Johns Manville
A Berkshire Hathaway Company

Residential
Building Insulation Guide

The JM Difference

When Johns Manville was founded in 1858, we believed in building relationships by providing outstanding service. The world has changed, but that credo holds true. Building trust with our customers is our top priority — that's why we provide a complete line of building insulation solutions, paired with our unparalleled service and support.

Your One-Stop-Shop

We also believe that your time matters. That's why we focus on driving convenience and efficiency to help all our valued customers get the right insulation product, for every job, every time — all from one source.

Comprehensive Insulation Expertise & Support

The JM TechConnect Program puts you in touch with our team of technical experts — in person, by phone or online — so you can quickly solve even the most challenging insulation problem. Connect with us at 800-654-3103.

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Formaldehyde-free™

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ComfortTherm®

Encapsulated Thermal & Sound Control Batts and Rolls

Poly-encapsulated batts and rolls designed for various concealed exterior and interior metal- or wood-framed cavities and directly above suspended ceilings. For wall applications, the vapor retarder is placed on the flange side while the remaining sides are perforated for moisture flow. For underfloor applications, the vapor retarder is placed on the side opposite the stapling flange.

North American Average Recycled Content:

- 30% post consumer

Note: JM ComfortTherm insulation is also available in several R-values with a non-vapor-retarder facing for use where vapor retarders are not appropriate.

AVAILABLE*

R-Value/RSI	Thickness	Width
Wood Framing		
R-30/RSI-5.3	10¼" (260mm)	16" (406mm), 24" (610mm)
R-21/RSI-3.7	5½" (140mm)	15" (381mm)
R-19/RSI-3.3	6½" (165mm)	15" (381mm), 23" (584mm)
R-13/RSI-2.3	3½" (89mm)	15" (381mm)
Metal Framing		
R-19/RSI-3.3	6½" (165mm)	16" (406mm), 24" (610mm)
R-13/RSI-2.3	3½" (89mm)	16" (406mm)

**Please check Product Availability Listing for latest sizing and availability.*

SPECIFICATION COMPLIANCE

ASTM C665, Type II, Class C, Category 1 (High-perm is Category 2; not classified as a vapor retarder)
Surface Burning Characteristics (ASTM E84):
- Flame Spread 25 or less
- Smoke Developed 50 or less

Critical Radiant Flux (ASTM E970): Greater than 0.12 W/cm² (0.11 Btu/ft²·s)
Water Vapor Permeance (ASTM E96) Facing: 0.5 Perms (29 ng/Pa·s·m²)
Water Vapor Sorption (ASTM C1104): 5% or less by weight
Odor Emission (ASTM C1304): Pass
Corrosiveness (ASTM C665, 13.8): Pass
Fungi Resistance (ASTM C1338): Pass
VOC Emissions (ES Section 01350): Pass

Unfaced

Thermal & Sound Control Batts and Rolls

Actual color of product may be lighter than image. Product image typical of material produced in the USA.

Light-density unfaced batts and rolls for installation within wall cavities, floors and ceilings. Available for metal or wood framing. May be used with a separate vapor retarder when moisture control is required. High-performance cathedral ceiling batts also available. Available in R-values ranging from R-11 to R-49.

North American Average Recycled Content:

