

Formaldehyde-free" Fiber Glass Insulation

# **Building Insulation Submittal Form**



JM Formaldehyde-free<sup>™</sup> fiber glass building insulation offers the thermal and acoustical performance you expect from fiber glass—and it improves indoor air quality, because it's made without formaldehyde. Why is that important? Because limiting overall exposure to formaldehyde can create a healthier living environment, and choosing JM is one way of achieving that goal. JM offers a complete line of Formaldehyde-free<sup>™</sup> fiber glass building insulation.

This form is provided to help you select and specify the proper fiber glass building insulation. Also included are basic performance data and specification compliances. For more information or technical assistance, contact your local sales representative.

If you are interested in other Johns Manville building products, such as Gorilla Wrap<sup>™</sup> Housewrap or Vent Chutes, please see the section following insulation products.

#### For more information on Johns Manville products, call 1-800-654-3103 or visit specJM.com

Submitted to:	
Submitted by:	Date:
Job Reference:	
Job Name:	

### **Fiber Glass Insulation Products**



M	aterials Provided	Product Description	R-value/Size (thickness, nominal)	RSI-value/Size (thickness, nominal)	Location	Specification Compliance
	FSK-25 Faced Batts FORMALDEHYDE-FREE™	Fiber glass batts for thermal and acoustical applications faced with a flame-resistant, foil-scrim-Kraft laminate. Meets ASTM E 84 flame/ smoke rating of 25/50 or less. The reflective foil facing has a maximum perm rating of 0.05 Grains/hr $\cdot$ ft <sup>2</sup> $\cdot$ in. Hg (2.9 ng/s $\cdot$ m <sup>2</sup> $\cdot$ Pa).	FOR METAL FRAMING           R-30/10¼"           R-19/6½"           R-13/3½"           R-11/3%"           FOR WOOD FRAMING           R-19/6½"           R-19/6½"           R-13/3½"	RSI-5.3/260 mm RSI-3.3/165 mm RSI-2.3/89 mm RSI-1.9/92 mm RSI-3.3/165 mm RSI-2.3/89 mm		ASTM Standard C 665 Type III Class A Category 1
	ComfortTherm® Poly-encapsulated Batts with Vapor- retarder Facing FORMALDEHYDE-FREE™	Poly-encapsulated batts for thermal and acoustical applications are designed for concealed metal and wood-framed wall and ceiling applications, directly above suspended ceiling systems and under floors. Poly-encapsulation makes installation cleaner and acts as a vapor retarder. Wrapped in polyethylene film with maximum perm rating of 0.5 Grains/hr • ft <sup>2</sup> • in. Hg (29 ng/s • m1 pt • Pa). These batts resist heat, sound and vapor transmission. Meets Fire Hazard Classification rating of 25/50 or less.	FOR METAL FRAMING         R-30/10¼"         R-19/6½"         R-13/3½"         R-11/3½"         FOR WOOD FRAMING         R-38c/10¼"         R-30/10¼"         R-21/5½"         R-13/3½"         R-13/3½"         FOR WOOD FRAMING         R-30/10¼"         R-30/10¼"         R-19/6½"         R-11/3½"         FOR WOOD FRAMING         R-11/3½"         FOR WOOD FRAMING         R-19/6½"	RSI-5.3/260 mm RSI-3.3/165 mm RSI-2.3/89 mm RSI-1.9/92 mm RSI-5.3/260 mm RSI-5.3/260 mm RSI-3.7/140 mm RSI-3.3/165 mm RSI-2.3/89 mm RSI-1.9/89 mm <b>UNDER FLOORS (REVERS</b> RSI-3.3/165 mm	  E FLANGE)	ASTM Standard C 665 Type II Class A Category 1 (non-perforated surface)
	ComfortTherm® Poly-encapsulated Batts with Non- vapor-retarder Facing FORMALDEHYDE-FREE™	ComfortTherm Poly-encapsulated Batts are also available with a non-vapor-retarder facing, recommended for hot, humid climates and over existing attic insulation.	<b>FOR WOOD FRAMING</b> □ R-30/10¼" □ R-19/6½" □ R-13/3½" □ R-11/3½"	RSI-5.3/260 mm RSI-3.3/165 mm RSI-2.3/89 mm RSI-1.9/89 mm		ASTM Standard C 665 Type II Class A Category 2 UL File R3711 ASTM E 84 Flame Spread 25 or less Smoke Developed 50 or less ASTM E 96 Permeability 10 Perms
	EasyFit® Vertically Perforated Batts <i>FORMALDEHYDE-FREE™</i>	Pre-cut, perforated batts come in a variety of sizes and R-values for thermal and acoustical use in nonstandard width cavities. Eliminates time-consuming hand cutting and enables a faster, safer and easier installation.	EASYFIT KRAFT-FACE R-21/5½" R-19/6½" R-15/3½" R-13/3½" EASYFIT UNFACED FO R-21/5½" R-19/6½" R-19/6½" R-15/3½" R-13/3½"	D FOR WOOD FRAMING RSI-3.7/140 mm RSI-3.3/165 mm RSI-2.6/89 mm RSI-2.3/89 mm R WOOD FRAMING RSI-3.7/140 mm RSI-3.3/165 mm RSI-2.6/89 mm RSI-2.3/89 mm		ASTM Standard C 665 Type I (Unfaced) Type II (Kraft-Faced) Class C Category 1

