

## AP™ Foil-Faced Polyisocyanurate Foam Sheathing

### Description

Johns Manville AP Foil-Faced foam sheathing board is composed of a uniform closed-cell polyisocyanurate foam core bonded on each side to a foil facer. One side has a printed foil reflective facer and the other side has a printed nonreflective foil facer to suit your building needs.

AP sheathing is now produced with a non-HCFC blowing agent, meeting the latest environmental regulations for using chemicals that do not harm the protective ozone layer in the earth's atmosphere. The new formula enhances the positive environmental profile for this energy-saving product.

### Applications

AP sheathing is designed for easy installation where high thermal efficiency is required within both new and retrofit construction:

- Interior insulation behind gypsum board
- Exterior insulation
- Behind all residential siding types, including brick veneer
- Masonry cavity wall insulation
- Behind exterior stucco or lath systems
- Cathedral ceilings
- Insulation underlayment leveling board for re-siding

### Storage

Store AP sheathing flat on pallets elevated above the floor or ground and standing water. If stored outdoors, keep dry by covering completely with a waterproof tarpaulin.

### Specification Compliance

ASTM C1289, Type I, Class 1  
ASTM D1621 Compressive Strength, 16 psi (110 kPa) and 20 psi (138 kPa)  
ASTM D2126 Dimensional Stability, 2% max, 7 days (length and width)  
ASTM E96 Moisture Vapor Transmission,\* < 1 perm (57.5 ng/Pa·s·m<sup>2</sup>)  
NFPA 285 Wall Assembly Testing  
ASTM C209 Water Absorption,\* <1% volume  
ASTM E84 Flame Spread\* 25 or less (4")  
ASTM E84 Smoke Development\* 450 or less (4")  
Service Temperature: -100°F to 250°F (-73°C to 122°C)  
California State Insulation Quality Standards

\*Foam core only.

### Short Form Specification

All insulation shown on drawings of specified herein shall be "Johns Manville AP Foil-Faced Polyisocyanurate Foam Sheathing." Thermal resistance "R" (RSI) values of the insulation shall be R (RSI) \_\_\_\_\_ in walls.

### Limitations of Use

Check applicable building codes. As with all foam plastics, this product will burn. Johns Manville AP sheathing products must be protected from open flame and kept dry at all times. Do not leave exposed. AP sheathing requires an interior finish of a minimum 1/2" (13 mm) gypsum board or equivalent 15-minute thermal barrier. AP sheathing must be protected from outside elements like wind, rain and sunlight.



### Performance Advantages

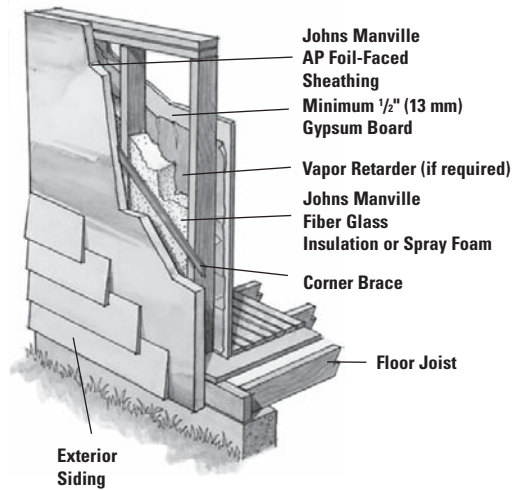
- Thermal efficiency – polyisocyanurate foam provides a high degree of insulation efficiency, resisting heat transfer with R-values up to R-22.8 (RSI-4.01). It reduces thermal bridging at the framing members where fiber glass batts don't insulate, improving the overall thermal efficiency of walls.
- 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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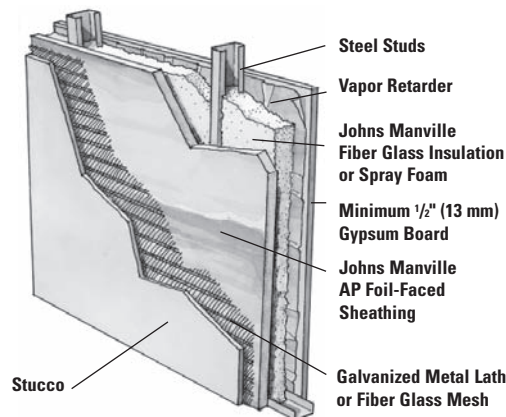
## Exterior Installation

