RESIDENTIAL PRODUCT SELECTOR GUIDE

Innovative Home Insulation Solutions
FIBER GLASS INSULATION
• ComfortTherm® Batts and Rolls
• EasyFit® Perforated Batts
• Unfaced Batts and Rolls
• Kraft-Faced Batts and Rolls
• JM Climate Pro®/JM Attic Protector® Blow-in Insulation
• JM Spider® Blow-in Insulation

MINERAL WOOL INSULATION
• TempControl™ Batts
• Sound & Fire Block™ Batts

SHEATHING INSULATION
• AP™ Foil-Faced Foam Sheathing
• CI Max® Foam Sheathing
• R-Panel® Roof Insulation

HVAC INSULATION PRODUCTS
• Flexible Air Duct with Flex-Glas® EQ
• MicroLite® EQ Fiber Glass Duct Wrap

SPRAY FOAM INSULATION
• JM Corbond III® Spray Polyurethane Foam
• JM Corbond MCS™ Spray Polyurethane Foam
• JM Open-cell Spray Polyurethane Foam

HYBRID INSULATION SOLUTIONS
• Custom Insulation Solutions

JM ICON KEY
- Thermal
- Acoustical
- Fire Resistant
- Moisture Control
- Recycled Content
- Formaldehyde-free™
- Air Control

MATERIALS MATTER
At Johns Manville, everyone in our company is committed to a core principle: Materials Matter. Our focus on performance inspires our research, design and manufacturing teams to consistently deliver quality products that promote more comfortable, healthier and more energy-efficient environments.

ONE-STOP INSULATION SHOP
JM is the only company to manufacture and offer a complete hybrid solution that includes both spray foam and certified Formaldehyde-free™ fiber glass insulation. This means you can increase energy efficiency, deliver thermal comfort and provide acoustical performance with a single insulation source, no matter what the situation.
**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.

<table>
<thead>
<tr>
<th>AVAILABLE</th>
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</thead>
<tbody>
<tr>
<td>PRODUCT</td>
</tr>
<tr>
<td>R-15 TempControl</td>
</tr>
<tr>
<td>R-23 TempControl</td>
</tr>
</tbody>
</table>

**SPECIFICATION COMPLIANCE**
ASTM C665, Type 1
ASTM E1356: 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%

**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.

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<thead>
<tr>
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<tbody>
<tr>
<td>PRODUCT</td>
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<tr>
<td>Sound &amp; Fire Block</td>
</tr>
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</table>

**ACOUSTICAL RATINGS FOR COMMON ASSEMBLIES**

<table>
<thead>
<tr>
<th>ASSEMBLY COMPONENTS</th>
<th>ASSEMBLY</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x4 Wood Wall</td>
<td>2&quot;x4&quot; wood studs, 16&quot; o.c., ½&quot; gypsum drywall both sides, resilient channels, 3&quot; JM Sound &amp; Fire Block insulation</td>
<td>STC-47</td>
</tr>
<tr>
<td>2x10 Wood Floor</td>
<td>2&quot;x10&quot; wood joists, 16&quot; o.c., ¾&quot; OSB subfloor, ½&quot; gypsum drywall, resilient channels, 3&quot; JM Sound &amp; Fire Block insulation</td>
<td>STC-47</td>
</tr>
</tbody>
</table>

**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
Water Vapor Sorption (ASTM C1104): Less than 5%
AP™ Foil-Faced
Polysiocyanurate Foam Sheathing

Rigid foam sheathing insulation designed for 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-resistant 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
A6AA Evaluated Material, Assembly

