

**Meets the requirements of ASTM C 1289, Type II, Class 2 Grade 2 (20 psi)**

- ENRGY 3 FR / Tapered ENRGY 3 FR

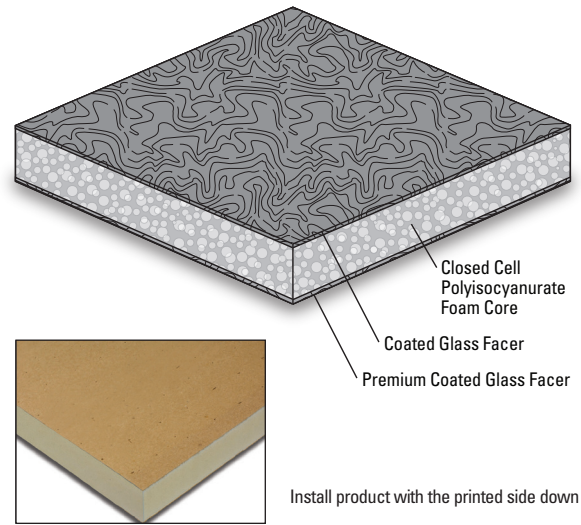
**Grade 3 (25 psi)**

- ENRGY 3 25 PSI FR / Tapered ENRGY 3 25 PSI FR

### Features and Components

**Inorganic Coated Glass Facers:** (With no cellulose) Provide improved resistance to mold growth as well as rigidity and resistance to indentation and crushing for mechanically fastened single ply membrane systems. The premium coated FR facer yields UL Class A combustible deck assembly rating without the need for a gypsum cover board or slipsheet.

**Closed Cell Polyisocyanurate Foam Core:** Provides high R-value per inch in built-up, modified bitumen, metal roof and single ply roof systems, and utilizes an environmentally compliant blowing agent that provides high thermal insulation performance.



<b>Component</b>
<b>I</b> Insulation
Multi-Ply Single Ply
<b>Type</b>
<b>HT</b> High Thermal
<b>TP</b> Tapered

**System Compatibility** This product may be used as a component in the following systems. Please reference product application for specific installation methods and information.

Multi-Ply	BUR		APP		SBS			
	HA*	CA	CA	HW	HA*	CA	HW	SA
Compatible with the selected Multi-Ply systems above								

Single Ply	TPO		PVC		EPDM		
	MF	AD	MF	AD	MF	AD	BA
Compatible with all Single Ply systems							

**Key:** HA = Hot Applied CA = Cold Applied HW = Heat Weldable SA = Self Adhered MF = Mechanically Fastened AD = Adhered BA = Ballasted

\* Can mop approved cover boards only.

### Energy and the Environment

LEED®	Recycled Content	Varies with thickness, see <i>Product Data and Packaging</i> table on next page.
Produced with environmentally compliant pentane blowing agent with zero ozone depletion (conforms to the Montreal Protocol of 1987).		

### Peak Advantage® Guarantee Information

Systems
For use in approved JM Peak Advantage Roofing Guarantees

### Codes and Approvals



- FM® Standards 4450/4470 Approvals (refer to FM RoofNav<sup>SM</sup>)
- UL® Standard 790, 263 and 1256 (refer to UL Roofing Materials system directory)
- Meets the requirements of CAN/ULC S704, Type 2 & 3, Class 3
- California Code of Regulations, Title 24, Insulation Quality Standard License #TI-1341
- Third-party certification with the PIMA Quality Mark™ for Long-Term Thermal Resistance (LTR) values

Refer to the Safe for Use instructions and product label prior to using this product. The Safe for Use instructions are available by calling (800) 922-5922 or on the Web at [www.jm.com/roofing](http://www.jm.com/roofing).

Note: Technical information on this data sheet is intended to be used as a general guideline only and is subject to change without notice. Contact your JM Sales Representative for further details.

### Installation/Application



Refer to the application instructions guidelines for proper utilization of this product.

Flute Span:

Width of Rib Opening:	Up to 2 <sup>5</sup> / <sub>8</sub> " (6.67 cm)	Up to 4 <sup>3</sup> / <sub>8</sub> " (11.11 cm)
Insulation Thickness (min):	1.0" (2.54 cm)	1.5" to 4.5" (3.8 to 11.4 cm)

### Packaging and Dimensions

Standard Sizes <sup>1</sup>	4' x 4' (1.22 m x 1.22 m)	4' x 8' (1.22 m x 2.44 m)	
Tapered Size <sup>2</sup>	4' x 4' (1.22 m x 1.22 m)		
Producing Locations	Bremen, IN Hazleton, PA	Cornwall, ONT Jacksonville, FL	Fernley, NV
Stocking Locations <sup>3</sup>	Grand Prairie, TX	Southgate, CA	Tracy, CA

- For available thicknesses, see *Product Data and Packaging* table on page 2 of this data sheet. Other sizes available by special request, some sizes are not stocked and special order with minimum order quantities. Contact your JM Sales Representative for details.
- Tapered ENRGY 3® FR and Tapered ENRGY 3® 25 PSI FR are available in thicknesses of 1/2" to 4". Available profiles are shown on page 3 of this data sheet. In some regions extended panels are also available.
- Not all sizes, thicknesses, and products are stocked at all locations, please call Customer Service at 1-877-766-3295.

