



#### **JOHNS MANVILLE: A HISTORY OF INNOVATION**

Johns Manville is the only manufacturer of fiber glass, polyurethane spray foam and polyisocyanurate insulation. This allows Johns Manville to offer a complete range of solutions that includes foam and fiber glass products, so you can be certain that our team of experts will direct you to the best insulation option to suit your particular requirements.

In our 150-year history at the forefront of insulation production, we are not just the only manufacturer with a wide range of insulation solutions, but we also led the way as the first to offer a full line of certified Formaldehyde-free  $^{\text{\tiny M}}$  fiber glass building insulation.

Contact your local Johns Manville representative today and find the easiest way to achieve energy efficiency in your builds through our foam and fiber glass insulation solutions. Visit specJM.com for more information.

Submitted To:	
Submitted By:	Date:
Job Reference:	
Job Name:	
	Zip:
Email Address:	
	Fax:



## FIBER GLASS INSULATION PRODUCTS

MATERIALS PROVIDED	PRODUCT DESCRIPTION	R-VALUE/SIZE (thickness, nominal)	RSI-VALUE/SIZE (thickness, nominal)	LOCATION	SPECIFICATION COMPLIANCE
FSK-25 FACED BATTS	Fiber glass batts for thermal and acoustical	FOR METAL FRAMING			ASTM
 JM	applications faced with a flame-resistant,	R-30/101/4"	RSI-5.3/260 mm		Standard C665
FORMALDEHYDE-FREE™ INSULATION	foil-scrim-kraft laminate. Meets ASTM E84 flame/smoke rating of 25/50 or less. The	R-19/6½"	RSI-3.3/165 mm		Type III Class A
INSULATION	reflective foil facing has a maximum perm	R-13/3½"	RSI-2.3/89 mm		Category 1
	rating of 0.05 Grains/hr • ft² • in. Hg (2.9 ng/s • m² • Pa).	R-11/3¾"	RSI-1.9/92 mm		
	ing/5 × iii × i dj.	FOR WOOD FRAMING			
		R-19/6½"	RSI-3.3/165 mm		
		R-13/3½"	RSI-2.3/89 mm		
COMFORTTHERM®	Poly-encapsulated batts for thermal and	FOR METAL FRAMING			ASTM
POLY-ENCAPSULATED BATTS with	acoustical applications are designed for concealed metal and wood-framed	R-30/10 <sup>1</sup> / <sub>4</sub> "	RSI-5.3/260 mm		Standard C665 Type II
