



# Formaldehyde-Free™ Fiber Glass Insulation Enhanced with Bio-Based Binder

UNFACED  
KRAFT FACED  
FOIL FACED



## PRODUCT DATA SHEET

### COMPANY

Johns Manville is committed to creating more comfortable, healthier and energy efficient indoor environments. We revolutionized the building insulation industry by pioneering the development of Formaldehyde-free™ fiber glass building insulation over a decade ago. We continue to build on our legacy of innovation with a new Formaldehyde-free™ fiber glass insulation solution that utilizes an innovative bio-based binder, made mostly from rapidly renewable plant-based materials, that continues to offer excellent thermal and acoustical performance as well as improved handling, easier cutting and less dust than our previous product. At JM, we believe that in every detail, materials matter.

### DESCRIPTION

JM Formaldehyde-free™ thermal and acoustical insulation is made of long, resilient glass fibers bonded with our bio-based binder. A wide range of thermal resistance R-values is available to provide thermal control for both vertical and horizontal applications. JM insulation is available unfaced or with a variety of facings, including kraft or foil vapor retarder.

### USE

JM Formaldehyde-free™ thermal and acoustical insulation can be used in a wide variety of wood frame, engineered wood and steel frame construction applications, including:

**New Construction:** residential homes and commercial buildings interior and exterior walls, floors and ceilings for thermal and sound control, as well as basement wall insulation.

**Retrofit:** adding insulation to attics, crawl spaces and above suspended ceilings.

### INSTALLATION

JM insulation cuts easily with an ordinary utility knife, and unfaced or tabless versions install easily by simply pressing in place between studs or joists in standard framing. Standard facings have stapling tabs for attachment to framing if additional securement is required.

### PACKAGING

JM insulation is compression-packaged for savings in storage and freight costs.

### DESIGN CONSIDERATIONS

Kraft and standard foil facings on this product will burn and must not be left exposed. It must be covered with gypsum board or another approved interior finish. Where an exposed application is required, use FSK-25 flame-resistant faced insulation.

In colder climate areas, vapor retarders (whether attached to the insulation or applied separately) are often placed toward the heated or conditioned side of the wall. This is done to reduce water vapor penetration into the wall from the building interior. Check your local building codes for vapor retarder requirements.

Refer to JM guide specifications for further design considerations and required installation instructions.

### LIMITATIONS OF USE

Check applicable building codes.



### PERFORMANCE ADVANTAGES

**Formaldehyde-free:** will not off-gas formaldehyde in the indoor environment.

**Thermal Efficiency:** provides effective resistance to heat transfer with R-values up to R-49 (RSI-8.6).

**Sound Control:** reduces transmission of sound through exterior and interior walls and floor or ceiling assemblies.

**Fire Resistant and Noncombustible:** see Physical Properties.

**Durable Inorganic Glass:** will not rot, mildew or deteriorate and is noncorrosive to pipes, wiring and metal studs.

**Superior Performance:** bonded glass fibers are dimensionally stable and will not slump within the wall cavity, settle or break down during normal applications.

### ENERGY AND ENVIRONMENT



NORTH AMERICAN AVERAGE  
30% POST-CONSUMER RECYCLED CONTENT  
ACTUAL RECYCLED CONTENT WILL VARY



INDOOR ADVANTAGE GOLD  
BUILDING MATERIALS



# Formaldehyde-Free™ Fiber Glass Insulation Enhanced with Bio-Based Binder



## PRODUCT DATA SHEET

## UNFACED | KRAFT FACED | FOIL FACED

### APPLICABLE STANDARDS & BUILDING CODE CLASSIFICATION\*\*

JM UNFACED INSULATION	JM KRAFT FACED INSULATION	JM FOIL FACED INSULATION
ASTM C665, Type I; ASTM E136	ASTM C665, Type II Class C, Category 1	ASTM C665, Type III, Class B, Category 1
IBC, ALL TYPES	IBC TYPES III, IV, V	IBC TYPES III, IV, V

\*\*JM Insulation complies with IBC (International Building Code), model code requirements for building construction types listed above.