### **Fiber Glass Insulation Products**



Materials Provided	Product Description	R-value/Size (thickness, nominal)	RSI-value/Size (thickness, nominal)	Location	Specification Compliance
□ Unfaced Batts FORMALDEHYDE-FREE™	Fiber glass insulation for thermal and acoustical applications with no facing. When vapor control is required, a separate vapor retarder such as 4 mil (0.1 mm) or thicker polyethylene may be installed.	FOR METAL FRAMING R-30/10/%" R-25/8%" R-21/5%" R-19/6%" *R-13/3%" R-11/3%" N/A/2%"	G RSI-5.3/260 mm RSI-4.4/210 mm RSI-3.7/140 mm RSI-3.3/165 mm RSI-2.3/89 mm RSI-1.9/92 mm N/A/70 mm		ASTM Standard C 665 Type I
	*For sound control in interior walls	FOR WOOD FRAMING           R-38/13"           R-38c/10½"           R-30c/10½"           R-30c/8½"           R-25/8½"           R-22/7½"           R-21/5½"           R-19/6½"           R-15/3½"           R-13/3½"           R-11/3½"	G RSI-6.7/318 mm RSI-6.7/260 mm RSI-5.3/260 mm RSI-5.3/210 mm RSI-4.4/210 mm RSI-3.9/190 mm RSI-3.9/190 mm RSI-3.3/165 mm RSI-3.3/165 mm RSI-2.6/89 mm RSI-2.3/89 mm		
□ Foil-Faced Batts FORMALDEHYDE-FREE™	Fiber glass batts for thermal and acoustical applications with a foil/Kraft laminate facing. The facing provides a maximum perm rating of 0.05 Grains/hr • ft <sup>2</sup> • in. Hg (2.9 ng/s • m <sup>2</sup> • Pa). The foil facing meets ASTM E 84 flame/smoke rating of 75/150 or less. It is not for use in exposed applications.	FOR METAL FRAMING           R-30/10¼"           R-19/6½"           R-13/3½"           R-11/3¾"	G RSI-5.3/260 mm RSI-3.3/165 mm RSI-2.3/89 mm RSI-1.9/92 mm		ASTM Standard C 665 Type III Class B Category 1
□ Kraft-Faced Batts FORMALDEHYDE-FREE™	Fiber glass batts for thermal and acoustical applications faced with a flanged, Kraft paper vapor retarder with a maximum perm rating of 1.0 Grains/hr • ft² • in. Hg (57 ng/s • m² • Pa). The Kraft facing is flammable and must not be left exposed.	FOR METAL FRAMING           R-19/6½"           R-13/3½"           R-11/3%"           FOR WOOD FRAMING           R-38/13"           R-38/13"           R-38/13"           R-30/10¼"           R-30/10¼"           R-30/10¼"           R-30/10¼"           R-30/10¼"           R-25/8¼"           R-25/8¼"           R-21/5½"           R-15/3½"           R-15/3½"           R-13/3½"	G RSI-3.3/165 mm RSI-2.3/89 mm RSI-1.9/92 mm S RSI-6.7/318 mm RSI-6.7/260 mm RSI-5.3/260 mm RSI-5.3/260 mm RSI-3.2/10 mm RSI-3.3/165 mm RSI-3.3/165 mm RSI-3.3/165 mm RSI-3.3/165 mm RSI-2.6/89 mm RSI-2.3/89 mm		ASTM Standard C 665 Type II Class C Category 1
MR <sup>®</sup> Faced Batts FORMALDEHYDE-FREE™	Fiber glass batts for thermal and acoustical applications with a flanged facing treated with an EPA-registered mold inhibitor. This inhibitor protects the insulation against the growth of mold, mildew and fungi. The facing is also a "smart" vapor retarder so that in extreme humidity, the permeability doubles to allow moisture to escape at a faster rate.	FOR METAL FRAMING         R-19/6½"         R-11/3½"         FOR WOOD FRAMING         R-30/10¼"         R-19/6½"         R-15/3½"         R-13/3½"	G (made to order) RSI-3.3/165 mm RSI-1.9/92 mm G RSI-5.3/260 mm RSI-3.3/165 mm RSI-2.6/89 mm RSI-2.3/89 mm		ASTM C 665 Type II Class C Category 1 ASTM E 96 Permeability; Kraft ≤ 1 Perm ASTM C 1338 No Growth ASTM D 2020* Fungus-resistant * Facing test method standardized for asphalt-coated Kraft