**AVAILABLE**

<table>
<thead>
<tr>
<th>R-VALUE/RSI</th>
<th>THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-2.7 (RSI-0.48)</td>
<td>⅜” (9mm)</td>
</tr>
<tr>
<td>R-3.5 (RSI-0.82)</td>
<td>⅝” (16mm)</td>
</tr>
<tr>
<td>R-4.4 (RSI-1.06)</td>
<td>1” (25mm)</td>
</tr>
<tr>
<td>R-5.7 (RSI-1.38)</td>
<td>1¼” (32mm)</td>
</tr>
<tr>
<td>R-7.1 (RSI-1.85)</td>
<td>1½” (38mm)</td>
</tr>
<tr>
<td>R-8.9 (RSI-2.40)</td>
<td>1¾” (45mm)</td>
</tr>
<tr>
<td>R-10.8 (RSI-2.96)</td>
<td>2” (50mm)</td>
</tr>
<tr>
<td>R-13.5 (RSI-3.78)</td>
<td>2½” (65mm)</td>
</tr>
<tr>
<td>R-16.5 (RSI-4.55)</td>
<td>3” (75mm)</td>
</tr>
<tr>
<td>R-19.5 (RSI-5.42)</td>
<td>3½” (89mm)</td>
</tr>
<tr>
<td>R-22.5 (RSI-6.30)</td>
<td>4” (100mm)</td>
</tr>
</tbody>
</table>

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

**SPEcIFICATION COMPLIANCE**

ASTM D1289, Type I, Class 1
ASTM D1621 Compressive Strength, >16 psi (110 kPa)
ASTM D2126 Dimensional Stability, 2% max, 7 days (length and width)
ASTM E86 Moisture Vapor Transmission** < 0.5 Perms
ASTM E99 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”.

Cl 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 polysiocyanurate foam core bonded on each side to a silver or white foil and glass mat facer. Cl 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), pre-engineered metal walls or ceilings.

Approvals
ENERGY STAR® Certification Pending
ICC-ESR-3398 Thermal, Air Barrier, Water-Resistive Barrier
A6AA Evaluated Material, Assembly

**AVAILABLE**

<table>
<thead>
<tr>
<th>R-VALUE/RSI</th>
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<tbody>
<tr>
<td>R-2.7 (RSI-0.48)</td>
<td>⅜” (9mm)</td>
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<td>R-3.5 (RSI-0.82)</td>
<td>⅝” (16mm)</td>
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<tr>
<td>R-4.4 (RSI-1.06)</td>
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<td>1¼” (32mm)</td>
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<tr>
<td>R-8.9 (RSI-2.40)</td>
<td>1¾” (45mm)</td>
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<tr>
<td>R-10.8 (RSI-2.96)</td>
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<tr>
<td>R-13.5 (RSI-3.78)</td>
<td>2½” (65mm)</td>
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<tr>
<td>R-16.5 (RSI-4.55)</td>
<td>3” (75mm)</td>
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<tr>
<td>R-19.5 (RSI-5.42)</td>
<td>3½” (89mm)</td>
</tr>
<tr>
<td>R-22.5 (RSI-6.30)</td>
<td>4” (100mm)</td>
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</tbody>
</table>

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

**SPECIFICATION COMPLIANCE**

ASTM D1289, Type I, Class 1
ASTM D1621 Compressive Strength, >16 psi (110 kPa)
ASTM D2126 Dimensional Stability, 2% max, 7 days (length and width)
ASTM E86 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 E64 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®
Polysiocyanurate Foam Sheathing

Rigid roof insulation board composed of a closed-cell polysiocyanurate foam core bonded in the foaming process to universal fiber glass 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 UC Roofing Materials system directory)
California Code of Regulations, Title 24, Insulation Quality Standard License #TI-1341
Miami-Dade County Product Control Approved: complies with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code

