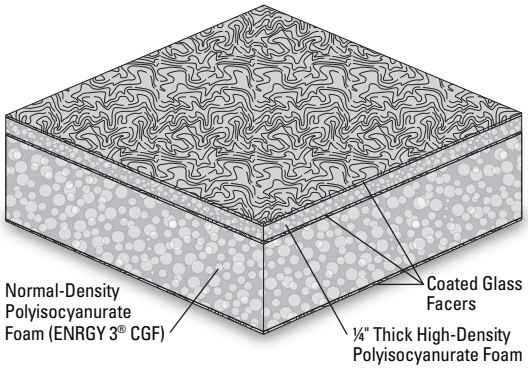
Invinsa Foam®

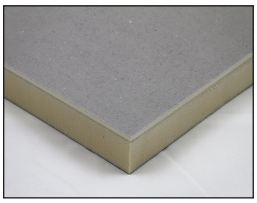
Dual-Density Polyisocyanurate Composite Board

High-Density layer meets the requirements of ASTM C 1289, Type II, Class 4, Grades 1, 2, & 3

Normal-Density layer meets the requirements of ASTM C 1289, Type II, Class 2

Currently no ASTM designation for this composite.





Component

I Insulation

Multi-Ply
Single Ply

Type

HT High Thermal

CP Composite

Features and Components

High-Density Foam (Invinsa): Provides the highest compressive strength (150 psi nominal) polyisocyanurate board on the market today. Provides a protective layer for insulation while working with the membrane above to ensure maximum performance and longevity.

Normal-Density Foam (ENRGY 3 CGF): Closed cell polyisocyanurate foam manufactured inline to create a homogeneous board with Invinsa® and coated glass facers.

Inorganic Coated Glass Facers: (With no cellulose) Provide improved resistance to mold growth, as well as a smooth surface that performs well with self-adhering systems, and efficient adhesive application in fully adhered single ply systems.

Cost Savings: Installation labor savings by combining cover board and insulation into a single board. Eliminates adhesive cost to adhere cover board to insulation.

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	FA	MF	FA	MF	FA	BA
	Compatible with the selected Single Ply systems above						

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

Energy and the Environment

LEED®	Recycled Content	Varies with thickness, see *Product Data and Packaging* table on back 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℠)
- UL® Standard 790, 263 and 1256 (refer to UL Roofing Materials system directory)
- Third-party certification with the PIMA Quality Mark™ for Long-Term Thermal Resistance (LTTR) values

Installation/Application

Hot Asphalt | Urethane Adhesive | Mechanically Fastened

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

Flute Span:

Width of Rib Opening: Up to 4 3/8" (11.11 cm)

Insulation Thickness *(min)*: 1.8" to 4.0" (4.6 to 10.2 cm)

Packaging and Dimensions

Standard Sizes[1]	48" x 47.75" (1.22 m x 1.21 m)	48" x 95.5" (1.22 m x 2.43 m)
Producing Locations	Bremen, IN	Hazleton, PA

1. For available thicknesses, see *Product Data and Packaging* table on back side 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.

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.

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.

RS-5504 12-18 (Replaces 7-16)

Johns Manville

Invinsa Foam®

Dual-Density Polyisocyanurate Composite Board

Typical Physical Properties

	Test	ASTM	Values
Strength	Tensile Strength	C 209	500 psf (24 kPa) *(min)*
	Compressive Strength, @ 10% Deformation, *(min)*	C 1621	20 psi (138 kPa)
	Dimensional Stability Change, *(length and width)*	D 2126	<2% linear
Moisture	Moisture Vapor Permeance	E 96	<1.5 perm, 86 ng/(Pa•s•m^2) *(max)*
	Water Absorption	C 209	2% *(max)*
	Resistance to Mold	D 3273	Pass (10)
Installation	Service Temperature	D 1623	-100°F to 250°F (-73°C to 121°C)
	Flame Spread each layer, *(foam core)*	E 84	<75
	Smoke Developed, *(foam core)*	E 84	<500

Product Data and Packaging

Thickness		Long-Term Thermal Resistance (LTTR) Values [1]		Total Recycled Content [2] (all pre-consumer)	Boards/Pallet	Square Feet/ Pallet		Pallets/Truck [3]	
in.	mm	(hr•ft^2•°F)/BTU	(M^2•°C)/W		4x4 & 4x8	4x4	4x8	4x4	4x8
1.80	45.7	10.0	1.77	6.54%	25	396	796		
1.90	48.3	10.6	1.87	6.72%	24	380	764		
2.00	50.8	11.2	1.97	6.87%	24	380	764		
2.10	53.3	11.7	2.07	7.02%	21	333	669		
2.20	55.9	12.3	2.17	7.17%	20	317	637		
2.30	58.4	12.9	2.27	7.30%	20	317	637		
2.40	61.0	13.5	2.38	7.44%	19	301	605		
2.50	63.5	14.1	2.48	7.57%	19	301	605		
2.60	66.0	14.7	2.58	7.70%	18	285	573		
2.70	68.6	15.3	2.69	7.81%	17	269	541		
2.80	71.1	15.9	2.80	7.93%	16	253	509		
2.90	73.7	16.5	2.90	8.04%	16	253	509	48	24
3.00	76.2	17.1	3.01	8.09%	16	253	509		
3.10	78.7	17.7	3.11	8.19%	14	222	446		
3.20	81.3	18.3	3.22	8.30%	14	222	446		
3.30	83.8	18.9	3.33	8.40%	14	222	446		
3.40	86.4	19.5	3.44	8.52%	13	206	414		
3.50	88.9	20.1	3.55	8.62%	13	206	414		
3.60	91.4	20.7	3.65	8.64%	12	190	382		
3.70	94.0	21.4	3.76	8.73%	12	190	382		
3.80	96.5	22.0	3.87	8.81%	12	190	382		
3.90	99.1	22.6	3.98	8.90%	12	190	382		
4.00	101.6	23.2	4.09	8.99%	12	190	382		

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.

Note: Invinsa Foam is sized by the thickness of the composite. Select the necessary LTTR value and then select the corresponding composite thickness. As an example, an LTTR of 20 requires a composite of 3.5" thickness which would be 0.25" Invinsa and 3.25" Polyiso.

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