### **Fiber Glass Insulation Products**

M	aterials Provided	Product Description	R-value	Installed Thickness	Settled Thickness	Bags per 1000 ft.²	Maximum Net Coverage (ft²/bag)	Minimum Weight per Square Foot (lb/ft²)
	Climate Pro®	Premium unbonded fiber glass	60	22.8"	22.7"	38.2	26	0.974
	<b>Blow-in Insulation</b>	blowing wool for pneumatic blowing	49	19.1"	19.0"	30.4	33	0.774
		machine installation in attics.	44	17.4"	17.3"	26.9	37	0.686
	FORMALDEHYDE-FREE™		38	15.3"	15.1"	22.9	44	0.583
			30	12.4"	12.2"	17.6	57	0.450
			26	10.9"	10.7"	15.1	66	0.385
			22	9.3"	9.2"	12.6	79	0.322
			19	8.1"	8.0"	10.8	93	0.276
			13	5.7"	5.6"	7.2	138	0.185
			11	4.9"	4.8"	6.1	164	0.155
	Climate Pro BIBC®	Promium unbondod fibor glass	20			60 5	14.4	1 77
	Blow In Blankot®	blowing wool for installation in enclosed cavities using the Blow-In-Blanket System (BIBS)*	36	9.25" <i>(</i> /	5" (Nominal 2x10)	54 A	14.4	1.77
	DIUW-III-DIdlikel"		30		7.25" (Nominal 2x8) 5.50" (Nominal 2x6)	54.4	10.4	1.33
	System		28	7.25" (/		42.6	23 /	1.00
	FORMALDEHYDE-FREE™		20			41.3	23.4	1.05
			23	5.50" <i>(1</i>		32.4	30.9	0.83
		are registered trademarks of Ark-Seal	15			26.3	38.0	0.60
		International.	14	3.50" (/	Nominal 2x4)	20.6	48.6	0.53
	JM Spider® Spray-in	Lightweight spray-in fiber glass	23			27.5	36.4	0.83
	<b>Custom Fiber Glass</b>	insulation bound together with a	22	5.50" (/	Vominal 2x6)	21.4	46.8	0.64
	Insulation	non-toxic, water-soluble adhesive	20			15.3	65.5	0.46
		that also binds to cavity surfaces.	15			17.5	57.1	0.53
	FORMALDEHYDE-FREE™	It completely fills gaps for	14	3.50" (/	Vominal 2x4)	13.6	73.5	0.41
		superior thermal and acoustical	13			9.7	102.9	0.29
		performance. It resists mold and mildew, is fast and easy to install and dries guickly.	Specifica	tion Complia	ance			

**Specification Compliance** ASTM Standard C 1014 ASTM Standard C 764 The JM Spider system meets all building code fire test requirements for concealed and exposed insulation.