- 30% post consumer

AVAILABLE*

R-Value/RSI	Thickness	Width
Wood Framing		
R-49/RSI-8.6	13½" (343mm)	16" (406mm), 24" (610mm)
R-38/RSI-6.7	12" (305mm) 13" (330mm)	16" (406mm), 24" (610mm) 16" (406mm), 24" (610mm)
R-30/RSI-5.3	10¼" (260mm)	16" (406mm), 24" (610mm)
R-21/RSI-3.7	5½" (140mm)	15" (381mm), 23" (584mm)
R-20/RSI-3.5	5½" (140mm)	15" (381mm)
R-19/RSI-3.3	6½" (165mm)	15" (381mm), 19" (483mm), 23" (584mm)
R-15/RSI-3.3	3½" (89mm)	15" (381mm), 23" (584mm)
R-13/RSI-2.3	3½" (89mm)	15" (381mm), 23" (584mm)
R-11/RSI-1.9	3½" (89mm)	15" (381mm), 23" (584mm)
Metal Framing		
R-30/RSI-5.3	10¼" (260mm)	16" (406mm), 24" (610mm)
R-21/RSI-3.7	5½" (140mm)	16" (406mm)
R-19/RSI-3.3	6½" (165mm)	16" (406mm), 24" (610mm)
R-13/RSI-2.3	3½" (89mm)	16" (406mm), 24" (610mm)
R-11/RSI-1.9	3⅝" (92mm)	16" (406mm), 24" (610mm)
N/A**	2¾" (70mm)	16" (406mm), 24" (610mm)

**Please check Product Availability Listing for latest sizing and availability.*
***Sound control for interior walls.*

SPECIFICATION COMPLIANCE

ASTM C665, Type I
Surface Burning Characteristics (ASTM E84):
- Flame Spread 25 or less
- Smoke Developed 50 or less

Critical Radiant Flux (ASTM E970): Greater than 0.12 W/cm² (0.11 Btu/ft²·s)
Water Vapor Sorption (ASTM C1104): 5% or less by weight
Odor Emission (ASTM C1304): Pass
Corrosiveness (ASTM C665, 13.8): Pass
Fungi Resistance (ASTM C1338): Pass
VOC Emissions (ES Section 01350): Pass

Kraft-Faced

Thermal & Sound Control Batts and Rolls

Actual color of product may be lighter than image. Product image typical of material produced in the USA.

Light-density batts and rolls with kraft facings for wood-framed construction. Kraft-Faced batts are also available for metal framing. Kraft-Faced batts should be used in concealed applications. Kraft facings provide excellent vapor retarders and are available in R-values ranging from R-11 to R-49.

North American Average Recycled Content:

- 30% post consumer

AVAILABLE*

R-Value/RSI	Thickness	Width
Wood Framing		
Available from R-11 (RSI-1.9) to R-38 (RSI-6.7) in various widths of 11" (279 mm), 15" (381 mm), 19" (483 mm) and 23" (584 mm) *Tabless Kraft batts also available in various R-values in widths of 15¼"*		
Metal Framing		
R-49/RSI-8.6	13½" (343mm)	16" (406mm), 24" (610mm)
R-30/RSI-5.3	10¼" (260mm)	16" (406mm), 24" (584mm)
R-19/RSI-3.3	6½" (165mm)	16" (406mm), 24" (584mm)
R-13/RSI-2.3	3½" (89mm)	16" (406mm), 24" (584mm)
R-11/RSI-1.9	3⅝" (92mm)	16" (406mm), 24" (584mm)

**Please check Product Availability Listing for latest sizing and availability.*

SPECIFICATION COMPLIANCE

ASTM C665:
- Kraft: Type II, Class C, Category 1

Surface Burning Characteristics (ASTM E84):
- Kraft: Not rated for Flame Spread/Smoke Developed

Water Vapor Permeance (ASTM E96)
- Kraft: 1.0 Perms (57 ng/Pa·s·m²)

Water Vapor Sorption (ASTM C1104): 5% or less by weight
Odor Emission (ASTM C1304): Pass
Corrosiveness (ASTM C665, 13.8): Pass
Fungi Resistance (ASTM C1338): Pass
VOC Emissions (ES Section 01350): Pass

JM Climate Pro®& JM Attic Protector®

Thermal & Sound Control Blow-in Fiberglass

JM blow-in Formaldehyde-free™ loose-fill fiberglass insulation is designed for attics. It is noncorrosive and noncombustible. JM Climate Pro insulation is for professionals using large truck-mounted, high-volume production blowing wool machines and for the Blow-In-Blanket® System (BIBS®) for blowing in to fill walls, ceilings and irregular spaces. JM Attic Protector insulation is for the remodeling professional or do-it-yourselfer who uses a portable blowing machine.