**AVAILABLE**

<table>
<thead>
<tr>
<th>LTR VALUE**</th>
<th>THICKNESS</th>
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<tr>
<td>23.6/4.16</td>
<td>4” (100mm)</td>
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<tr>
<td>19.2/3.39</td>
<td>3½” (85mm)</td>
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<tr>
<td>17.4/3.06</td>
<td>3½” (78mm)</td>
</tr>
<tr>
<td>14.4/2.53</td>
<td>3½” (75mm)</td>
</tr>
<tr>
<td>13.2/2.32</td>
<td>3½” (65mm)</td>
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<tr>
<td>11.4/2.01</td>
<td>2½” (50mm)</td>
</tr>
<tr>
<td>9.7/1.71</td>
<td>1½” (40mm)</td>
</tr>
<tr>
<td>8.6/1.51</td>
<td>1¼” (30mm)</td>
</tr>
<tr>
<td>7.5/1.00</td>
<td>1” (25mm)</td>
</tr>
</tbody>
</table>

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

**LTR = Long-term Thermal Resistance (LTR) Values were determined in accordance with CAN/ULC S707 at 75°F (24°C).

**SPEcIFICATION COMPLIANCE**

ASTM D1289-01, Type I, Class 1, 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 E86 Moisture Vapor Transmission < 1 Perms
Service Temperature: -100°F to 250°F (-73°C to 122°C)

*Also available in 25 psi (172 kPa).
Flexible Air Duct
with Flex-Glas® EQ

Flexible air duct with JM Formaldehyde-free™ Flex-Glas EQ fiber glass insulation is flexible, so it’s easier and faster to install, and it reduces the homeowner’s energy bills because the insulation helps keep the air in the duct at a constant temperature, even if the duct is in an unconditioned space, such as an attic, basement or crawlspace. The fiber glass core reduces noise, so the home stays quieter.

North American Average Recycled Content:
• 12% post consumer

Note: JM itself does not manufacture flexible air duct. For more information on the availability of flexible air duct made with JM Formaldehyde-free™ Flex-Glas EQ fiber glass insulation, contact your JM representative.

AVAILABLE*

<table>
<thead>
<tr>
<th>TYPE</th>
<th>R-VALUE/RSI</th>
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<tr>
<td>100</td>
<td>R-4.2/RSI-0.74</td>
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<tr>
<td>130</td>
<td>R-6.0/RSI-1.06</td>
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<tr>
<td>135</td>
<td>R-8.0/RSI-1.41</td>
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</table>

Fiber Glass Duct Wrap

Fiber glass duct wrap insulation is used on the exterior of rectangular and round metal ducts as thermal insulation.

Operating Temperature Limit:
250°F (121°C)

North American Average Recycled Content:
• 29% post consumer

AVAILABLE*

<table>
<thead>
<tr>
<th>TYPE</th>
<th>THICKNESS</th>
<th>R-VALUE/RSI</th>
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<tbody>
<tr>
<td>75</td>
<td>1½” (38mm)</td>
<td>R-4.2/RSI-0.74</td>
</tr>
<tr>
<td>75</td>
<td>2” (51mm)</td>
<td>R-5.6/RSI-1.06</td>
</tr>
<tr>
<td>75</td>
<td>21∕3” (59mm)</td>
<td>R-6.5/RSI-1.14</td>
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<tr>
<td>75</td>
<td>3” (76mm)</td>
<td>R-8.3/RSI-1.46</td>
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<tr>
<td>100</td>
<td>1½” (38mm)</td>
<td>R-4.5/RSI-0.79</td>
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<tr>
<td>100</td>
<td>2” (51mm)</td>
<td>R-6.0/RSI-1.06</td>
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<tr>
<td>150</td>
<td>1½” (38mm)</td>
<td>R-4.7/RSI-0.83</td>
</tr>
<tr>
<td>150</td>
<td>2” (51mm)</td>
<td>R-6.3/RSI-1.11</td>
</tr>
</tbody>
</table>