Materials Provided	Product Description	R-value/Size (thickness, nominal)	RSI-value/Size (thickness, nominal)	Location	Specification Compliance
□ Panel Deck FSK-25 Faced Batts FORMALDEHYDE-FREE™	Fiber glass batts for thermal and acoustical applications faced with an extended tab, flame-resistant, foil-scrim-Kraft laminate facing.	□ R-30/10¼" □ R-19/6½"	RSI-5.3/260 mm RSI-3.3/165 mm		ASTM Standard C 665 Type III Class A Category 1
□ Panel Deck PSK-Faced Batts FORMALDEHYDE-FREE™	Fiber glass batts for thermal and acoustical applications faced with extended tab, flame-resistant, white, polypropylene-scrim-Kraft laminate facing.	□ R-19/6½"	RSI-3.3/165 mm		ASTM Standard C 665 Type II Class A Category 1
☐ ITP Concrete Wall Insulation™ System FORMALDEHYDE-FREE™	White WMP-10 faced fiber glass insulation used to increase thermal performance of concrete walls.	□ R-10/2¼"	RSI-1.76/57 mm		ASTM Standard C 612 Type IA
Basement Wall           Insulation           FORMALDEHYDE-FREE™	Fiber glass blanket, either unfaced or white polypropylene faced, designed to insulate basement or crawl space walls without framing. The faced product with seams taped provides a finished wall surface.	FOR WOOD FRAMI           R-11/3½" Unfa           R-11/3½" Face           R-11/3½" Face           R-11/3½" Perf	NG aced ed forated Facing		ASTM Standard C 665 Type I Unfaced ASTM Standard C 665 Type II, Class A Category 1 (faced

Category 2 (perforated facing)

not present.

Μ	aterials Provided	Product Description	Location	
	Insul-SHIELD® Insulation	A series of flexible, semi-rigid or rigid fiber glass boards available unfaced or with FSK (foil-scrim-Kraft facings), white PSK (polypropylene-scrim-Kraft facings), or black mat facings in the density/thermal ranges listed below. Coated Black Insul-SHIELD is available in roll form. Because of its rigidity, the insulation can often be used where framing is		

### **Physical Properties**

	Den	isity	"k" value	es*	Thickness		R-value*	RSI*
Product Name	lb/ft <sup>3</sup>	kg/m³	Btu•in (hr•ft²•°F)	W m•K	inches	mm	(hr•ft²• °F) Btu	m² ∙ K/W
I/S 100	1.0	16.0	0.27	0.039	1½	38	5.6	0.99
I/S 150	1.50	24.0	0.24	0.035	1**	25	4.2	0.74
					1½**	38	6.3	1.11
					2**	51	8.3	1.46
					<b>2</b> ½**	64	10.4	1.83
					3	76	12.5	2.20
					3½	89	14.6	2.57
					4	102	16.7	2.94
I/S 225	2.25	36.1	0.23	0.033	1**	25	4.3	0.76
					1½**	38	6.5	1.14
					2**	51	8.7	1.53
					2½**	64	10.9	1.92
					3**	76	13.0	2.29
					3½	89	15.2	2.68
					4	102	17.4	3.06
I/S 300	3.0	48.1	0.23	0.033	1**	25	4.3	0.76
					1½**	38	6.5	1.14
					2**	51	8.7	1.53
					<b>2</b> ½**	64	10.9	1.92
					3**	76	13.0	2.29
					3½	89	15.2	2.68
					4	102	17.4	3.06
I/S 600	6.0	96.1	0.22	0.032	1**	25	4.5	0.79
					1½**	38	6.8	1.20
					2**	51	9.1	1.60
					<b>2</b> ½	64	11.4	2.01
					3	76	13.6	2.40
I/S Coated			0.25	0.036	1	25	4.0	0.70
Black					2	51	8.0	1.41

\*Thermal properties per ASTM C 518 \*\*Black Mat Insul-SHIELD available for these thicknesses only. Other thicknesses available by special order and subject to minimums.