AVAILABLE

R-Value

R-11 to R-60

JM Climate Pro Insulation – Attics

Installation in attics using a professional-grade blowing machine
(See package for sq. ft. coverage at each R-value)

JM Climate Pro Insulation – Enclosed Cavities

Blow-In-Blanket System installation in walls, ceilings and floors
(See package for R-value and sq. ft. coverage at each cavity thickness)

JM Attic Protector Insulation – Attics

Installation in attics using a portable blowing machine
(See package for sq. ft. coverage at each R-value)

SPECIFICATION COMPLIANCE

ASTM C764, Type I
Surface Burning Characteristics (ASTM E84 and CAN/ULC S102.2)
- Flame Spread 25 or less
- Smoke Developed 50 or less

Critical Radiant Flux (ASTM E970) Greater than 0.12 W/cm² (0.11 Btu/ft²·s)
Combustion Characteristics (ASTM E136): Pass
Water Vapor Sorption (ASTM C1104): 5% or less by weight
Odor Emission (ASTM C1304): Pass
Corrosiveness (ASTM C764): Pass
Fungi Resistance (ASTM C1338): Pass
Fungi Resistance (ASTM G21): Pass
VOC Emissions (ES Section 01350): Pass

JM Spider® Plus

The Premium Blow-in Insulation Solution

JM Spider® Plus blow-in insulation, now featuring interlocking fiber technology, is the next evolution of the JM insulation family. Interlocking fiber technology allows the fibers to spring and lock into cavities with no adhesive or netting. And with a simple installation that is typically faster than other spray systems and unprecedented drying times, JM Spider Plus saves you time and money on every project.

Installed Without Adhesive

JM Spider Plus insulation can be installed dry in Drill-and-Fill and BIBS applications. The specially designed fibers are very effective at delivering the desired performance for these types of installs.

AVAILABLE

R-Value

R-14 to R-15 (2x4 cavity)

R-22 to R-23 (2x6 cavity)
(See package for sq. ft. coverage at each R-value)

JM Spider Plus insulation is available in:

30 lb. bags

SPECIFICATION COMPLIANCE

ASTM Standard C764, Type I
Surface Burning Characteristics (ASTM E84 and CAN/ULC S102.2)
- Flame Spread 25 or less
- Smoke Developed Index 50 or less

Critical Radiant Flux (ASTM E970) 0.12 W/cm² (0.11 Btu/ft²·s) or greater
Combustion Characteristics (ASTM E136): Pass
Water Vapor Sorption (ASTM C1104) 5% by weight or less
Odor Emission (ASTM C1304): Pass
Corrosiveness (ASTM C764): Pass
Fungi Resistance (ASTM C1338): Pass
Fungi Resistance (ASTM G21): Pass
VOC Emissions (ES Section 01350): Pass

Spray Foam Insulation

JM Corbond III®

Spray Polyurethane Foam

Closed-cell JM Corbond III® spray foam is a premium insulation that offers superior thermal performance, advanced air isolation and excellent moisture control. It resists mold and mildew, which improves the indoor environment. Our spray foam insulation allows a 3-inch lift in a single pass while providing an R-21. JM Corbond III boasts an industry-leading R-value of 7.0/per inch and can be applied on substrates as low as 20 degrees Fahrenheit. JM Corbond III insulation and its unique Lavender® color have become the symbol of uncompromising quality and performance.

North American Average Recycled Content:

- 11% combined post- and pre-consumer in Side B

AVAILABLE

R-Value/RSI	Thickness
R-42/RSI-7.4	6" (152mm)
R-21/RSI-3.7	3" (76mm)

Substrate Application

Winter	Min. 20°F	Max. 70°F
Summer	Min. 45°F	Max. 120°F

May be applied in passes of uniform thickness from a minimum of a half inch to a maximum of three inches in a single pass.