Corner bracing is necessary when building with nonstructural sheathing. Secure boards with  $\frac{3}{8}$ -inch (10 mm) head diameter galvanized roofing nails long enough to penetrate the stud at least  $\frac{3}{4}$  inch (19 mm), or use 1-inch (25 mm) crown 16-gauge staples with leg length sufficient to penetrate framing  $\frac{1}{2}$  inch (13 mm). Fasten boards to framing every 8 inches (203 mm) horizontally and every 12 inches (305 mm) vertically. Wood, hardboard, vinyl or aluminum siding can be installed over AP sheathing in accordance with siding manufacturers' instructions. Adhere wire mesh for stucco finishes over AP sheathing by nailing to the studs. Industry practice restricts the thickness of foam sheathing under conventional stucco to  $\frac{1}{2}$  inch (38 mm) maximum due to the potential for nail deflection. Attach brick veneer over AP sheathing by nailing wall ties to the studs. In those parts of the country where heating degree days total 2,000 or more, vapor control may be required by the installation of thicker AP Foil-Faced sheathing or an interior vapor retarder. Consult your area utility or weather bureau for degree-day information. Consult local building department for code requirements on vapor retarders.

## Exterior Application



## Exterior Stucco System



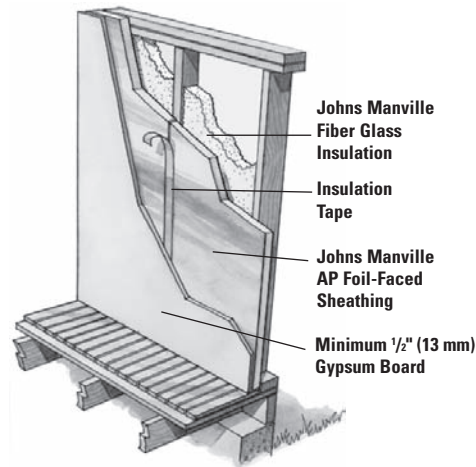
# AP™ Foil-Faced Polyisocyanurate Foam Sheathing

## Interior Installation

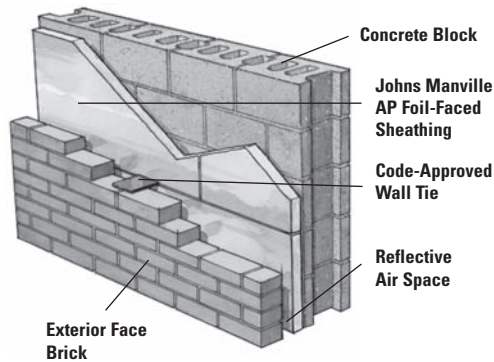
When used as an underlayment, AP sheathing is easily attached to the interior stud surface, and should always be covered with a minimum 1/2 inch (13 mm) gypsum board. Apply vapor retarder tape to all joints. AP sheathing does not need a vapor retarder.

**Cavity Wall Installation.** Install 16-inch (406 mm) or 24-inch (610 mm) AP sheathing horizontally between the concrete block wall and the exterior masonry. Attach insulation panels against the inner wall using construction-grade adhesive with wall ties at the insulation joints. AP sheathing may be installed directly to oil-based waterproofing compounds.

## Interior Application



## Cavity Wall Construction



# AP™ Foil-Faced Polyisocyanurate Foam Sheathing

## Building Code Compliance and Fire Hazard Classification

	ICBO	SBCCI	BOCA	ICC	Flame Spread*	Smoke Developed*
AP Foil-Faced Polyisocyanurate Foam Sheathing	UBC Section 2602 (1997)	SBC Section 2603 (1999)  International One and Two Family Dwelling Code, Section 317 (1998)	NBC Section 2603 (1999)	IBC Section 2603.5 (2009)  IBC Section 2603 (2009)  IRC Section R314 (2009)	4" thickness (102 mm), 25 or less	4" thick (102 mm), 450 or less

\*Per ASTM E84.

## Available Forms\*

Specification Compliance	R-value** (hr-ft <sup>2</sup> · °F/Btu)	RSI-value (m <sup>2</sup> · °K/Watts)	Thickness (in)	Thickness (mm)
ASTM C1289	25.0	4.40	4	102
AP Foil-Faced Type 1 Class 1	22.8	4.01	3½	89
	19.5	3.43	3	76
	16.3	2.87	2½	64
	13.0	2.29	2	51
	9.8	1.73	1½	38
	6.5	1.14	1	25
	5.0	0.88	¾	19
	4.1	0.72	⅝	16
	3.3	0.58	½	13

\*Consult your local sales representative or product availability chart for other available sizes and R-values. Upon special request, JM will provide boards scored to 16" (406 mm) or 24" (610 mm) widths for easy application in cavity walls. Standard product lengths include 8 and 9 ft. (2,440 and 2,740 mm).

\*\*R-value determined by ASTM C518 at 75°F mean temperature and ASTM C1289.



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### North American Sales Offices, Insulation Systems

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Fax: (419) 784-7866

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P.O. Box 5108  
Denver, CO 80217  
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Fax: (303) 978-4661

Technical specifications as shown in this literature are intended to be used as general guidelines 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, call (800) 654-3103.

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