

**DESCRIPTION**

Johns Manville’s XSPECT™ ISOfoam APF board consists of a uniform closed-cell polyisocyanurate foam core bonded on each side with a foil facer.

JM XSPECT ISOfoam APF is produced with an EPA-compliant hydrocarbon-based blowing agent that has zero Ozone Depletion Potential (ODP) and virtually no Global Warming Potential (GWP); it also meets both CFC- and HCFC-free specification requirements. Polyiso has been cited by the EPA for its responsible impact on the environment.

**APPLICATIONS**

When properly installed, JM XSPECT ISOfoam APF functions as a moisture-resistant, vapor barrier that can be used to insulate roof-top ducts. Consult your local building department for code requirements.

Johns Manville offers a flat and tapered (or sloped) XSPECT board for insulating rooftop ducts. Utilizing tapered boards as the top piece of a rooftop duct insulation system helps to prevent ponding water and assists in precipitation drainage away from a rooftop duct.

Additionally, JM XSPECT ISOfoam APF can be applied in a number of OEM applications, including appliance (e.g., commercial refrigerators and freezers), HVAC equipment, refrigerated transportation, storage vessels, and rail-cars.

**GENERAL PROPERTIES**

**Thermal Insulation:**

Polyiso provides one of the highest R-values per inch of any rigid insulation (R-6.0 at 1 inch). R means resistant to heat flow. The higher the R-value, the greater the insulating power. R-values for JM XSPECT ISOfoam APF flat and tapered boards are shown in Table 1 and Table 2 (see reverse).

**Lightweight:**

JM XSPECT ISOfoam APF is lightweight and can be easily cut with a utility knife or saw. As with all cutting devices, please read and follow all proper safety rules and operating instructions.

**STORAGE:**

Store JM XSPECT ISOfoam APF elevated above the floor or ground and standing water. If stored outdoors, keep dry by covering completely with waterproof tarpaulin.

**LIMITATIONS:**

JM XSPECT ISOfoam APF insulation is non-structural.

**WARRANTY:**

All Johns Manville products are sold subject to Johns Manville’s Limited Warranty and Limitation of Remedy. For a copy of these documents, call 800-654-3103.

**WARNING:**

JM XSPECT ISOfoam APF is combustible and shall be used only as specified by the local building code with respect to flame spread and smoke development classification.



**AVAILABILITY:**

JM XSPECT ISOfoam APF is available in the sizes shown in Table 1 (see reverse). For additional information or special sizes inquiries, please consult your local sales representative.

**PHYSICAL PROPERTIES**

Thermal Resistance	6.0 °F • ft <sup>2</sup> • hr/BTU	ASTM C518*
Thermal Conductivity	0.16 $\frac{\text{BTU} \cdot \text{in}}{\text{hr} \cdot \text{ft}^2 \cdot \text{F}^\circ}$	ASTM C518
Compressive Strength	≥ 16 PSI	ASTM D1621
Flexural strength	≥ 40 PSI	ASTM C203
Water Absorption	0.1% by volume	ASTM C209
Water Vapor Permeance	0.05 Perms	ASTM E96
Surface Burning Characteristics**		ASTM E84 & CAN/ULC S102
Flame Spread	≤ 25 Index	
Smoke Developed†	≤ 450 Index	
Service Temperature Range	-100°F to 250°F	

†Foam core tested at 4 inches.

\*Aged R-value at 75°F in accordance with ASTM C2189.

\*\*Numerical ratings are not intended to reflect hazards present in actual fire conditions.

**SPECIFICATION COMPLIANCE**

ASTM C1289	Type 1, Class 1
CAN/ULC S704	Type 1, Class 1

# JM XSPECT® ISOFOAM APF BOARD

FLAT AND TAPERED POLYISO FOAM BOARD INSULATION

## DATA SHEET

## THERMAL PERFORMANCE – FLAT BOARDS

Board Size (ft) 4x8				
Thickness (inches)	R-Value U.S. <sup>1</sup> (°F • ft <sup>2</sup> • hr/BTU)	Thickness (mm)	RSI-Value (°K • m <sup>2</sup> /W)	Design LTTR (°K • m <sup>2</sup> /W)
1.00	6.0	25	1.06	1.02
1.50	9.3	38	1.63	1.57
2.00	13	51	2.21	2.12
2.50*	16	64	2.79	2.67
3.00	19	76	3.36	3.22
3.50*	22	89	3.94	3.77
4.00*	26	102	4.52	4.31

<sup>1</sup> Aged R-value at 75°F in accordance with ASTM C1289

\* Made to Order

## THERMAL PERFORMANCE – TAPERED BOARDS

Board Size (ft) 4x8, 4x10					
Slope (in.)	Dimension (in.)		R-Value <sup>2</sup> Nominal	LTTR Value Nominal	Pieces per Unity
	Thin	Thick			
1/4	1	2	9.3	8.6	32
1/4	2	3	16.0	14.4	18
1/4	3	4	22.0	20.5	12

<sup>2</sup> Nominal R-value of the entire board

The table above represents the maximum slope possible. For any made to order requests on slope requirements or board size contact your local JM sales representative.



717 17th St.  
Denver, CO 80202  
800-654-3103  
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### North American Sales Offices, Insulation Systems

#### Eastern Region and Canada

P.O. Box 158  
Defiance, OH 43512  
800-334-2399  
Fax: 419-784-7866

#### Western Region

P.O. Box 5108  
Denver, CO 80217  
800-368-4431  
Fax: 303-978-4661

The physical and chemical properties of XSPECT® Isofoam listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to ensure current information

**All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit [www2.jm.com/terms-conditions](http://www2.jm.com/terms-conditions) or call (800) 654-3103.**