SPECIFICATION COMPLIANCE

ASTM Standard C1029
Surface Burning Characteristics (ASTM E84)
- Flame Spread 25 or less
- Smoke Developed Index 450 or less

Water Absorption (ASTM D2842)
- 0.9%

Water Vapor Transmission (calculated) (ASTM E96)
- 0.61 perms @ 1½"

Air Infiltration (ASTM E283-04)
- 75 Pa 0.001 L/S/m^2 (1.57 psf) (<0.001 cfm/ft^2)
- 300 Pa 0.001 L/S/m^2 (6.24 psf) (<0.001 cfm/ft^2)

Air Permeance (ASTM E2178-03)
- 75 Pa 0.000055 L/S.m^2.Pa
- 0.000117 ft^3/min.m^2.Pa
- 300 Pa 0.000024 L/S.m^2.Pa
- 0.000051 ft^3/min.m^2.Pa

Sound Transmission Coefficient (STC) (ASTM E90-90 & E413-87)
- 36 (STC)

JM Corbond MCS™

Spray Polyurethane Foam

Closed-cell JM Corbond MCS™ spray foam acts as a climate barrier, keeping the indoors from the outdoors. The closed-cell polyurethane foam provides superior thermal performance in addition to important air and moisture isolation. JM Corbond MCS can provide an R-13 when installed at a thickness of 2 inches and R-41 at 6 inches. It offers a maximum thickness of up to 2 inches per pass and can be applied in temperatures as low as 40 degrees Fahrenheit.

North American Average Recycled Content:

- 13% combined post- and pre-consumer in Side B

AVAILABLE

R-Value/RSI	Thickness
R-41/RSI-7.2	6" (152mm)
R-20/RSI-3.5	3" (76mm)
R-6.8/RSI-1.2	1" (25mm)

Substrate Application

Min. 40°F	Max. 90°F

May be applied in passes of uniform thickness from a minimum of a half inch to a maximum of three inches in a single pass.

SPECIFICATION COMPLIANCE

ASTM Standard C1029
Surface Burning Characteristics (ASTM E84)
- Flame Spread 25 or less
- Smoke Developed Index 450 or less

Water Absorption (ASTM D2842)
- 0.9%

Water Vapor Transmission (calculated) (ASTM E96)
- 0.7 perms @ 1½"

Air Infiltration (ASTM E283-04)
- 75 Pa 0.006 L/S/m^2 (1.57 psf) (<0.006 cfm/ft^2)
- 300 Pa 0.006 L/S/m^2 (6.24 psf) (<0.006 cfm/ft^2)

Air Permeance (ASTM E2178-03)
- 75 Pa 0.000055 L/S.m^2.Pa
- 0.000117 ft^3/min.m^2.Pa
- 300 Pa 0.000024 L/S.m^2.Pa
- 0.000051 ft^3/min.m^2.Pa

JM Corbond® Open-cell

Spray Polyurethane Foam

JM Corbond® Open-cell Spray Polyurethane Foam (oc SPF) insulation is a two component, low-density, nonstructural insulation system designed for interior commercial, residential and industrial applications. JM Corbond oc SPF is 100% water blown. The low-density nature allows for tremendous yield while providing excellent heat, air, and sound control. This multi-functionality results in high performing buildings that are energy efficient, comfortable, and have better air quality. JM Corbond oc SPF is compatible with most common construction materials.

JM Corbond oc SPF has a versatile range of R-values: R-3.6 when installed at a thickness of 1 inch, R-14 at 4 inches and R-21 at 6 inches. The unique, high yield insulation functions as an air barrier, which improves the indoor environment and makes a home more comfortable. It can be applied when ambient air and surface temperatures are between 45 and 120 degrees Fahrenheit.

