



# Unfaced

Formaldehyde-free™ Fiber Glass Insulation

### FORMALDEHYDE-FREE™ FIBER GLASS INSULATION

Johns Manville has revolutionized the building industry by introducing an entire line of certified Formaldehyde-free fiber glass building insulation. JM Formaldehyde-free™ insulation provides the same high-quality thermal and acoustical properties as conventional fiber glass—just without the formaldehyde-based binder. Why? Because it's a smart thing to do for our customers and the environment. Formaldehyde has traditionally been used as part of the binder in fiber glass insulation. Although there is no health risk with the traditional product, formaldehyde at higher levels may cause irritation and sensitivity. JM Formaldehyde-free™ building insulation utilizes an innovative acrylic binder that eliminates binder-related formaldehyde emissions during manufacturing and, once installed, will not off-gas formaldehyde in the indoor environment. No formaldehyde means fewer things to worry about. Visit us at [www.JM.com](http://www.JM.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.

### INSTALLATION

Available in many sizes and R-values, unfaced insulation can be quickly installed for a 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 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.

### 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.

### PACKAGING

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

### SPECIFICATION COMPLIANCE

- ASTM/NZS 4859.1 for thermal performance
- AS1530.1/1994 = Non-combustible as per CSIRO report F-11-054 from 22 September 2011\*
- AS1530.3/1994 = 0;0;0;1 (as per CSIRO report F-11-054 from 22 September 2011)\*

- ASTM C665, Type I
- ASTM E136 = Noncombustible
- ASTM E84 = Flame Spread = 10 / Smoke Developed = 10
- ASTM C1104 = Water Vapor Absorption = Less than 5% by weight
- ASTM C665 = Noncorrosive
- ASTM C1338 = Does not support microbial growth

### SHORT FORM SPECIFICATIONS

All insulation shown on drawings or specified herein shall be "Johns Manville Unfaced Formaldehyde-free™ Thermal and Acoustical Fiber Glass Insulation." Thermal resistance "R" values of the insulation shall be R \_\_\_\_\_ in ceilings, R \_\_\_\_\_ in walls, R \_\_\_\_\_ in floors.

### LIMITATIONS OF USE

Check applicable building codes.



### PERFORMANCE ADVANTAGES

- JM Formaldehyde-free™ insulation – will not off-gas formaldehyde in the indoor environment.
- Thermal efficiency – provides effective resistance to heat transfer.
- Sound control – reduces transmission of sound through exterior and interior walls and floor and ceiling assemblies.
- Fire resistant and noncombustible.
- Noncorrosive – does not accelerate corrosion of pipes, wiring or metal studs.
- Durable – in normal use, it will not rot, mildew, or otherwise deteriorate.
- 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.
- Perfect for re-insulating attics.

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## PRODUCT CHARACTERISTICS AND LOADING DATA

R-Value*	Thickness mm	Width mm	Length mm	Batts/Bag	m <sup>2</sup> /Bag	Bags/Unit	m <sup>2</sup> /Unit	Units/Container	m <sup>2</sup> / Container
1.5	75	432	1,164	42	21.12	5	105.60	100	10,560
1.5	75	584	1,164	42	28.55	5	142.75	80	11,420
2.0	90	432	1,164	27	13.58	5	67.88	100	6,788
2.0	90	584	1,164	32	21.75	4	87.01	80	6,961
2.5	140	432	1,164	25	12.75	5	63.75	100	6,285
2.5	140	584	1,164	25	17.00	4	68.00	80	5,440
3.2	165	432	1,219	18	9.48	4	37.92	100	3,792
3.2	165	584	1,219	18	12.81	4	51.26	80	4,101
3.5	171.5	432	1,164	16	8.05	4	32.18	100	3,218
3.5	171.5	584	1,164	16	10.88	4	43.51	80	3,480
4.0	195	432	1,164	18	9.05	4	45.26	100	3,394
4.0	195	584	1,164	18	12.24	4	48.94	80	3,916

\*m<sup>2</sup>K/W at 23° C.

\* ASTM E 136-09 is a very similar test to that of AS 1530.1-1994, using the very similar equipment, having the same temperature exposure and very similar performance requirements. The values presented in Report Number F-11-054 would not deem the product combustible according to the test criteria specified in Clause 3.4 of AS 1530.1-1994.

Both ASTM E 136-09 and AS 1530.1-1994 are much more severe than AS/NZS 1530.3-1999. Any product that has even a small amount of combustible content will deem the product combustible according to AS 1530.1. A product that is not deemed combustible according to AS 1530.1 will not ignite when subjected to the test regime of AS/NZS 1530.3. It will also emit very little smoke, as a consequence of no significant pyrolysing constituents present in the product. Consequently, this Division would expect the product to achieve test indices of 0;0;0;1 or better when tested in accordance with AS/NZS 1530.3-1999.

Based on the fire performance of your glass-fibre insulation, at 16.8 kg/m<sup>3</sup> density, when tested to ASTM E 136-09, it is the opinion of this Division that your "Johns Manville Formaldehyde-free Fiber Glass Insulation", at a density of 16.8 kg/m<sup>3</sup> or less, would not be deemed combustible if subjected to the test conditions of AS 1530.1-1994, and would achieve test indices of 0;0;0;1 or better when tested in accordance with AS/NZS 1530.3-1999.



5% Pre-consumer  
20% Post-consumer  
SCIENTIFIC CERTIFICATION SYSTEMS

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 JM 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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