Vapor-retarder Facing	wall and ceiling applications, directly	R-19/6½"	RSI-3.3/165 mm		Class A
JM	above suspended ceiling systems and	R-13/3½"	RSI-2.3/89 mm		Category 1
FORMALDEHYDE-FREE™	under floors. Poly-encapsulation makes installation cleaner and acts as a vapor	R-11/3 <sup>5</sup> / <sub>8</sub> "	RSI-1.9/92 mm		(non-perforated surface)
INSULATION	retarder. Wrapped in polyethylene film	FOR WOOD FRAMING	_		Surface)
	with maximum perm rating of 0.5 Grains/	R-30/101/4"	RSI-5.3/260 mm		UL File R3711
	hr • ft² • in. Hg (29 ng/s • m² • Pa). These batts resist heat, sound and	R-21/5½"	RSI-3.7/140 mm		ASTM E84 Flame Spread 25 or less
	vapor transmission. Meets Fire Hazard	R-19/6½"	RSI-3.3/165 mm		Smoke Developed
	Classification rating of 25/50 or less.	R-13/3½"	RSI-2.3/89 mm		50 or less
		R-11/3½"	RSI-1.9/89 mm		
		FOR WOOD FRAMING U (REVERSE FLANGE)	INDER FLOORS		
		R-19/6½"	RSI-3.3/165 mm		
COMFORTTHERM®	ComfortTherm Poly-encapsulated Batts are	FOR WOOD FRAMING	_		ASTM
POLY-ENCAPSULATED BATTS with	also available with a non-vapor-retarder facing, recommended for hot, humid	R-30/101/4"	RSI-5.3/260 mm		Standard C665 Type II
Non-vapor-retarder	climates and over existing attic insulation.	R-19/6½"	RSI-3.3/165 mm		Class A
Facing .	i i	R-13/3½"	RSI-2.3/89 mm		Category 2
JM		R-11/3½"	RSI-1.9/89 mm		UL File R3711 ASTM E84 Flame
FORMALDEHYDE-FREE™ INSULATION					Spread 25 or less
INSOLATION					Smoke Developed
					50 or less ASTM E96
					Permeability 10
					Perms
EASYFIT®	Pre-cut, perforated batts come in a variety	EASYFIT KRAFT-FACED	FOR WOOD FRAMING		ASTM
VERTICALLY	of sizes and R-values for thermal and	R-21/5½"	RSI-3.7/140 mm		Standard C665
PERFORATED BATTS	acoustical use in nonstandard-width cavities. Eliminates time-consuming	R-19/6½"	RSI-3.3/165 mm		Type I (Unfaced) Class A
JM FORMALDEHYDE-FREE™	hand-cutting and enables a faster and	R-15/3½"	RSI-2.6/89 mm		Category 2
FURMALDEHYDE-FKEE™ INSULATION	easier installation.	R-13/3½"	RSI-2.3/89 mm		Type II
		EASYFIT UNFACED FOR			(Kraft-Faced) Class C
		R-21/5½"	RSI-3.7/140 mm		Category 1
		R-19/6½"	RSI-3.3/165 mm		
		R-13/3½"	RSI-2.3/89 mm		