AVAILABLE

R-Value/RSI	Thickness	Substrate Application
R-21/RSI-3.7	6" (152mm)	Min. 45°F
R-14/RSI-2.5	4" (102mm)	Max. 120°F
R-3.6/RSI-0.6	1" (25mm)	

SPECIFICATION COMPLIANCE

ASTM Standard C1029
Surface Burning Characteristics (ASTM E84)
- Flame Spread 25 or less
- Smoke Developed Index 450 or less

Air Leakage Rate (ASTM E283)
- < 0.02 (L/S/m²)

Fungi Resistance (ASTM 1338)
- Pass with No Fungal Growth

Sound Transmission Coefficient (ASTM E90)
- 38 STC*

Compressive Strength (ASTM D1621)
- 0.95 psi

Apparent Density (ASTM D1622)
- 0.5 pcf (Normal)

Open-cell Content (ASTM 1940)
- >97%

Tensile Strength (ASTM D1623)
- 5 psi

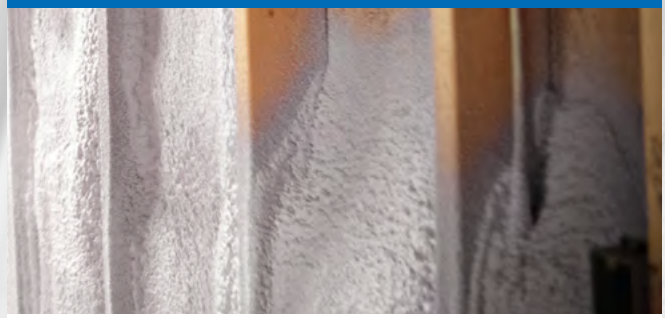
Permeability (ASTM E96)
- 9.8 perm/in @ 3½"

Dimensional Stability (ASTM D2126)
- <15% Change in Volume

**Residential exterior wall with 16" o.c. 2x4 wood studs, OSB sheathing, and ½" gypsum board. STC 40 with fiberboard siding.*

JM Corbond® Open-cell Appendix X

Spray Polyurethane Foam



JM Corbond® Open-cell Appendix X Spray Polyurethane Foam (ocx SPF) insulation is a two-component, low-density, nonstructural insulation system designed for interior commercial, residential and industrial applications. JM Corbond ocx SPF is Class 1 rated and meets AC 377 NFPA 286 Appendix X requirements for application without an ignition barrier in attics and crawl spaces. JM Corbond ocx SPF is 100% water blown. The low-density nature allows for tremendous yield while providing excellent heat, air, and sound control. This multi-functionality results in high-performing buildings that are energy efficient, comfortable, and have better air quality.

JM Corbond ocx SPF has a versatile range of R-values: R-3.7 when installed at a thickness of 1 inch, R-14 at 4 inches and R-21 at 6 inches. The unique, high yield insulation functions as an air barrier, which improves the indoor environment and makes a home more comfortable. It can be applied when ambient air and surface temperatures are between 45 and 120 degrees Fahrenheit.

AVAILABLE

R-Value/RSI	Thickness	Substrate Application
R-21/RSI-3.7	6" (152mm)	Min. 45°F
R-14/RSI-2.5	4" (102mm)	Max. 120°F
R-3.7/RSI-0.7	1" (25mm)	

SPECIFICATION COMPLIANCE

ASTM Standard C1029
Surface Burning Characteristics (ASTM E84)
- Flame Spread 25 or less
- Smoke Developed Index 450 or less

Air Leakage Rate (ASTM E283)
- < 0.02 (L/S/m²)

Fungi Resistance (ASTM 1338)
- Pass with No Fungal Growth

Sound Transmission Coefficient (ASTM E90)
- 38 STC*

Compressive Strength (ASTM D1621)
- 25 psi

Apparent Density (ASTM D1622)
- 0.5 pcf (Normal)

Open-cell Content (ASTM 1940)
- >95%

Tensile Strength (ASTM D1623)
- 5 psi

Dimensional Stability (ASTM D2126)
- <15% Change in Volume

**Residential exterior wall with 16" o.c. 2x4 wood studs, OSB sheathing, and ½" gypsum board. STC 40 with fiberboard siding.*

Hybrid Insulation Solutions

Hybrid Insulation Solutions

Custom Insulation Systems

Hybrid insulation solutions offer custom insulation systems that adapt to your construction needs. The innovative systems can be created by applying multiple products in the same cavity or by separately installing both fiberglass and spray polyurethane foam insulation in the right areas of a home. Combining the proven performance of fiberglass insulation and the innovative product benefits of spray foam insulation creates flexible insulation systems that provide premium performance at a more economical price.

