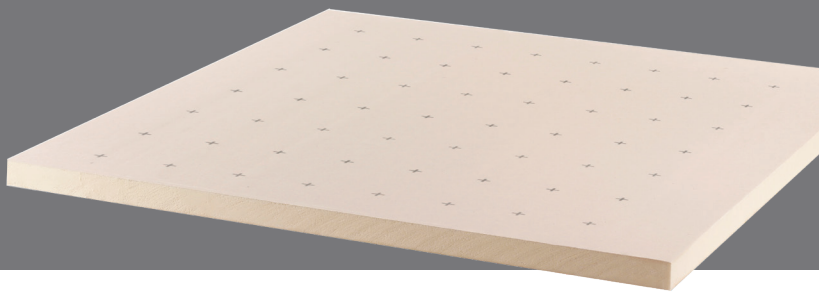
Flat Polyiso with CGF Facers

EnergyGuard™ RA
Ultra
Polyiso Insulation



Description:

EnergyGuard™ RA Ultra Polyiso Insulation is a sloped panel made using inorganic coated glass facers (CGF) bonded to a core of polyisocyanurate foam.

Features and Benefits:

- High insulation value—the 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 job site 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
- This product has been validated by UL Environment as resistant to mold growth based on independent testing to UL 2824 †
- Versatile — approved component in single-ply, BUR, modified bitumen, and ballasted systems, with a variety of attachment methods: mechanically attached, fully adhered, loose laid

Panel Characteristics:

- EnergyGuard™ RA Ultra Polyiso Insulation board is offered in a variety of thicknesses, providing long-term thermal resistance (LTTR) values from 5.7 to 26.8
- Available in 4ft x 8ft (1.22m x 2.44m) and 4ft x 4ft (1.22m x 1.22m) panels

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

FM APPROVED · CLASSIFIED UL · MIAMI-DADE COUNTY APPROVED

EnergyGuard™ RA Ultra Polyiso Insulation Thermal Values:

SIZE*	R-VALUE**	MAX FLUTE SPAN
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)
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)	25.5	4 3/8" (111 mm)
4.5" (114 mm)	26.8	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.

† 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.

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EnergyGuard™ RA ULTRA Polyiso Insulation

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 11.2% and 6.2% recycled materials by weight
- Has achieved GREENGUARD GOLD Certification

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 Polyiso Insulation board should be kept dry before, during, and after installation.
- This product will burn if exposed to an ignition source of sufficient heat and intensity.
- Do not apply flame directly to EnergyGuard™ RA Ultra Polyiso Insulation board. Refer to product packaging and PIMA Technical Bulletin #109 for storage and handling recommendations.
- An offset or staggered multi-layer application of EnergyGuard™ RA Ultra Polyiso Insulation board is strongly recommended when the total insulation thickness exceeds 2.7".
- 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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