## **FIBER GLASS INSULATION PRODUCTS**

MATERIAL C PROVIDER	DRODUCT DECORIDATION	R-VALUE/SIZE	RSI-VALUE/SIZE	LOCATION	SPECIFICATION
MATERIALS PROVIDED	PRODUCT DESCRIPTION	(thickness, nominal) FOR METAL FRAMING	(thickness, nominal)	LOCATION	COMPLIANCE
UNFACED BATTS	Fiber glass insulation for thermal and acoustical applications with no facing.	<u> </u>	RSI-4.4/210 mm		ASTM Standard C665
JM FORMALDEHYDE-FREE™	When vapor control is required, a separate	R-25/8 <sup>1</sup> / <sub>4</sub> "	RSI-3.7/140 mm		Type I
INSULATION	vapor retarder, such as 4 mil (0.1 mm) or thicker polyethylene, may be installed.	R-21/5½"	<u> </u>		Class A Category II
	of thicker polyethylene, may be instance.	R-19/6½"	RSI-3.3/165 mm		oategory ii
		R-13/3½"	RSI-2.3/89 mm		
		*R-11/3%"	RSI-1.9/92 mm		
		N/A/2¾" FOR WOOD FRAMING	N/A/70 mm		
		<u> </u>	DCI 0.7/205 220		<u> </u>
		**R-38/13" + 12"	RSI-6.7/305 mm + 330 mm		
		R-38c/10½"	RSI-6.7/260 mm		
		R-30/10 <sup>1</sup> / <sub>4</sub> "	RSI-5.3/260 mm		
		R-30c/8 <sup>1</sup> / <sub>4</sub> "	RSI-5.3/210 mm		
		R-25/8 <sup>1</sup> / <sub>4</sub> "	RSI-4.4/210 mm		
		R-22/7½"	RSI-3.9/190 mm RSI-3.7/140 mm		
		R-21/5½"	RSI-3.3/165 mm		
		R-19/6½" R-15/3½"	RSI-2.6/89 mm		
	*For sound control in interior walls.	<b>⊢</b>	RSI-2.3/89 mm		
	**Willows only (12").	R-13/3½"	<u> </u>		
FOIL-FACED BATTS	Fibra along botto for the area of an advantage	R-11/3½" FOR METAL FRAMING	RSI-1.9/89 mm		ASTM
	Fiber glass batts for thermal and acoustical applications with a foil/kraft laminate facing.		RSI-5.3/260 mm		Standard C665
JM FORMALDEHYDE-FREE™	The facing provides a maximum perm rating	R-30/10 <sup>1</sup> / <sub>4</sub> "	RSI-3.3/165 mm		Type III
INSULATION	of 0.05 Grains/hr • ft2 • in. Hg (2.9 ng/s • m2 • Pa). The foil facing meets ASTM E84	R-19/6½"	RSI-2.3/89 mm		Class B Category 1
	flame/smoke rating of 75/150 or less. It is	R-13/3½"	RSI-1.9/92 mm		outogory 1
	not for use in exposed applications.	R-11/3%"	N31-1.9/92 IIIII		
KRAFT-FACED BATTS	Fiber gless bette for thermal and acquetical	FOR METAL FRAMING			ASTM
	Fiber glass batts for thermal and acoustical applications faced with a flanged, kraft	R-19/6½"	RSI-3.3/165 mm		Standard C665
JM FORMALDEHYDE-FREE™	paper vapor retarder with a maximum	R-13/3½"	RSI-2.3/89 mm		Type II
INSULATION	perm rating of 1.0 Grains/hr • ft <sup>2</sup> • in. Hg (57 ng/s • m <sup>2</sup> • Pa). The kraft facing is	R-11/3%"	RSI-1.9/92 mm		Class C Category 1
	flammable and must not be left exposed.	FOR WOOD FRAMING	1101-1.3/32 11111		outogo.y .
		*R-38/13" + 12"	RSI-6.7/305 mm + 330 mm		
		R-38c/10 <sup>1</sup> / <sub>4</sub> "	RSI-6.7/260 mm		
		R-30/101/4"	RSI-5.3/260 mm		
		R-30c/8 <sup>1</sup> / <sub>4</sub> "	RSI-5.3/210 mm		
		R-25/8½"	RSI-4.4/216 mm		
		R-22/7½"	RSI-3.9/191 mm		
		R-21/5½"	RSI-3.7/140 mm		
		R-19/6½"	RSI-3.3/165 mm		
		R-15/3½"	RSI-2.6/89 mm		
	*\\/:   /40"\	R-13/3½"	RSI-2.3/89 mm		
	*Willows only (12").	R-11/3½"	RSI-1.9/89 mm		
MR® FACED BATTS	Fiber glass batts for thermal and acoustical	FOR WOOD FRAMING	<u> </u>		ASTM C665
JM	applications with a flanged facing treated	R-30/101/4"	RSI-5.3/260 mm		Type II
FORMALDEHYDE-FREE™	with an EPA-registered mold inhibitor. This inhibitor protects the insulation against	R-19/6½"	RSI-3.3/165 mm		Class C Category 1
INSULATION	the growth of mold, mildew and fungi. The	R-13/3½"	RSI-2.3/89 mm		ASTM E96
	facing is also a "smart" vapor retarder, so that in extreme humidity, the permeability				Permeability; Kraft ≤ 1 Perm
	doubles to allow moisture to escape at a				ASTM C1338
	faster rate.				No Growth
				*Facing test method standardized for	ASTM D2020* Fungi-resistant
				asphalt-coated kraft.	