Spray Foam and Batts/Rolls

- Fiberglass batts or rolls and spray polyurethane foam
- Superior thermal performance and advanced air isolation
- Layered application offers easy hybrid installation

Spray Foam and JM Spider® Plus Blow-in Insulation

- Premium hybrid insulation solution
- Easy spray-in for any shaped cavity
- Adaptable to almost any home design

BIBS® HP

- Closed-cell spray foam and fiberglass insulation
- BIBS mesh
- Innovative, adaptable application

TempControl®

Thermal Control & Fire Delay Mineral Wool Batts

TempControl® mineral wool insulation is made from high-density, noncombustible fibers to help delay the spread of fire. It also delivers exceptional thermal performance for the life of a home, reducing heating and cooling bills to save money year-round.

AVAILABLE

Product	Thickness	Width
R-15 TempControl	3½" (89mm)	15¼" (387mm)
R-23 TempControl	5½" (140mm)	23" (584mm)

SPECIFICATION COMPLIANCE

ASTM C665, Type 1
ASTM E136: Noncombustible
IBC (International Building Code): All types
Thermal Resistance ASTM C518 R-15, R-23
Surface Burning Characteristics (ASTM E84)
- Flame Spread 5
- Smoke Developed 0

Critical Radiant Flux (ASTM E970): Greater than 0.12 W/cm²
Water Vapor Sorption (ASTM C1104): Less than 5%
Odor Emission (ASTM C1304): Pass
Corrosiveness (ASTM C665): Pass
Fungi Resistance (ASTM C1338): Pass

Sound & Fire Block®

Sound Control & Fire Delay Mineral Wool Batts

Sound & Fire Block® mineral wool insulation batts help delay the spread of fire between interior floors and rooms. Made from high-density, noncombustible materials designed for maximum sound absorption, it also reduces noise transfer in the places occupants need it most – between interior walls and in the ceilings and floors.

AVAILABLE

Product	Thickness	Width
Sound & Fire Block	3" (76mm)	15¼" (387mm)

Acoustical Ratings for Common Assemblies

Assembly	Components	Rating
2x4 Wood Wall	2"x4" wood studs 16" o.c., 5/8" gypsum drywall both sides, resilient channels, 3" JM Sound & Fire Block insulation	STC-47
2x10 Wood Wall	2"x10" wood studs 16" o.c., 23/32" OSB subfloor, 5/8" gypsum drywall, resilient channels, 3" JM Sound & Fire Block insulation	STC-47

SPECIFICATION COMPLIANCE

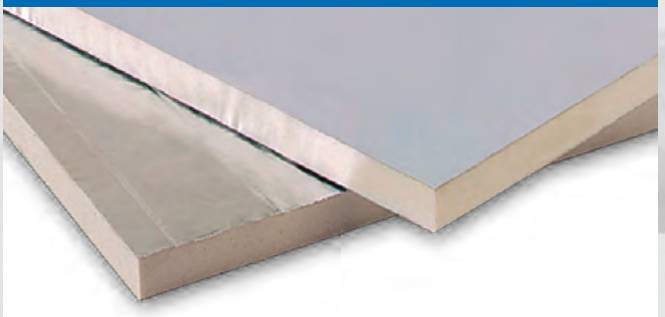
Sound Transmission Class (ASTM E90)
Surface Burning Characteristics (ASTM E84)
- Flame Spread 5
- Smoke Developed 0