#### **Specification Compliance**<sup>+</sup>

	I/S	I/S	I/S	I/S	I/S	I/S Coated
Туре	100	150	225	300	600	Black
ASTM C 612, Type IA, Category 1**	Х	Х	Х	Х	Х	Х
ASTM C 612, Type IB, Category 1**		Х	Х	Х	Х	
ASTM C 612, Type IB, Category 2**				Х	Х	
ASTM C 553, Type I and II**	Х	Х				
ASTM C 665, Type I**	Х	Х				
ASTM C 665, Type III, Class A, Category 1**	Х					
ASTM E 136 (Noncombustible)	Х	Х	Х	Х		Х
ASTM E 84 (Flame/Smoke 25/50 or less)	Х	Х	Х	Х	Х	Х

+When ordering material under a government specification that requires specific lot testing and certification of compliance prior to shipment, this must be requested on the purchase order. There may be additional charges for specification compliance testing. ++Not tested for use at elevated temperatures.

## Foam Sheathing Insulation Products

Materia	als Provided	Product Description	R-value/Size (thickness, nominal)	Location	Specification Compliance
□ AP <sup>™</sup> Poly Foa	<sup>™</sup> Foil-Faced yisocyanurate m Sheathing	Rigid foam sheathing insulation for non-exposed uses in commercial and residential construction. Composed of a polyisocyanurate foam core bonded on each side to foil laminate facers.	R-22.8/3½"         R-19.5/3"         R-16.3/2½"         R-13.0/2"         R-9.8/1½"         R-6.5/1"         R-5.0/¾"         R-4.1/5⁄″         R-3.3/½"		ASTM C 1289, Type I Class 1
□ Ven Nai Inst	nted ilboard® ulation	Rigid roof insulation panel composed of a polyisocyanurate foam core attached with wood spacers to ‰" or ‰" OSB on one side and a universal fiber glass- reinforced facer on the other. Spacers provide ventilation space, allowing airflow in any direction.	Includes 7/16" OSB:         R-25/5½"         R-23.4/5½"         R-21.7/5"         R-20.1/4¾"         R-18.5/4½"         R-16.9/4¼"         R-15.3/4"         R-13.7/3¾"         R-12.1/3½"         R-10.5/3¼"         R-9/3"         R-7.5/2¾"		ASTM C 1289-01 Type V
□ Nai Insu	ilboard® ulation	Rigid roof insulation composed of a polyisocyanurate foam core attached to ¼" or ¾" OSB on one side and a universal fiber glass- reinforced facer on the other.	Includes <sup>7</sup> /16" OSB:           R-25.6/4½"           R-22.3/4"           R-19.1/3½"           R-15.9/3"           R-12.7/2½"           R-9.6/2"           R-6.6/1½"		ASTM C 1289, Type V F.S. HH-I-1972/GEN and HH-I-1972/2
Othe	or Ruildi	na Products	Includes ⁵/₅" OSB: R-25.7/4½" R-22.4/4" R-19.2/3½" R-16.0/3" R-12.8/2½" R-9.7/2" R-6.7/1½"		
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**JM** Johns Manville

<b>Materials Provided</b>	Product Description	Size	Location	Specification Standards
☐ Gorilla Wrap™ Housewrap	Non-perforated, non-woven, high-tear- strength polymeric wrap for residential and commercial use. Designed to significantly reduce infiltration of air and water into the wall cavity, during and after construction.	<ul> <li>9' x 100'</li> <li>9' x 150'</li> <li>10' x 100'</li> <li>10' x 150'</li> </ul>		AATCC 127-1995, 407 cm ASTM E-96-95 Procedure A, 24 perms TAPPI T-460 Gurley-Hill, > 2500 sec/ 100 cc
Vent Chute	Rigid foam channel that creates a ventilation space between the roof deck and insulation to relieve heat and moisture buildup in the attic.	Perforated for 16" o.c. joists (48" x 11" channel or 24" o.c. joists (48" x 22" channel	)	

#### **FIRE SAFETY**

Johns Manville Fiber Glass Building Insulation, without facing, has been tested in accordance with ASTM E 84 and has a flame spread rating of less than 25 and a smoke developed rating of less than 50. UL Label File R-3711 available upon request, documenting a Fire Hazard Classification rating of 25/50 or less. Unfaced fiber glass insulation has passed the ASTM E 136 test and is therefore considered noncombustible by the major building codes. When provided with a standard vapor retarder, the composite product cannot be classified as "noncombustible" as defined in most building codes. Vapor retarders (unless Class A rated) will burn and must not be left exposed. They must be covered with gypsum board or other code-approved materials and installed in compliance with all building codes. To prevent a fire, keep open flames and other sources of heat away from the facing. Faced insulations listed as ASTM C 665, Class A have achieved a flame spread rating of 25 or less, and a smoke developed rating of 50 or less per ASTM E 84 test method. (See additional information in "Guide Specifications" section of this form.)

