

## Product Description

ENRGY 3 Plus is a rigid roof insulation board composed of a closed cell polyisocyanurate foam core bonded in the foaming process to ½" (1.27 cm) high-density wood fiberboard on one side and a fiber-reinforced facer on the other. ENRGY 3 Plus is designed for direct application to steel and other roof decks, and is compatible with virtually all roof covering membranes.

ENRGY 3 Plus 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.

ENRGY 3 Plus meets the physical property requirements of ASTM C 1289, Type IV and CAN/ULC S704, Type 3, Class 2 (See CCMC Evaluation Report 13058-L).

ENRGY 3 Plus specialty products are also available as tapered panels, precut miters and precut crickets.

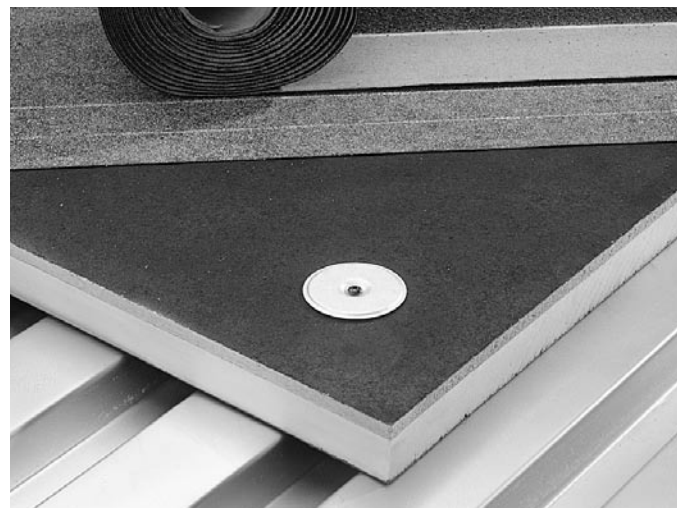
Third-party certification with the PIMA Quality Mark™ for Long-Term Thermal Resistance (LTTR) values.

## Applications

- FM Class 1, UL Class A Constructions
- Single Ply Roof Systems:
  - Adhered, Mechanically Attached, Ballasted
- Modified Bitumen Roof Systems
- Built-Up Roof Systems

## Features and Benefits

ENRGY 3 Plus is a highly efficient thermal insulation with high R-Value and low installed cost. When installed facing up, the coated fiberboard provides an excellent base for conventional built-up roofing, modified bitumen and single ply systems.



## Standard Sizes

ENRGY 3 Plus is available in standard 4' x 4' (1.22 m x 1.22 m) or 4' x 8' (1.22 m x 2.44 m) boards and in thicknesses of 1.5" (3.81 cm) to 4" (10.16 cm).

## Codes & Compliances

### Underwriters Laboratories Inc.

- Component of Class A roof systems: Single Ply (UL 790) – Ballasted, Adhered, Mechanically Attached, Built-Up, Modified Bitumen.
- Hourly Rated P-Series roof assemblies (UL 263).
- Insulated metal deck assemblies (UL 1256).
- ENRGY 3 Plus classified by ULC.

### FM Global®

- FM approved for Class 1-60 and 1-90 assemblies with built-up, adhered and mechanically attached single ply roof coverings subject to the conditions of approval described in current FM Global Approval Guide and Supplements (reports available on request).

## Typical Physical Properties

	Values	Test Method
Thermal Performance . . .	As required . . . . .	ASTM D 518
Dimensional Stability . . . .	2% max, 7 days . . . . .	ASTM D 2126
Change . . . . .	(length and width)	
Moisture Vapor . . . . .	< 1 perm . . . . .	ASTM E 96
Transmission*	57.5 ng/Pa•s•m <sup>2</sup>	
Water Absorption . . . . .	< 2% by volume . . . . .	ASTM C 209
Service Temperature . . . .	-100°F - 250°F (-73°C - 121°C)	

\* Foam core only.

Refer to the Material Safety Data Sheet and product label prior to using these products.

## Thermal Performance

Thickness (nom.) (in.) (cm)	C-Value (Conductance)		LTTR* R-Value		Flute Spanability	
	BTU/(hr•ft <sup>2</sup> •°F)	W/m <sup>2</sup> •°C	(hr•ft <sup>2</sup> •°F)/BTU	m <sup>2</sup> •°C/W	(in.)	(cm)
1.5	3.81	0.137	0.78	7.30	1.29	3% 9.21
1.6	4.06	0.127	0.72	7.90	1.39	3% 9.21
1.7	4.32	0.118	0.67	8.50	1.50	3% 9.21
1.8	4.57	0.110	0.62	9.10	1.60	3% 9.21
2.1	5.33	0.092	0.52	10.90	1.92	3% 9.21
2.3	5.84	0.082	0.47	12.20	2.15	4% 11.11
2.5	6.35	0.075	0.43	13.40	2.36	4% 11.11
2.7	6.86	0.068	0.39	14.70	2.59	4% 11.11
3.0	7.62	0.060	0.34	16.60	2.92	4% 11.11
3.1	7.87	0.050	0.28	19.10	3.37	4% 11.11
3.3	8.38	0.054	0.31	18.50	3.26	4% 11.11
3.6	9.14	0.049	0.28	20.40	3.60	4% 11.11
4.0	10.16	0.043	0.24	23.00	4.05	4% 11.11

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