

**Description**

ENERGY 3 is a rigid roof insulation board composed of a closed cell polyisocyanurate foam core bonded in the manufacturing process to universal fiber glass reinforced facers.

ENERGY 3 utilizes an environmentally compliant blowing agent containing pentane hydrocarbon to enhance the thermal performance of the foam insulation. This hydrocarbon has zero ozone depletion potential and conforms to the Montreal Protocol established in 1987.

ENERGY 3 meets the physical property requirements of ASTM C 1289, Type II, Class 1, Grade 2 and CAN/ULC S704, Type 2, Class 3. ENERGY 3 specialty products are also available as tapered panels, precut miters and precut crickets.

**Use**

ENERGY 3 provides high thermal insulation value over metal, nailable and non-nailable roof decks in built-up, modified bitumen and single ply membrane roofing systems. It may be applied using hot bitumen, cold adhesives or mechanical fasteners. The universal facer on both the top and bottom provides a suitable surface for mechanical attachment to a structural deck as well as a suitable surface to apply hot asphalt or cold adhesives. ENERGY 3 is rated in FM Global® fire- and wind-resistant systems for BUR, modified bitumen and single ply systems in specific constructions. It has been classified by UL® as an approved roof insulation in many Class A roof constructions and Roof/Ceiling hourly fire-rated assemblies, and is classified by Underwriters' Laboratories of Canada.

JM supports NRCA Bulletin #9 in recommending that a cover board of Fesco® Board or ½" (1.27 cm) Retro-Fit™ Board be installed over foam insulations in hot bituminous membrane systems.

**Energy and the Environment**

<b>Producing Locations</b>	Bremen, IN	Cornwall, ONT
	Fernley, NV	Hazleton, PA
	Jacksonville, FL	



**Advantages**

- High thermal efficiency
- Universal facer that is compatible with BUR, modified bitumen and single ply membrane systems
- Complies with EPA, CEPA and Montreal Protocol requirements
- Meets Clean Air Act Amendments of 1990
- Third-party certification with the PIMA Quality Mark™ for Long-Term Thermal Resistance (LTTR) values
- Potential LEED points

**Sizes**

ENERGY 3 is available in 4' x 4' (1.22 m x 1.22 m) or 4' x 8' (1.22 m x 2.44 m) boards (other sizes available by special request) and in thicknesses of 1.0" (2.54 cm) to 4.0" (10.16 cm). Some sizes are special order with minimum order quantities. Contact your JM sales representative for details.

**For Use over Metal Decks**

The minimum thicknesses of ENERGY 3 and ISO 3 insulation over metal decks are as follows:

<b>Width of Rib Opening</b>	<b>Up to 2 5/8" (6.67 cm)</b>	<b>Up to 3 3/8" (8.57 cm)</b>	<b>Up to 4 3/8" (11.11 cm)</b>
Thickness of Insulation (Minimum)	1.0" (2.54 cm)	1.2" (3.05 cm)	1.3" (3.30 cm)

**Typical Physical Properties**

	<b>Values</b>	<b>Test Method</b>
Water Absorption .....	<1.0% max.....	ASTM C 209
Dimensional Stability Change.....	<2% .....	ASTM D 2126
Compression Resistance*		
10% Consolidation—psi (kPa).....	20 (138) min.....	ASTM D 1621
Moisture Vapor Permeance.....	<1 perm .....	ASTM E 96
	57.5 ng/(Pa•s•m²)	
Service Temperature .....	-100°F - 250°F	
	(-73°C - 121°C)	
Tensile Strength—psf (kPa).....	730 (35) nom.....	ASTM D 1623

\* Also available in 25 psi (172 kPa).

Refer to the Material Safety Data Sheets and product labels prior to using this product.

**Product Data**

<b>Standard Thicknesses (nom.) (in.) (mm)</b>	<b>LTTR* R-Value*</b>		<b>Recycled Content**</b>			
	<b>(hr*ft²*°F)/BTU</b>	<b>m²*°C/W</b>	<b>Pre-Consumer (%)</b>	<b>Post-Consumer (%)</b>	<b>Total (%)</b>	
1.0	25	6.0	1.05	13.7	26.4	40.1
1.5	38	9.0	1.59	11.8	19.1	30.9
1.7	43	10.3	1.81	11.3	17.4	28.8
2.0	51	12.1	2.14	10.9	15.8	26.7
2.3	58	14.0	2.47	10.2	13.3	23.6
2.5	64	15.3	2.69	10.1	12.9	23.1
2.8	71	17.2	3.03	9.8	11.9	21.7
3.0	76	18.5	3.26	9.7	11.3	21.1
3.1	79	19.1	3.37	9.7	11.0	20.6
3.3	84	20.4	3.60	9.5	10.5	20.0
4.0	102	25.0	4.40	9.1	8.7	17.8

\* The Long-Term Thermal Resistance (LTTR) values were determined in accordance with CAN/ULC S770.

\*\* Value represents average results.

Nonstandard thicknesses are available. Contact your JM sales representative for more information.