



Polyisocyanurate Foam Sheathing Continuous Insulation

AP™ FOIL-FACED



PRODUCT DATA SHEET

DESCRIPTION

Johns Manville AP™ Foil-Faced Foam Sheathing board consists of a uniform closed-cell polyisocyanurate foam core bonded on each side to a foil facer. One side has a reflective foil facer and the other side has a white non-reflective foil facer to suit your building needs.

Polyiso provides one of the highest R-values per inch of any rigid insulation (R-6.0 at 1 inch). Furthermore, when properly installed, AP Foil-Faced Foam Sheathing functions as a water-resistive barrier, vapor barrier and air barrier, eliminating the need to install additional components.

AP Foil-Faced Foam Sheathing 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 is one of North America's most widely used insulation products and has been cited by the EPA for its responsible impact on the environment.

AP Foil-Faced Foam Sheathing provides exceptional heat, moisture and air control to protect your building's exterior wall assembly.

INSTALLATION

AP Foil-Faced Foam Sheathing is lightweight and can be easily cut with a utility knife or saw. Use maximum board lengths to minimize the number of joints. Vertical joints should be staggered. Butt joints should be centered over framing. To create a water-resistive barrier or an air barrier, treat seams and penetrations as instructed in the installation guide and in accordance with manufacturer's guidelines. Once installed, AP Foil-Faced Foam Sheathing may be left exposed for up to 60 days. Consult your local building department for code requirements.

COMPLIANCES

- ASTM C1289 Type 1, Class 1
- CAN/ULC S704, Type 1, Class 1
- ICC-ES Evaluation Report ESR-3398
- Canadian Construction Materials Centre 13104-L
- Air Barrier Association of America Evaluated Air Barrier Material, Assembly & Water Resistive Barrier
- International Building Code
- International Residential Code
- International Energy Conservation Code
- ENERGY STAR
- ASHRAE 90.1
- California State Insulation Quality Standards

PERFORMANCE STANDARDS

- ASTM C1289, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
- CAN/ULC-S704, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced
- ASTM E84, Test for Surface Burning Characteristics of Building Materials
- CAN/ULC S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies
- NFPA 259, Standard Test Method for Potential Heat of Building Materials
- NFPA 285, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
- AC 71, Acceptance Criteria for Foam Plastic Sheathing Panels Used as Water-Resistive Barriers
- ASTM E331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- AATCC Test Method 127, Water Resistance: Hydro Static Pressure Test
- ASTM E1233, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Cyclic Air Pressure Differential
- ASTM E2178, Standard Test Method for Air Permeance of Building Materials
- ASTM E2357, Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

AVAILABILITY

AP Foil-Faced Foam Sheathing is available in the sizes shown in Table 1 (see reverse). For additional information or special size inquiries, please consult a sales representative at 800-654-3103.



PERFORMANCE ADVANTAGES

Thermal Insulation: inch for inch, polyiso has one of the highest energy efficiencies. R-values for AP Foil-Faced Foam Sheathing are shown in Table 1, and physical properties are shown in Table 2 (see reverse). R means resistance to heat flow. The higher the R-value, the greater the insulating power.

Water-Resistive Barrier: when properly installed as part of a Johns Manville Wall System, AP Foil-Faced Foam Sheathing meets the ICC-ES AC71 acceptance criteria for foam plastic sheathing used as a water-resistive barrier. Please see the installation guide for qualifying assemblies and detailed instructions.

Vapor Barrier: at a minimum thickness of one inch, AP Foil-Faced Foam Sheathing has a vapor permeance of 0.05 perms and qualifies as a Class I vapor retarder.

Air Barrier: when properly installed as part of a Johns Manville Wall System, AP Foil-Faced Foam Sheathing meets the Air Barrier Association of America boardstock criteria for materials and assemblies. Please see installation guide for qualifying assemblies and detailed instructions.

Noncorrosive: does not accelerate corrosion of pipes, wiring or metal studs.

Lightweight: easy to handle, can be cut with a utility knife or saw.

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STORAGE

Store AP Foil-Faced Foam Sheathing elevated above the floor or ground and standing water. If stored outdoors, keep dry by covering completely with a waterproof tarpaulin.

LIMITATIONS

AP Foil-Faced Foam Sheathing is nonstructural. The walls must be braced in accordance with the requirements of the applicable code.

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

AP Foil-Faced Foam Sheathing is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable thermal barrier when required.

TECHNICAL SERVICES

Johns Manville can provide technical information to assist in addressing questions regarding AP Foil-Faced Foam Sheathing. Please call 800-654-3103 for technical assistance.

PERFORMANCE DATA

Table 1: Thermal Performance

THICKNESS (inches)	R-VALUE U.S. ¹ (°F•ft ² •h/BTU)	THICKNESS (mm)	RSI-VALUE ¹ (°K•m ² /W)	BOARD SIZE (ft)	R-VALUE WITH REFLECTIVE AIR SPACE ²		
					½" Air Space	¾" Air Space	1" Air Space
0.50	2.7	13	0.48	4 x 8, 9, or 10	5.2	5.5	5.4
0.625	3.5	16	0.62	4 x 8, 9, or 10	6.0	6.3	6.2
0.75	4.4	19	0.77	4 x 8, 9, or 10	6.8	7.1	7.0
1.00	6.0	25	1.06	4 x 8, 9, or 10	8.5	8.8	8.7
1.50	9.3	38	1.63	4 x 8, 9, or 10	11.7	12.0	12.0
2.00	13	51	2.21	4 x 8, 9, or 10	15	15	15
2.50	16	64	2.79	4 x 8, 9, or 10	18	19	19
3.00	19	76	3.36	4 x 8, 9, or 10	22	22	22
3.50	22	89	3.94	4 x 8, 9, or 10	25	25	25
4.00	26	102	4.52	4 x 8, 9, or 10	28	28	28
4.50	28	114	5.09	4 x 8, 9, or 10	30	31	31

¹Aged R-value at 75° F in accordance with ASTM C1289.

²Only applies when an ideal reflective air space and horizontal heat flow conditions exist. The shiny foil side of product must face the air space.

Determined in accordance with FTC 16 CFR Part 460 requirements and published ASHRAE air space R-values. Refer to the 2009 ASHRAE Handbook of Fundamentals, Chapter 26, Table 3, for details.

Table 2: Physical Properties

PROPERTY	UNITS	TEST METHOD	RESULT
Thermal Resistance, 1 inch	°F•ft ² •hr/BTU	ASTM C518*	6.0
Compressive Strength	psi	ASTM D1621	≥ 16
Flexural Strength	psi	ASTM C203	≥ 40
Water Absorption	% by volume	ASTM C209	0.1
Water Vapor Permeance	perms	ASTM E96	0.05
Surface Burning Characteristics**			
Flame Spread [†]	index	ASTM E84	≤ 25
Smoke Developed [†]	index	ASTM E84	≤ 450
Service Temperature	°F		-100 to 250

*Aged R-value at 75° F in accordance with ASTM C1289.

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

[†]Foam core tested at 4 inches.

Visit our website at www.JM.com or call 800-654-3103 | Building Insulation Division P.O. Box 5108 | Denver, CO 80217-5108

Data as shown in this literature is intended to be used as a general guideline only. The physical and chemical properties of AP Foil-Faced Polyisocyanurate Foam Sheathing 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. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the sales office nearest you for current information. All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy or for information on other Johns Manville thermal and acoustical insulation and systems, visit the website or call the 800 number above. 717 17th Street Denver CO, 80202