# Guide Specifications for Johns Manville Fiber Glass Thermal and Acoustical Insulations

Note to the specifier: Delete sections not used; fill in correct selections where indicated and/or add other information as required.

Specifications apply to wall, ceiling and/or floor insulation, both thermal and acoustical, except where noted.

Insulation materials meet the Insulation Quality Standards of the State of California and the Minnesota Thermal Insulation Standards.

#### I. SCOPE

**A.** The general conditions in Division 1 of this specification form an integral part of the contract for the work specified in this section and all conditions contained therein shall be binding upon the contractor and shall govern the work.

**B.** No substitution will be permitted for materials and methods covered in this section.

#### **II. WORK INCLUDED**

A. The work under this section of the specifications shall include furnishing all supervision, labor, materials, tools and equipment, and performing all operations necessary for the complete insulation system as described in the drawings and specifications in a first-class workmanlike manner.

#### **III. GENERAL REQUIREMENTS**

**A**. All materials must be delivered in original unopened packages with manufacturer's name and contents legibly indicated. Store insulation indoors. Keep insulation clean and dry at all times. When transporting, cover completely with a waterproof tarpaulin as necessary. **B.** All work, by other trades, to be concealed by insulation must be inspected and approved by those having jurisdiction; execution of the insulation installation shall not proceed until so authorized.

#### IV. MATERIALS (REPEAT FOR EACH LOCATION) THERMAL-ACOUSTICAL INSULATION

A. Insulation for (location: ceilings, walls, floors, etc.) shall be Johns Manville Formaldehyde-free™\* fiber glass insulation (Unfaced, Kraft-Faced, MR® Faced, ComfortTherm,® Climate Pro,® JM Spider,® FSK-25 flame-resistant foil-faced, Foil-faced or Insul-SHIELD®) fiber glass in roll, batt, board or loose fill form, (thickness) thick, R-value\*\* (specify).

\*\*Strike "Formaldehyde-free™" if specifying Insul-SHIELD \*\*2¾" sound control batts do not carry an R-value.

#### **V. INSTALLATION**

**Note:** The following apply to both thermal and acoustical applications *except* for B and C, which apply to thermal applications only.

**A.** Installation of the insulation shall be in accordance with the applicable building code, industry standards and any specific instructions on the product package.

**B.** Insulation shall fit all framing spaces, including areas between joists and outside headers, behind electrical outlets and piping, and other areas, to form a complete insulating blanket around the heated or cooled areas of the structure. **C.** 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 predominately hot, humid climates local practices often call for placing the vapor retarder toward the outside of the wall cavity or omitting the vapor retarder. Check your local building codes for vapor retarder requirements.

D. Standard kraft and standard foil facings are combustible and must not be left exposed. Where exposed application is desirable and permitted by applicable codes, FSK-25 flame-resistant facing must be used.<sup>+</sup>

E. Insulation should not be installed over or within 3" (76 mm) of fixtures containing lights, fans or other heat-generating electrical devices. Baffles should be used to maintain these clearances. Failure to do so may result in damage to these devices. To determine insulation clearance requirements, local building code requirements must be followed. IC-rated light fixtures may be covered with insulation.

Metal flues from furnaces, hot water tanks, etc., and some types of chimneys require 1" (25 mm) or more clearance from combustible materials. Some may require clearance from noncombustible materials (per ASTM E 136) like unfaced fiber glass insulation. Equipment and appliance manufacturer's instructions and local building codes shall be consulted for specific insulation clearance requirements.

<sup>+</sup>Johns Manville Fiber Glass Building Insulations, exclusive of facings, have passed the ASTM E 136 test. Products that pass this test are considered noncombustible by the major 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 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 or for information on other Johns Manville thermal and acoustical insulation and systems, call or write to the 800 number or address listed on this page.



### Johns Manville Insulation Systems

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