm)	25.4	4 3/8" (111 mm)
4.5" (114 mm)	26.6	4 3/8" (111 mm)
4.6" (117 mm)	27.1	4 3/8" (111 mm)

\* Other thicknesses available upon request.

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

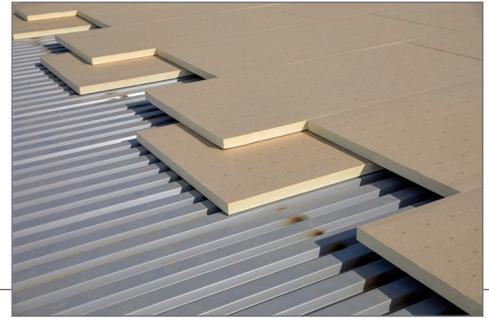
For optimal roof performance and to prevent thermal bridging GAF recommends installing two layers of Polyiso with staggered joints.



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**Sustainability** — for more information go to [gaf.com/green](https://gaf.com/green)

- Manufactured with EPA-compliant blowing agents containing no CFCs or HCFCs; has zero ozone depletion potential (ODP) and negligible global warming potential (GWP)
- GREENGUARD Gold
- Green Circle Certified for recycled content
- Potential LEED Credits for Polyiso Use
- Health Product Declaration (HPD)
- Environmental Product Declaration (EPD) (Industry)



**Typical Physical Property Data**

PROPERTY	TEST METHOD	MINIMUM VALUES
Compressive Strength ( <i>psi (kPa), min</i> )*	ASTM D1621	Grade 2 – 20 psi (138kPa) Grade 3 – 25 psi (172kPa)
Dimensional Stability Change ( <i>length + width, max</i> )**	ASTM D2126	<2% max
Flexural Strength ( <i>psi (kPa), min</i> )	ASTM C203	40 psi (275kPa)
Tensile Strength ( <i>psi (kPa), min</i> )	ASTM C209	≥ 500 (24kPa)
Water Absorption ( <i>percent by volume, max</i> )	ASTM C209	<1.5%
Water Vapor Permeance ( <i>perm, max</i> )	ASTM E96	<1.5 perm (57.5ng/Pa•s•m <sup>2</sup> )
Service Temperature		-100° to 250°F (-73.3° to 121.1°C)
Flame Spread † Index	ASTM E84 / UL 723	< 75*
Smoke Developed Index	ASTM E84 / UL 723	< 200*

\* Foam Core.

\*\* Stated dimensional stability tolerance: Board thickness shall not diminish by more than 2% max.

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

**Warnings and Limitations**

- EnergyGuard™ Polyiso Insulation is a non-structural, non load-bearing material. It is not designed for direct traffic usage unless adequately protected.
- EnergyGuard™ Polyiso Insulation should be stored protected from the elements. Bundle wrap is not for use as waterproofing for boards. No more insulation should be installed than can be completely covered with roofing on the same day.
- As unprotected polyisocyanurate will burn, fire safety precautions should be observed wherever insulation products are used.
- Direct mopping of modified bitumen roofing or built-up roofing (BUR) to EnergyGuard™ Polyiso Insulation is not approved.
- Refer to PIMA Technical Bulletin No. 109 Storage and Handling Recommendations for Polyiso Roof Insulation at [www.polyiso.org](http://www.polyiso.org)
- Refer to the application specifications in the current membrane manufacturer's application and specifications manual for proper installation procedures.



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