### STANDARD SIZES\*\*

R-VALUE (hr•ft <sup>2</sup> •°F/Btu)	RSI VALUE (m <sup>2</sup> •°C/Watts)	THICKNESS***		WIDTH†		
		in (mm)		METAL FRAMING in (mm)		WOOD FRAMING in (mm)
Δ	Δ	2¾ (70)		16 (406)	24 (610)	—
11	1.9	3½ (89)	3¾ (92)	16 (406)	24 (610)	15 (381) 19 (483) 23 (584)
13	2.3	3½ (89)	3¾ (92)	16 (406)	24 (610)	15 (381) 23 (584)
15	2.6	3½ (89)		—	—	15 (381)
19	3.3	6½ (165)		16 (406)	24 (610)	15 (381) 19 (483) 23 (584)
20	3.5	5½ (140)		—	—	15 (381)
21	3.7	5½ (140)		16 (406)	—	15 (381) 23 (584)
22	3.9	7½ (191)		—	—	15 (381)
30	5.3	10¼ (260)		16 (406)	24 (610)	16 (406) 19 (483) 24 (610)
30c	5.3	8¼ (210)		—	—	15½ (394) 23¾ (600)
38	6.7	13 (330)		16 (406)	24 (610)	16 (406) 24 (610)
38c	6.7	10¼ (260)		—	—	15½ (394) 23¾ (600)
49	8.6	13½ (343)		16 (406)	24 (610)	16 (406) 24 (610)

\*\*Consult your local JM sales representative or product availability chart for available sizes and R-values (RSI-values) including wide-roll products.

\*\*\*Thickness may vary by producing location.

†Special widths and lengths may be available. Check with your local JM sales representative. Standard product lengths include 48", 93" and 96" (1219 mm, 2362 mm and 2438 mm) batts.

ΔFor sound control applications in interior walls.

cCathedral ceiling application.

### PHYSICAL PROPERTIES\*\*

PRODUCTION	FLAME SPREAD	SMOKE DEVELOPED	VAPOR RETARDER (PERMS)	WATER VAPOR SORPTION	DIMENSIONAL STABILITY
Unfaced	<25	<50	N/A	<5%	Less than 0.1%
Foil Faced	<75	<150	0.05	N/A	Less than 0.1%
Kraft Faced	N/R	N/R	1	N/A	Less than 0.1%

\*\*Products are tested in accordance: R-value ASTM C518 | Surface Burning Characteristics ASTM E84 | Perm Rating ASTM E96 | Water Vapor Sorption ASTM C1104

Kraft and standard foil facing will burn. Do not leave exposed. Facing must be installed in substantial contact with an approved ceiling, floor or wall material. Keep open flame and other heat sources away from facing. Do not place insulation within 3" of light fixtures or similar electrical devices unless device is labeled for contact with insulation. Use only unfaced insulation between wood framing and masonry chimneys. Do not use insulation in spaces around metal chimneys, fireplaces, or flues. JM Unfaced insulation is considered non-combustible by model building codes. Flame Spread 25 products are flame spread rated and can be left exposed where codes allow. See package for warnings, fire hazard and installation instructions, or call 800-654-3103.

Due to potential skin irritation, unfaced insulation should not be used for exposed applications where it will be subject to human contact.

\*GREENGUARD certification is not intended for residential environments. Instead, the certification is intended only for buildings meeting ASHRAE 62.1-2007 commercial building ventilation rates. This certification is proof that the product meets the GREENGUARD Environmental Institute's indoor air quality standards and product emission standards for VOCs.

Visit our website at [www.JM.com](http://www.JM.com) or call 800-654-3103 | Building Insulation Division P.O. Box 5108 | Denver, CO 80217-5108

Technical specifications as shown in this literature are intended to be used as general guidelines only. The physical and chemical properties of thermal and acoustical fiber glass insulation 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

