ENERGYGUARD™ NH
POLYISO INSULATION, 20 & 25 PSI (1 of 2)

Description
EnergyGuard™ NH Polyiso Insulation Board is made of glass-reinforced cellulosic felt facers bonded to a core of non-halogenated isocyanurate foam, which is better for the environment yet attains UL790 and ASTM E108 Class A ratings. EnergyGuard™ NH Polyiso Insulation Board holds a Health Product Declaration (HPD), is GreenCircle third-party recycled content certified, and is a Red List Free product with a Declare label designation. Sustainable design projects pursuing certifications under a green building rating system such as LEED® v4 or Living Building Challenge will benefit from these certifications and listings. See our GAF LEED® v4 Playbook at www.gaf.com/green.

Uses
- EnergyGuard™ NH Polyiso Insulation is designed for use over structural roof decks where R-values of 5.7 or higher are required, along with comprehensive UL and FM approvals.
- Meets FM 4450/4470 and UL1256/790/263.
- When properly installed, it is suitable for use under built-up, modified bitumen, and most single-ply roofing systems.
- Refer to the application specifications in the current membrane manufacturer's application and specifications manual for proper membrane installation procedures.
- Meets ASTM C1289 Type II, Class 1, Grade 2 (20 psi), and available in Grade 3 (25 psi).

Advantages
- High insulation value — Excellent "LTTR" value compared to any other FM Class I rated products of equivalent thickness.
- Manufactured with EPA-compliant blowing agents.
- Lightweight — Lighter than most other insulating products offering comparable thermal resistance; as much as five times lighter in weight than many other materials with the same R-value.
- Excellent dimensional stability.
- Low water permeability — Lower overall perm rating than many conventional insulation boards.
- High moisture resistance and no capillarity; is stable and maintains its physical and insulating characteristics.
- Easier handling and faster to install — Because of its light weight, this material is easier to handle on the job site and installs faster. Easier cutting in the field provides the installer with simplified fabricating on the roof deck. Minimizes on-the-job damage.

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

Thermal and Physical Characteristics[1]

Thickness* Inches	Thickness* mm	LTTR (R-Value**)	Max. Flute Spanability Inches	Max. Flute Spanability mm
1.0	25.4	5.7	2 5/8	66.7
1.1	27.9	6.3	2 5/8	66.7
1.2	30.5	6.8	2 5/8	66.7
1.3	33.0	7.4	2 5/8	66.7
1.4	35.6	8.0	4 3/8	111
1.5	38.1	8.6	4 3/8	111
1.6	40.6	9.1	4 3/8	111
1.7	43.1	9.7	4 3/8	111
1.75	44.5	10.0	4 3/8	111
1.8	45.7	10.3	4 3/8	111
1.9	48.3	10.8	4 3/8	111
2.0	51	11.4	4 3/8	111
2.1	53	12.0	4 3/8	111
2.2	56	12.6	4 3/8	111
2.3	58	13.2	4 3/8	111
2.4	61	13.8	4 3/8	111
2.5	64	14.4	4 3/8	111
2.6	66	15.0	4 3/8	111
2.7	69	15.6	4 3/8	111
2.8	71	16.2	4 3/8	111
2.9	74	16.8	4 3/8	111
3.0	76	17.4	4 3/8	111
3.1	79	18.0	4 3/8	111
3.2	81	18.6	4 3/8	111
3.25	83	18.9	4 3/8	111
3.3	84	19.2	4 3/8	111
3.4	86	19.9	4 3/8	111
3.5	89	20.5	4 3/8	111
3.6	91	21.1	4 3/8	111
3.7	94	21.7	4 3/8	111
3.8	97	22.3	4 3/8	111
3.9	99	23.0	4 3/8	111
4.0	102	23.6	4 3/8	111
4.1	104	24.2	4 3/8	111
4.2	106	24.9	4 3/8	111
4.3	109	25.5	4 3/8	111
4.4	112	26.1	4 3/8	111
4.5	114	26.8	4 3/8	111
4.6	116	27.1	4 3/8	111

*Other thicknesses available upon request.

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

[1]Note: Physical and thermal properties shown are based on data obtained under controlled laboratory conditions and are subject to normal manufacturing tolerances.

Code Compliance

*Product certified at time of publication. Consult with manufacturer and the PIMA quality mark program directory on the PIMA website (www.pima.org).