### Typical Physical Properties

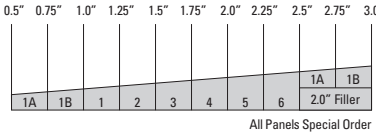
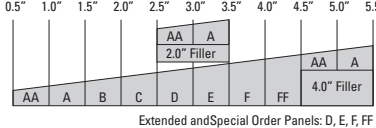
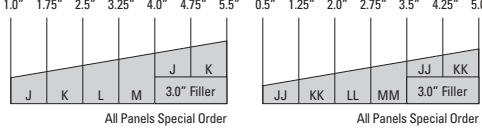
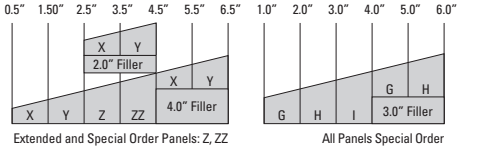
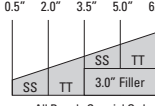
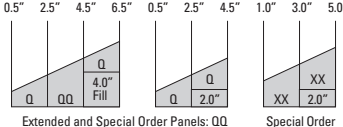
Test		ASTM	Values
Strength	Tensile Strength	C 209	500 psf (24 kPa) ( <i>min</i> )
	Compressive Strength, @ 10% Deformation, ( <i>min</i> )	D 1621	Grade 2: 20 psi (138 kPa), Grade 3: 25 psi (172 kPa)
	Dimensional Stability Change, ( <i>length and width</i> )	D 2126	2% linear ( <i>max</i> )
Moisture	Moisture Vapor Permeance	E 96	4.0 perm, 229 ng/(Pa•s•m <sup>2</sup> ) ( <i>max</i> )
	Water Absorption	C 209	1.5% ( <i>max</i> )
	Resistance to Mold	D 3273	Pass (10)
Installation	Service Temperature	D 1623	-100°F to 250°F (-73°C to 121°C)
	Flame Spread, ( <i>foam core</i> )	E 84	20 - 30 ( <i>nom</i> ), 75 ( <i>max</i> )
	Smoke Developed, ( <i>foam core</i> )	E 84	55 - 250 ( <i>nom</i> ), 450 ( <i>max</i> )

### Product Data and Packaging

Thickness		Long-Term Thermal Resistance (LTTR) Values <sup>1</sup>		Total Recycled Content <sup>2</sup>	Boards/Pallet	Square Feet/Pallet		Pallets/Truck <sup>3</sup>	
in.	mm	(hr-ft <sup>2</sup> -°F)/BTU	m <sup>2</sup> -°C/W	(all pre-consumer)	4x4 and 4x8	4x4	4x8	4x4	4x8
1.0	25.4	5.7	1.00	5.3%	48	768	1536	48	24
1.1	27.9	6.3	1.10	5.4%	41	656	1312		
1.2	30.5	6.8	1.20	5.5%	38	608	1216		
1.25	31.8	7.1	1.25	5.5%	35	560	1120		
1.3	33.0	7.4	1.30	5.6%	35	560	1120		
1.4	35.6	8.0	1.41	5.6%	32	512	1024		
1.5	38.1	8.6	1.51	5.7%	32	512	1024		
1.6	40.6	9.1	1.61	5.8%	28	448	896		
1.7	43.2	9.7	1.71	5.8%	27	432	864		
1.75	44.5	10.0	1.76	5.8%	27	432	864		
1.8	45.7	10.3	1.81	5.8%	25	400	800		
1.9	48.3	10.8	1.91	5.8%	24	384	768		
2.0	50.8	11.4	2.01	5.9%	24	384	768		
2.1	53.3	12.0	2.11	5.9%	21	336	672		
2.2	55.9	12.6	2.22	6.0%	20	320	640		
2.3	58.4	13.2	2.32	6.0%	20	320	640		
2.4	61.0	13.8	2.43	6.0%	19	304	608		
2.5	63.5	14.4	2.53	6.0%	19	304	608		
2.6	66.0	15.0	2.64	6.0%	18	288	576		
2.7	68.6	15.6	2.74	6.1%	17	272	544		
2.8	71.1	16.2	2.85	6.1%	16	256	512		
2.9	73.7	16.8	2.96	6.1%	16	256	512		
3.0	76.2	17.4	3.06	6.2%	16	256	512		
3.1	78.7	18.0	3.17	6.2%	14	224	448		
3.2	81.3	18.6	3.28	6.2%	14	224	448		
3.25	82.6	18.9	3.33	6.2%	14	224	448		
3.3	83.8	19.2	3.39	6.2%	14	224	448		
3.4	86.4	19.9	3.50	6.2%	13	208	416		
3.5	88.9	20.5	3.61	6.2%	13	208	416		
3.6	91.4	21.1	3.72	6.2%	12	192	384		
3.7	94.0	21.7	3.82	6.2%	12	192	384		
3.75	95.3	22.0	3.88	6.3%	12	192	384		
3.8	96.5	22.3	3.94	6.3%	12	192	384		
3.9	99.1	23.0	4.05	6.3%	12	192	384		
4.0	101.6	23.6	4.16	6.4%	12	192	384		
4.1	104.0	24.2	4.26	6.4%	11	176	352		
4.2	107.0	24.9	4.39	6.4%	11	176	352		
4.3	109.0	25.5	4.49	6.4%	11	176	352		
4.4	112.0	26.1	4.60	6.4%	10	160	320		
4.5	114.0	26.8	4.72	6.4%	10	160	320		