Critical Radiant Flux (ASTM E970) Greater than 0.12 W/cm²
Noncombustible (ASTM E136): Pass
Water Vapor Sorption (ASTM C1104): Less than 5%
Odor Emission (ASTM C1304): Pass
Corrosiveness (ASTM C665): Pass
Fungi Resistance (ASTM C1338): Pass

Sheathing Insulation

AP™ Foil-Faced

Polyisocyanurate Foam Sheathing



Rigid foam sheathing insulation for use in commercial and residential construction where continuous insulation and/or high thermal efficiency is required – behind gypsum board, all siding types, above and below grade exterior walls, above and below grade interior walls, attics and cathedral ceilings, and crawl spaces. Reduces thermal bridging at framing members and is noncorrosive and lightweight. When properly installed, functions as a water-resistive barrier, vapor barrier and air barrier, eliminating the need for additional components. Reflective foil facer on one side, nonreflective foil facer on the other.

Approvals

ENERGY STAR® Certification
ICC-ESR-3398 Thermal, Air Barrier, Water-Resistive Barrier
ABAA Evaluated Material, Assembly

AVAILABLE*

R-Value/RSI	Thickness
R-28 (RSI-5.09)	4½" (114mm)
R-26 (RSI-4.52)	4" (102mm)
R-22 (RSI-3.94)	3½" (89mm)
R-19 (RSI-3.36)	3" (76mm)
R-16 (RSI-2.79)	2½" (64mm)
R-13 (RSI-2.21)	2" (51mm)
R-10 (RSI-1.81)	1⅔" (42mm)
R-9.3 (RSI-1.63)	1½" (38mm)
R-6.0 (RSI-1.06)	1" (25mm)
R-5.0 (RSI-0.91)	27/32" (21.6mm)
R-4.4 (RSI-0.77)	¾" (19mm)
R-3.5 (RSI-0.62)	5/8" (16mm)
R-2.7 (RSI-0.48)	½" (13mm)

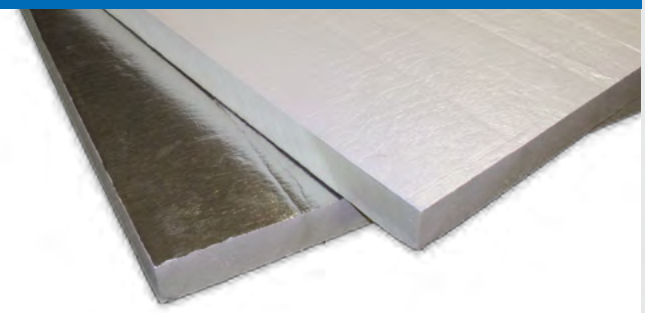
**Please check Product Availability Listing for latest sizing and availability.*

SPECIFICATION COMPLIANCE

ASTM C1289, Type I, Class 1
ASTM D1621 Compressive Strength, >16 psi (110 kPa)
ASTM D2126 Dimensional Stability, 2% max, 7 days (length and width)
ASTM E96 Moisture Vapor Transmission** < .05 Perms (1.3 ng/P·s·m²)
ASTM C209 Water Absorption,** 0.1% volume
ASTM E84 Flame Spread,** ≤25
Service Temperature: -100˚F to 250˚F (-73˚C to 122˚C)
California State Insulation Quality Standards
VOC Emissions per CA Specification 01350: Pass

***Foam core tested at 4.5".*

CI Max®
Foam Sheathing



Rigid foam sheathing insulation designed for exposed interior use in walls or ceilings in commercial and residential construction. It is made from a uniform closed-cell polyisocyanurate foam core bonded on each side to a silver or white foil and glass mat facer. CI Max is designed for easy installation where high thermal efficiency is required within both new and retrofit interior construction. It is an excellent insulation for interior insulation, masonry walls (above grade and tilt up), below grade basement walls, crawl spaces, framed walls (wood and metal), and pre-engineered metal walls or ceilings.

