

**Description**

ENERGY 3 AGF is a rigid roof insulation board composed of a closed cell polyisocyanurate foam core bonded in the foaming process to an all glass facer.

ENERGY 3 AGF 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 AGF meets the physical property requirements of ASTM C 1289, Type II, Class I, Grade 2 and CAN/ULC S 704. ENERGY 3 AGF specialty products are also available as tapered panels, pre-cut miters and pre-cut crickets.

**Use**

ENERGY 3 AGF 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 or mechanical fasteners. The AGF 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. ENERGY 3 AGF has been rated in FM Global® 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 or ½" Retro-Fit™ Board be installed over foam insulations in hot membrane systems.

**Advantages**

- High thermal efficiency
- 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

**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 <sup>2</sup> ))	
Service Temperature .....	-100°F - 200°F	
	(-73° - 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 AGF insulation over metal decks are as follows:

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

**Sizes**

ENERGY 3 AGF 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.

**Thermal Performance**

Thickness (nom.) (in.) (cm)	C-Value (Conductance)		*Long Term Thermal Resistance (LTTR)	
	BTU/(hr•ft <sup>2</sup> •°F)	W/m <sup>2</sup> •°C	R-Value (Resistance) (hr•ft <sup>2</sup> •°F)/BTU	m <sup>2</sup> •°C/W
1.0	2.54	0.17	0.95	6.00
1.5	3.81	0.11	0.63	9.00
1.6	4.06	0.10	0.59	9.60
1.7	4.32	0.01	0.55	10.30
1.8	4.57	0.09	0.52	10.90
2.0	5.08	0.08	0.47	12.10
2.3	5.84	0.07	0.41	14.00
2.5	6.35	0.06	0.37	15.30
2.7	6.86	0.06	0.34	16.60
3.0	7.62	0.05	0.31	18.50
3.2	8.13	0.05	0.29	19.80
3.3	8.38	0.05	0.28	20.40
3.4	8.64	0.05	0.27	21.10
3.6	9.14	0.05	0.25	22.40
3.8	9.65	0.04	0.24	23.70
4.0	10.16	0.04	0.23	25.00

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

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.