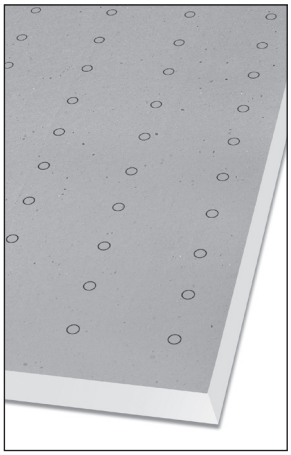
Typical Physical Properties

Property	Value	Test Method
Water Absorption, % by Volume – 2 hours (under 1" [25.4 mm] water)	1.5 max.	ASTM C209
Dimensional Stability Change, 7 days @158°F (70°C), 97% RH • Length + Width	<2%	ASTM D2126
Compressive Strength — psi (kPa)	25 (172) nom. Grade 3 20 (138) nom. Grade 2	ASTM D1621
Tensile Strength — psf (kPa)	≥ 500 (23.9)	ASTM C209
Moisture Vapor Transmission	<1.5 perm (85.8ng/Pa•s•m²)	ASTM E96 (Procedure A)
Flame Spread[(1),(2)] Index	<75	ASTM E84
Service Temperature	-100 to 200°F (-73.3 to 93.3°C)	

[(1)]Foam core only.

[(2)]These numerical ratings are not intended to reflect hazards presented by these or any other material under actual fire conditions.

EnergyGuard™ NH Polyiso Insulation



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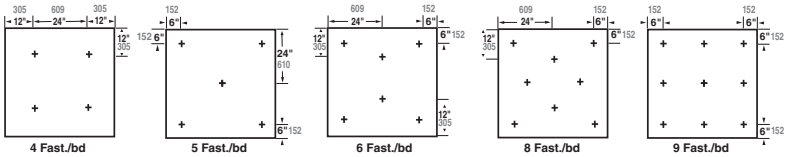
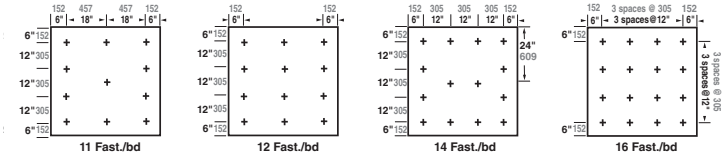
Limitations and Potential Fire Hazard

- EnergyGuard™ NH Polyiso Insulation is a non-structural, non load-bearing material. It is not designed for direct traffic usage unless adequately protected.
- EnergyGuard™ NH Polyiso Insulation should be stored protected from the elements. Bundle wrap is not for use as water-proofing 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™ NH Polyiso Insulation is not approved.

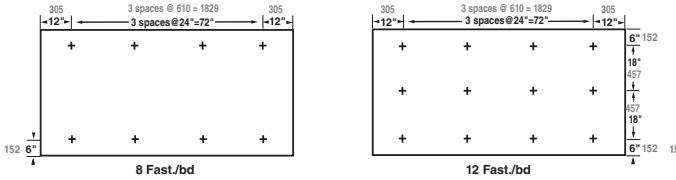
Design Considerations – Suggested Insulation Fastener Patterns (NOTE: Measurements in GRAY are in millimeters)

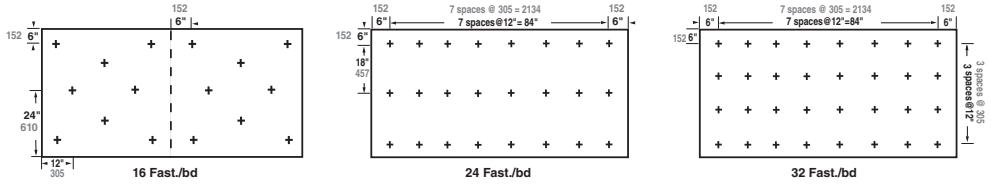
4' x 4' (1220 x 1220) Boards





4' x 8' (1220 x 2440) Boards





NOTE: These patterns are for FM Approved decks utilizing appropriate FM Approved screws and insulation plates when installed per RoofNav. 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 (19.1 mm). Due to ongoing testing programs and changes in FM Global (FM) requirements, the number of fasteners and their placement are subject to change without notice. Consult RoofNav and FM Global Loss Prevention Data Sheets 1-28, 1-29, and 1-29R for approved fastener density for Polyisocyanurate Roof Insulations. If your fastener pattern is not listed, please contact Technical Services at 1-800-766-3411.