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

SPECIFICATION COMPLIANCE

ASTM Standard C553
• Type II – Type 75, 100 and 150
• Type III – Type 150
ASTM C1290
ASTM E84: FHC 25/50 – FSK Facing
ASTM C1136, Type II – FSK Facing
NYC MEA # 40-75-M
Canada: CGSB 51-GP-11M; CAN/ULC S102-M88
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. It’s the only spray foam insulation that 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:
• 10% 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)
• 0.020 (gm/cc)
Water Vapor Transmission (ASTM E96)
• 0.81 perms @ 1.5”
Fungi Resistance
Air Infiltration (ASTM E283-04)
• 75 Pa 0.001 L/S/m² (1.57 psf) (<0.001 cfm/ft²)
• 300 Pa 0.001 L/S/m² (6.24 psf) (<0.001 cfm/ft²)
Air Permeance (ASTM E2178-03)
• 75 Pa 0.000055 L/S/m²/Pa
• 0.000171 ft³/min·ft²
• 300 Pa 0.000024 L/S/m²/Pa
• 0.000051 ft³/min·ft²
Sound Transmission Coefficient (STC) (ASTM E90-90 & E413-87)
• 36 (STC)

JM Corbond MCS™ SPF
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 45 degrees Fahrenheit.

North American Average Recycled Content:
• 13% combined post and pre consumer in Side B

AVAILABLE
R-VALUE/RSI THICKNESS
R-41/RSI-6.7 6” (152mm)
R-20/RSI-3.5 3” (76mm)
R-6.8/RSI-1.2 1” (25mm)

SUBSTRATE APPLICATION
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 two 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)
• 0.020 (gm/cc)
Water Vapor Transmission (calculated) (ASTM E96)
• 0.7 perms @ 1½”
Air Infiltration (ASTM E283-04)
• 75 Pa 0.001 L/S/m² (1.57 psf) (<0.001 cfm/ft²)
• 300 Pa 0.001 L/S/m² (6.24 psf) (<0.001 cfm/ft²)
Air Permeance (ASTM E2178-03)
• 75 Pa 0.000055 L/S/m²/Pa
• 0.000171 ft³/min·ft²
• 300 Pa 0.000024 L/S/m²/Pa
• 0.000051 ft³/min·ft²

Hybrid Insulation Solutions

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 fiber glass and spray polyurethane foam insulation in the right areas of a home. Combining the proven performance of fiber glass 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 Batt/Rolls
- Fiber glass 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 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 fiber glass insulation
- BIBS mesh
- Innovative, adaptable application

JM Open-cell SPF

Spray Polyurethane Foam
JM ocSPF is a low-density, nonstructural open-cell spray polyurethane foam insulation that allows contractors to quickly insulate and air seal in a single step. It is mold and mildew resistant and minimizes sound transmission. JM ocSPF has a versatile range of R-values: R-3.7 when installed at a thickness of 1 inch, R-13 at 3.5 inches and R-20 at 5.5 inches. When used at a thickness of 3.5 inches, JM ocSPF is considered an effective 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 40 and 120 degrees Fahrenheit.

Available

<table>
<thead>
<tr>
<th>R-VALUE/RSI</th>
<th>THICKNESS</th>
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</thead>
<tbody>
<tr>
<td>R-20/RSI-3.5</td>
<td>5 ½” (140mm)</td>
</tr>
<tr>
<td>R-13/RSI-2.3</td>
<td>3 ½” (89mm)</td>
</tr>
<tr>
<td>R-3.7/RSI-0.7</td>
<td>1” (25mm)</td>
</tr>
</tbody>
</table>

Substrate Application
Min. 40°F  Max. 120°F

Specification Compliance

- ASTM Standard C1129
- Surface Burning Characteristics (ASTM E84)
  - Flame Spread 25 or less
  - Smoke Developed Index 450 or less
- Fung Resistance (ASTM G21)
- Zero Rating
- Air Leakage Rate (ASTM E283)
  - < 0.02 (L/s)/m²
- Compressive Strength (ASTM D1621)
  - < 5 psi
- Apparent Density (ASTM D1622)
  - 0.5pcf (Normal)
- Open-cell Content (ASTM D2856)
  - > 90%
- Tensile Strength (ASTM D1623)
  - < 5 psi
- Permeability (ASTM E96)
  - 21 perm-in
- Dimensional Stability (ASTM D2126)
  - <15% Change in Volume