Approvals

ENERGY STAR® Certification Pending
ICC-ESR-3398 Thermal

AVAILABLE*

R-Value/RSI	Thickness
R-26 (RSI-4.52)	4" (102mm)
R-22 (RSI-3.94)	3½" (89mm)
R-19 (RSI-3.36)	3" (76mm)
R-16 (RSI-2.79)	2½" (64mm)
R-13 (RSI-2.21)	2" (51mm)
R-10 (RSI-1.81)	1⅔" (42mm)
R-9.6 (RSI-1.69)	1⅝" (39mm)
R-9.3 (RSI-1.63)	1½" (38mm)
R-6.0 (RSI-1.06)	1" (25mm)
R-4.5 (RSI-0.79)	¾" (19mm)
R-2.7 (RSI-0.48)	½" (13mm)

**Please check Product Availability Listing for latest sizing and availability.*

SPECIFICATION COMPLIANCE

ASTM C1289, Type I, Class 1
ASTM D1621 Compressive Strength, >16 psi (110 kPa)
ASTM D2126 Dimensional Stability, 2% max, 7 days (length and width)
ASTM E96 Moisture Vapor Transmission, 0.02 perm (1.4 ng/ Pa·s·m²)
ASTM C209 Water Absorption,** <0.6% volume
ASTM E84 Flame Spread, 25 or less (4")
ASTM E84 Smoke Development, 450 or less (4")
NFPA 286 Corner Burn Test
Service Temperature: -100°F to 250°F (-73°C to 122°C)
California State Insulation Quality Standards
VOC Emissions per CA Specification 01350: Pass

***Foam core tested at 4.0".*

R-Panel®
Polyisocyanurate Foam Sheathing

Rigid roof insulation board composed of a closed-cell polyisocyanurate foam core bonded in the foaming process to universal fiberglass reinforced facers. R-Panel provides high thermal insulation value over metal, nailable and non-nailable roof decks in built-up, modified bitumen and single-ply membrane roofing systems. It may be applied using hot bitumen, cold adhesives or mechanical fasteners. The universal facer on the top and bottom sides provides a suitable surface for mechanical attachment to a structural deck as well as a suitable surface to apply hot asphalt or cold adhesives.

Approvals

FM® Standards 4450/4470 Approvals (refer to FM RoofNav℠)
UL® Standard 790, 263, and 1256 (refer to UL Roofing Materials system directory)
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 (LTTR) Values
Miami-Dade County Product Control Approved: complies with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code

AVAILABLE*

LTTR Value**	Thickness
23.6/4.16	4" (102mm)
19.2/3.39	3⅓" (84mm)
17.4/3.06	3" (76mm)
14.4/2.53	2½" (64mm)
13.2/2.32	2⅓" (58mm)
11.4/2.01	2" (51mm)
9.7/1.71	1⁷⁄₁₀"(43mm)
8.6/1.51	1½" (38mm)
5.7/1.00	1" (25mm)

**Please check Product Availability Listing for latest sizing and availability.*
***(°F•ft²•h/BTU), (°K•m²/W) Long-term thermal resistance (LTTR) values were determined in accordance with CAN/ULC S770 at 75°F (24°C).*

SPECIFICATION COMPLIANCE

ASTM C1289-01, Type II, Class I, Grade 2
CAN/ULC S704, Type II, Class 3
ASTM C209 Water Absorption, <1% volume
ASTM D2126 Dimensional Stability, 2% max, 7 days (length and width)
ASTM D1621 Compressive Strength 10% Consolidation,* 20 psi (138 kPa)
ASTM E96 Moisture Vapor Transmission < 1 Perms (57.5 ng/P·s·m²)
ASTM D1623 Tensile Strength, 730 psf (35 kPa)
Service Temperature: -100°F to 250°F (-73°C to 122°C)

**Also available in 25 psi (172 kPa).*

Johns Manville

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