



## Formaldehyde-free™ Fiber Glass Insulation

### JM FORMALDEHYDE-FREE™ FIBER GLASS INSULATION

JM Formaldehyde-free fiber glass building insulation offers superior thermal and acoustical performance—and it improves indoor air quality, because it's made without formaldehyde. Why is that important? Because the U.S. Environmental Protection Agency (EPA) recommends limiting exposure to formaldehyde as much as possible, and the California Air Resources Board, a division of the California EPA, recommends that homeowners, builders and architects use building materials and insulation made without formaldehyde when building a home or remodeling. JM is the only company in the industry with a complete line of Formaldehyde-free fiber glass building insulation. Visit [specJM.com](http://specJM.com) for more information.

### PRODUCT DESCRIPTION

Johns Manville unfaced insulation is a lightweight thermal and acoustical fiber glass insulation made of long, resilient glass fibers bonded with an acrylic thermosetting binder. Where vapor control is required, a separate vapor retarder can be used.

### AVAILABLE FORMS

- Pre-cut batts – fit standard wall cavities and are faster to install than roll products.
- Rolls – can be cut to fit any size wall cavity and installed in any part of a building—especially long unobstructed areas such as attics or crawl spaces.

### APPLICATIONS

#### New Construction

- Wood frame construction – residential homes and light commercial buildings
- Metal frame construction – commercial buildings
- Manufactured homes – modular or manufactured housing
- Engineered wood construction – assemblies framed with 12" to 19.2" (305 mm to 488 mm) on-center cavities, wide-spaced wood trusses or I-joists
- Suspended ceiling systems – sized to fit above 2' x 4' (0.61 m x 1.22 m) ceiling panels
- Interior wall sound control – interior walls, floor and ceiling assemblies. (for sound class ratings for wall assemblies, see the appropriate STC values data sheet for either steel or wood framing).
- Basement wall insulation

#### Retrofit

- Re-insulating attics, crawl spaces
- Back-fill above suspended ceiling systems

### INSTALLATION

Available in many sizes and R-values, unfaced insulation can be quickly installed for a wide variety of applications. JM unfaced insulation cuts easily with an ordinary utility knife and installs by simply pressing in place between studs or joists. Wire rods, chicken wire or wire may be needed to hold insulation in place in horizontal applications. Unfaced insulation must be protected from the outside elements like wind, rain and sunlight.

**Note:** 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. Conversely, in predominantly hot, humid climates local practices often call for placing the vapor retarder toward the outside of the wall cavity. Check your local building codes for vapor retarder requirements.

### PACKAGING

Johns Manville unfaced insulation is compression-packaged for savings in storage and freight costs.

### RECOMMENDED STORAGE AND TRANSPORT

Store insulation indoors. Keep insulation clean and dry at all times. When transporting, cover completely with a waterproof tarpaulin as necessary.

### SPECIFICATION COMPLIANCE

ASTM C 665, Type I  
ASTM E 84 Flame Spread 25 or less, Smoke Developed 50 or less

## Unfaced

### Formaldehyde-free Thermal and Acoustical Fiber Glass Insulation



### PERFORMANCE ADVANTAGES

- Improves indoor air quality – because it's made without formaldehyde.
- Thermally efficient – provides effective resistance to heat transfer with R-values up to R-38 (RSI-6.7).
- Controls sound – reduces transmission of sound through exterior and interior walls and floor/ceiling assemblies.
- Fire-resistant and noncombustible – (see Specification Compliance).
- Noncorrosive – does not accelerate corrosion of pipes, wiring or metal studs.
- Mold-resistant – does not support mold or mildew. Does not supply a food source for insects or rodents.
- Resilient – bonded glass fibers will not pull apart during normal applications and resist settling, breakdown and sagging from vibration.
- Flexible – forms readily around corners and curved surfaces.

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### BUILDING CODE COMPLIANCE AND FIRE HAZARD CLASSIFICATION

	ICBO	SBCCI	BOCA	IBC/IRC	Flame Spread*	Smoke Developed*
Unfaced	All Types	All Types	All Types	All Types/All Types	25	50

\*Per ASTM E 84.

### AVAILABLE FORMS\*

Specification Compliance	R-Value (hr•ft <sup>2</sup> •°F/Btu)	RSI-Value (m <sup>2</sup> •°C/Watts)	Thickness**		Width***			
			(in)	(mm)	Metal Framing (in)	Wood Framing (in)	Metal Framing (mm)	Wood Framing (mm)
ASTM C 665	38c	6.7	10 ¼	260	—	15 ½, 23 ¾	—	394, 600
Unfaced	38	6.7	13	330	16, 24	16, 24	406, 610	406, 610
Type I	30c	5.3	8 ¼	210	—	15 ½, 23 ¾	—	394, 600
	30	5.3	10 ¼	260	16, 24	16, 19, 24	406, 610	406, 483, 610
	25	4.4	8 ½	216	16, 24	15, 19, 23	406, 610	381, 483, 584
	22	3.9	7 ½	191	—	15	—	381
	21	3.7	5 ½	140	16	15, 23	406	381, 584
	19	3.3	6 ½	165	16, 24	15, 19, 23	406, 610	381, 483, 584
	15	2.6	3 ½	89	—	15	—	381
	13	2.3	3 ½, 3 ¾	89, 92	16, 24	15, 23	406, 610	381, 584
	11	1.9	3 ½, 3 ¾	89, 92	16, 24	15, 19, 23	406, 610	381, 483, 584
	Δ	Δ	2 ¾	70	16, 24	—	406, 610	—

\* Consult your local JM sales representative or product availability chart for other 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 and 2438 mm) batts.

Δ For sound control applications in interior walls.

c Cathedral ceiling application.

### SHORT FORM SPECIFICATION

All insulation shown on drawings or specified herein shall be "Johns Manville Unfaced Formaldehyde-free Thermal and Acoustical Fiber Glass Insulation." Thermal resistance "R" (RSI) values of the insulation shall be R (RSI) \_\_\_\_\_ in ceilings, R (RSI) \_\_\_\_\_ in walls, and R (RSI) \_\_\_\_\_ in floors over unheated spaces. The product shall have an FHC rating of 25/50 or less.

### LIMITATIONS OF USE

Check applicable building codes.



Properly insulating a structure using Johns Manville building insulation helps preserve our environment by reducing energy consumption for heating and cooling, reducing the pollution resulting from fuel burning, reducing the emission of hazardous air pollutants during manufacturing and reducing waste through the utilization of recycled materials. Look for the cross and globe emblem on Johns Manville building insulation which indicates independent certification by Scientific Certification Systems, Inc. of 25% or more recycled glass content.

Technical specifications as shown in this literature are intended to be used as general guidelines only. The physical and chemical properties of unfaced 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, call or write to the 800 number or address listed below.



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