Formaldehyde-free™ Fiber Glass Insulation

Spider™

Spray-in Custom Fiber Glass Insulation and Delivery System

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 JM.com/formfree for more information.

APPLICATIONS

Thermal and Acoustical Insulation of Interior and Exterior Walls and Ceiling/Floor Assemblies

- Wood-frame construction – residential homes and light commercial buildings
- Metal-frame construction – residential and commercial buildings
- Manufactured homes – modular or manufactured housing
- Engineered-wood construction – assemblies framed with 12" to 19.2" on-center cavities

INSTALLATION

Equipment for JM Spider installation is engineered for professional use. The Spider Insulation Delivery System is compatible with most fiber glass blowing machines and includes the following pieces of equipment:

- High-pressure adhesive pump and hose
- Vacuum fan and generator
- Blowing nozzle attachments
- Portable adhesive tank
- Blowing and vacuum hoses
- Wall scrubber

Contact your local JM sales representative for a certified Spider contractor. Visit **JM.com/builder** for additional information including information sheets on drying time and acoustical performance advantages.

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

Spider insulation meets ASTM C 764, "Standard Specification for Mineral Fiber Loose-Fill Thermal Insulation." Spider system meets all building code fire test requirements for concealed and exposed insulation (see following page for a complete list of test results).

PACKAGING

JM Spider loose-fill fiber glass insulation is available in 30-lb. bags. JM Spider adhesive comes in totes and 55-gallon drums.

SHORT FORM SPECIFICATIONS

All insulation shown on drawings or specified herein shall be "Spider Custom Insulation System" as manufactured by Johns Manville. 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.

LIMITATIONS OF USE

Check applicable building codes.

PERFORMANCE ADVANTAGES:

- Improves indoor air quality – because it's made without formaldehyde.
- Energy efficient – provides superior resistance to heat transfer with R-values up to R-23 in a 2x6 cavity.
- Covers completely – gap-free coverage maximizes thermal and acoustical performance and minimizes air leakage where energy can escape.
- Resilient – revolutionary adhesive binder and lightweight fiber glass prevent settling.
- Controls sound – reduces transmission of sound through exterior and interior walls and floor/ceiling assemblies. See the Spider Acoustical Performance Advantages sheet (BID-0080) for details.
- Easy to install – insulates a typical 2,700 sq. ft. home in 2-3 hours, twice as fast as cellulose.
- Mold- and mildew-resistant – fiber glass is naturally mold-resistant; adhesive contains an EPA-registered mold inhibitor to further protect the product from mold and mildew.
- Fire-resistant and noncombustible – see Test Data.
- Noncorrosive – does not accelerate corrosion of pipes, wiring or metal studs.
- Durable – will not rot, mildew or otherwise deteriorate. Spider will not hold moisture or permanently lose R-value.
- Fast-drying – requires less moisture than cellulose during installation and dries immediately when installed as recommended. See the Spider Drying Time Information sheet (BID-0082) for details.

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TEST DATA

Test Method	Results
ASTM E 84 and CAN/ULC S102.2 *Surface Burning*	Flame spread less than 25, smoke developed less than 50
ASTM E 136 *Combustion Characteristics*	Pass, indicating non-combustible material
ASTM E 970 *Critical Radiant Flux*	Greater than 0.12 W/sq.cm., passing for exposed attic installation
ASTM C 1338 *Fungi Resistance of Insulation Materials*	Pass, with no growth
ASTM G 21 *Fungi Resistance of Synthetic Polymeric Materials*	Pass, with no growth

Test Method	Results
ASTM C 764 *Corrosiveness*	No greater than sterile cotton for steel, copper, aluminum
ASTM C 518 *Thermal Performance – Heat Flow Meter*	See coverage chart for standard R-values
ASTM C 1104/C 1104M *Water Vapor Sorption*	5% or less by weight
ASTM C 1304 *Odor Emission*	No objectionable odor
ES Section 01350 *VOC Emissions*	Pass, with no hazardous emissions

WALL AND OVERHEAD COVERAGE FOR SPIDER SPRAY-IN CUSTOM FIBER GLASS INSULATION

Thermal Resistance R-value	Cavity Depth/ Installed Thickness inches	Minimum Installed Density lbs/ft³	Minimum Mass Per Unit Area lbs/ft²	Maximum Net Coverage* ft²/bag	Bags Per 1000 ft²	Adhesive Use Per 1000 ft² gallons		
Wood Framing								
13	3.50	1.0	0.29	102.9	9.7	4.9	to	7.3
15	*(Nominal 2x4)*	1.8	0.53	57.1	17.5	8.8	to	13.1
20	5.50	1.0	0.46	65.5	15.3	7.6	to	11.5
23	*(Nominal 2x6)*	1.8	0.83	36.4	27.5	13.8	to	20.6
27	7.25	1.0	0.60	49.7	20.1	10.1	to	15.1
30	*(Nominal 2x8)*	1.8	1.09	27.6	36.3	18.1	to	27.2
34	9.25	1.0	0.77	38.9	25.7	12.8	to	19.3
38	*(Nominal 2x10)*	1.8	1.39	21.6	46.3	23.1	to	34.7
42	11.25	1.0	0.94	32.0	31.3	15.6	to	23.4
47	*(Nominal 2x12)*	1.8	1.69	17.8	56.3	28.1	to	42.2
Steel Studs, Purlins, Engineered Lumber, etc.								
15	4.0	1.0	0.33	90.0	11.1	5.6	to	8.3
17		1.8	0.60	50.0	20.0	10.0	to	15.0
22	6.0	1.0	0.50	60.0	16.7	8.3	to	12.5
25		1.8	0.90	33.3	30.0	15.0	to	22.5
30	8.0	1.0	0.67	45.0	22.2	11.1	to	16.7
33		1.8	1.20	25.0	40.0	20.0	to	30.0
37	10.0	1.0	0.83	36.0	27.8	13.9	to	20.8
41		1.8	1.50	20.0	50.0	25.0	to	37.5
45	12.0	1.0	1.00	30.0	33.3	16.7	to	25.0
50		1.8	1.80	16.7	60.0	30.0	to	45.0

*Net coverage area per bag—does not include framing adjustment.

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

Johns Manville

Distributed by:

R-ProSelect
209 Cane Creek Road
Fletcher, NC 28732
828.651.9696

www.r-proselect.com
GFRPRO@aol.com