1. The Long-Term Thermal Resistance (LTTR) values were determined in accordance with CAN/ULC S770 at 75°F (24°C). The ultimate R-Value of these products will depend on individual installation circumstances. 2. Value represents average results. 3. Assumes 48' flatbed truck.

**Johns Manville Tapered Polyiso Offerings** *Please refer to the previous page for typical physical properties.*

Panel Desig.	Slope	Dimension		LTRR* Value Nominal	Pieces per Unit	Square Foot per Unit	Brd Ft per Unit	Slope Profiles
		Thin	Thick					
<b>1/16 in/ft (5.2 mm/m)</b>								
1A	1/16	0.5	0.75	3.6	70	1120	700	 <p>All Panels Special Order</p>
1B	1/16	0.75	1	5.0	50	800	700	
1	1/16	1	1.25	6.4	38	608	684	
2	1/16	1.25	1.5	7.8	32	512	704	
3	1/16	1.5	1.75	9.3	28	416	676	
4	1/16	1.75	2	10.7	22	352	660	
5	1/16	2	2.25	12.1	20	320	680	
6	1/16	2.25	2.5	13.6	18	288	684	
<b>1/8 in/ft (10.4 mm/m)</b>								
AA	1/8	0.5	1	4.3	64	1024	768	 <p>Extended and Special Order Panels: D, E, F, FF</p>
A	1/8	1	1.5	7.1	38	608	760	
B	1/8	1.5	2	10.0	26	416	728	
C	1/8	2	2.5	12.9	20	320	720	
D**	1/8	2.5	3	15.9	16	256	704	
E**	1/8	3	3.5	18.9	14	224	728	
F**	1/8	3.5	4	22.1	12	192	720	
FF**	1/8	4	4.5	25.3	10	160	680	
R	1/8	0.75	1.25	5.7	44	704	704	
S	1/8	1.25	1.75	8.6	30	480	720	
T	1/8	1.75	2.25	11.4	22	352	704	
U	1/8	2.25	2.75	14.4	16	256	640	
V	1/8	2.75	3.25	17.4	14	224	672	
W	1/8	3.25	3.75	20.5	12	192	672	
<b>3/16 in/ft (15.6 mm/m)</b>								
J	3/16	1	1.75	7.8	32	512	704	 <p>All Panels Special Order</p>
K	3/16	1.75	2.5	12.1	20	320	680	
L**	3/16	2.5	3.25	16.6	16	256	736	
M**	3/16	3.25	4	21.2	12	192	696	
JJ	3/16	0.5	1.25	5.0	52	832	728	
KK	3/16	1.25	2	9.3	28	448	728	
LL**	3/16	2	2.75	13.6	18	288	691	
MM**	3/16	2.75	3.5	18.2	14	224	694	
<b>1/4 in/ft (20.8 mm/m)</b>								
G	1/4	1	2	8.6	30	480	720	 <p>Extended and Special Order Panels: Z, ZZ</p>
H	1/4	2	3	14.4	16	256	640	
I**	1/4	3	4	20.5	12	192	672	
X	1/4	0.5	1.5	5.7	48	768	768	
Y	1/4	1.5	2.5	11.4	24	384	768	
Z**	1/4	2.5	3.5	17.4	16	256	768	
ZZ**	1/4	3.5	4.5	23.6	12	192	768	
<b>3/8 in/ft (31.2 mm/m)</b>								
SS	3/8	0.5	2	7.1	36	576	720	 <p>All Panels Special Order</p>
TT**	3/8	2	3.5	15.9	16	256	704	
<b>1/2 in/ft (41.6 mm/m)</b>								
Q	1/2	0.5	2.5	8.6	32	512	768	 <p>Extended and Special Order Panels: QQ      Special Order</p>
QQ**	1/2	2.5	4.5	20.5	12	192	672	
XX	1/2	1	3	11.4	22	352	704	

\* (hr•ft²•°F/Btu)

\*\* Extended panels require less adhesive and less labor.

**Tapered Recycle Content:**

Recycled content is dependent upon average thickness. To calculate, match the average thickness of Tapered ENRGY 3 FR to the thickness of Flat ENRGY 3 FR. Use the number from Flat ENRGY 3 FR as your recycled content.

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