

Description

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

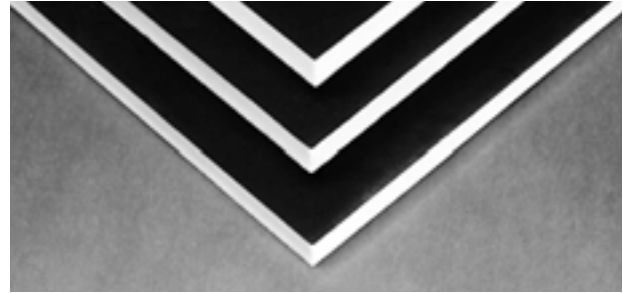
ENERGY 3 utilizes an environmentally compliant blowing agent containing pentane hydrocarbon to enhance the thermal performance of the foam insulation. This hydrocarbon has zero ozone depletion potential and conforms to the Montreal Protocol established in 1987.

ENERGY 3 meets the physical property requirements of CAN/ULC S 704. ENERGY 3 specialty products are also available as tapered panels, pre-cut miters and pre-cut crickets.

Meets the physical property requirements of ASTM C 1289 Type II Class I Grade 2 and Federal Specification HH-1-1972/Gen and HH-1-1972/2.

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 the top and



bottom side provide 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 has been rated in Factory Mutual 1A-60 and 1A-90 fire and wind-resistant systems for BUR, modified bitumen and single ply systems in specific constructions. It has been classified by Underwriters Laboratories, Inc. as an approved roof insulation in numerous Class A roof constructions and Roof/Ceiling hourly fire-rated assemblies, and is classified by Underwriters Laboratories Canada.

JM also supports NRCA Bulletin #9 in recommending that a cover board of Fesco Board, Fiber Glass Roof Insulation or 1/2" Retro-Fit Board be installed over foam insulations in hot membrane systems.

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

Typical Physical Properties

	Values	Test Method
Water Absorption	<3.5%	ASTM D 2842
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•m ²))	
Service Temperature	-100 to 200°F	
	(-73° to 93°C)	
Tensile Strength-psf (kPa)	730 (35) nom.	ASTM D 1623

*Also available in 25 psi (172 kPa).

For Use Over Metal Decks

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

Width of Rib Opening	Up to 2 5/8" (67 mm)	Up to 3 3/8" (86 mm)	Up to 4 3/8" (111 mm)
Thickness of Insulation (Minimum)	1.0" (25 mm)	1.2" (30 mm)	1.3" (33 mm)

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" (25 mm) to 4.0" (102 mm).

Thermal Performance

Thickness (nom.)	C-Value (Conductance)	*Long Term Thermal Resistance (LTTR)			
		R-Value (Resistance)	R-Value (Resistance)		
in	mm	BTU/(hr-ft ² -°F)	W/m ² -°C	hr-ft ² -°F/BTU	m ² -°C/W
1.0	25	.167	0.95	6.0	1.05
1.5	38	.111	0.63	9.0	1.59
1.6	41	.104	0.59	9.6	1.70
1.7	43	.098	0.55	10.3	1.81
1.8	46	.092	0.52	10.9	1.92
2.0	51	.082	0.47	12.1	2.14
2.3	58	.071	0.41	14.0	2.47
2.5	64	.063	0.37	15.3	2.69
2.7	69	.060	0.34	16.6	2.92
3.0	76	.054	0.31	18.5	3.26
3.2	81	.051	0.29	19.8	3.49
3.3	84	.049	0.28	20.4	3.60
3.4	86	.047	0.27	21.1	3.71
3.6	91	.045	0.25	22.4	3.94
3.8	97	.042	0.24	23.7	4.17
4.0	102	.040	0.23	25.0	4.40

*The Long Term Thermal Resistance (LTTR) values were determined in accordance with CAN/ULC S 770.

The ultimate R-Value of these products will depend on individual installation circumstances.

Refer to the Material Safety Data Sheet and Product Label prior to using this product. For an identical copy of this data sheet, ask for RS-5137.