

Flat Polyiso with CGF Facers for Combustible Decks



Description:

EnergyGuard™ Barrier Polyiso Insulation board is made of coated glass facers (CGF) bonded to a core of polyisocyanurate foam.

Features and Benefits:

- EnergyGuard™ Barrier Polyiso Insulation achieves an ANSI/UL 790 Class A Roofing Fire Resistance Rating over combustible decks with a 1/2" (12.7 mm) board thickness
- Meets the requirements of D3272 for resistance to mold growth††
- 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
- High insulation value — Polyiso insulation has the highest R-value per inch compared to any other type of non-polyiso insulation of equivalent thickness
- Excellent dimensional stability, high moisture resistance and low water permeability
- Because of its light weight, this material is easy to handle on the job site and installs quickly. Easy cutting in the field provides the installer with simplified fabricating on the roof deck

Panel Characteristics:

- Available in a variety of thickness's from .5" (25.4 mm) to 4.6" (116 mm)
- Available in 4' x 4' (1.22 m x 1.22 m) and 4' x 8' (1.22 m x 2.44 m) boards
- Other EnergyGuard™ products available – tapered, GRF facer and non-halogenated. See individual data sheets for more information

Codes & Compliance:

- Meets the requirements of ASTM C1289, Type II, Class 2, Grade 2 (20 psi), and also available in Grade 3 (25 psi)
- See UL product iQ for details
- For additional information, contact GAF at 1-800-766-3411 or designservices@gaf.com



EnergyGuard™ Barrier Polyiso Thermal Values:

Size*	R-Value**	Max Flute Span (in)
0.5" (12.7 mm)	2.9	2 5/8" (66.7 mm)
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)
2.2" (59 mm)	12.6	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" (116 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/UL C 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

- 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
- 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•m²)
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*
Resistance to Mold ††	ASTM D3273	Pass (10)

* 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.

†† 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.

Warnings and Limitations

- EnergyGuard™ Barrier Polyiso Insulation is a non-structural, non load-bearing material. It is not designed for direct traffic usage unless adequately protected.
- As unprotected polyisocyanurate will burn, fire safety precautions should be observed wherever insulation products are used.
- Refer to the application specifications in the current membrane manufacturer's application and specifications manual for proper installation procedures.
- EnergyGuard™ Barrier 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.
- Refer to PIMA Technical Bulletin No. 109 Storage and Handling Recommendations for Polyiso Roof Insulation at www.polyiso.org



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