## **FIBER GLASS INSULATION PRODUCTS**

MATERIALS PROVIDED	PRODUCT DESCRIPTION	R-VALUE	INSTALLED THICKNESS	SETTLED THICKNESS	BAGS PER 1,000 ft <sup>2</sup>	MAXIMUM NET COVERAGE (ft²/bag)	MINIMUM WEIGHT PER SQUARE FOOT (Ib/ft²)
Climate Pro®	Premium unbonded fiber glass	60	21.4"	21.4"	30.6	33	0.963
Blow-in Insulation	blowing wool for pneumatic blowing	49	17.8"	17.8"	24.3	41	0.767
JM	machine installation in attics.	44	16.2"	16.2"	21.6	46	0.680
FORMALDEHYDE-FREE™ INSULATION		38	14.2"	14.2"	18.4	54	0.579
INSULATION		30	11.4"	11.4"	14.2	70	0.448
		26	10.0"	10.0"	12.2	82	0.384
		22	8.5"	8.5"	10.2	98	0.321
		19	7.4"	7.4"	8.7	114	0.275
		13	5.2"	5.2"	5.9	170	0.185
		11	4.4"	4.4"	4.9	202	0.156
Climate Pro BIBS®	Premium unbonded fiber glass	38	0.25" (N	. 10 40)	56.2	17.8	1.77
Blow-In-Blanket®	blowing wool for installation in enclosed cavities using the	36	9.25" (Nom	inai ZXIU)	44.1	22.7	1.39
System		30	7.25" (Nominal	.inal 20\	44.1	22.7	1.39
JM	Blow-In-Blanket System® (BIBS®).*	28		IIIIdi ZXOJ	34.5	29.0	1.09
FORMALDEHYDE-FREE™		23	5.50" (Non	ninal 2v6)	33.4	29.9	1.05
INSULATION	*BIBS and the Blow-In-Blanket System are registered trademarks of Ark-Seal International.	22	J.30 (NOII		26.2	38.2	0.83
		15	3.50" (Non	minal 2x4)	21.3	47.0	0.67
		14	0.00 (14011	IIIIdi ZX IJ	16.7	60.0	0.53
JM Spider®	Lightweight spray-in fiber glass	23			27.5	36.4	0.83
Spray-in Custom	insulation bound together with a	22	5.50" (Non	ninal 2x6)	21.4	46.8	0.64
Fiber Glass	nontoxic, water-soluble adhesive that	20			15.3	65.5	0.46
Insulation	also binds to cavity surfaces.  It completely fills gaps for superior	15			17.5	57.1	0.53
JM	thermal and acoustical performance.	14	3.50" (Non	ninal 2x4)	13.6	73.5	0.41
FORMALDEHYDE-FREE™	It resists mold and mildew, is fast and	13			9.7	102.9	0.29
INSULATION	easy to install, and dries quickly.	ASTM S ASTM S The JM	cation Comp tandard C101 tandard C764 Spider systen insulation.	4	uilding code	fire test requirements	s for concealed and

Materials Provided	Product Description	R-value/Size (thickness, nominal)	RSI-value/Size (thickness, nominal)	Location	Specification Compliance
Panel Deck FSK-25 Faced Batts  JM FORMALDEHYDE-FREE™ INSULATION	Fiber glass batts for thermal and acoustical applications faced with an extended tab, flame-resistant, foil-scrim-kraft laminate facing.  Note: Willows only.	R-30/10¼" R-19/6½"	RSI-5.3/260 mm RSI-3.3/165 mm		ASTM Standard C665 Type III Class A Category 1
Panel Deck PSK-Faced Batts  JM FORMALDEHYDE-FREE™ INSULATION	Fiber glass batts for thermal and acoustical applications faced with extended tab, flame-resistant, white, polypropylene-scrim-kraft laminate facing.  Note: Willows only.	R-19/6½"	RSI-3.3/165 mm		ASTM Standard C665 Type II Class A Category 1
Basement Wall Insulation  JM FORMALDEHYDE-FREE™ INSULATION	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.	R-11/3½" Unfaced  R-11/3½" Faced  R-11/3½" Faced  R-11/3½" Perforate	d Facing		ASTM Standard C665 Type I Unfaced Category 2 (perforated facing) ASTM Standard C665 Type II, Class A Category 1 (faced) Category 2 (perforated facing)



## FIBER GLASS INSULATION PRODUCTS

Materials 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 not present.	

### **Physical Properties**

Duado et Na	Der	sity	"k" valu		Thick	ness	R-value*	RSI*
Product Name	lb/ft³	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	1.5	24.0	0.24	0.035	1**	25	4.2	0.74
					1½**	38	6.3	1.11
					2**	51	8.3	1.46
					2½**	64	10.4	1.83
					3	76	12.5	2.20
					3½	89	14.6	2.57
					4	102	16.7	2.94
/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
					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 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
I/S Coated			0.25	0.036	1	25	4.0	0.70
Black					2	51	8.0	1.41

<sup>\*</sup>Thermal properties per ASTM C518.

### 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 C612, Type IA, Category 1 <sup>††</sup>	Χ	Χ	Χ	Χ	Χ	Χ	
ASTM C612, Type IB, Category 1 <sup>††</sup>		Χ	Χ	Χ	Χ		
ASTM C612, Type IB, Category 2 <sup>††</sup>				Χ	Χ		
ASTM C553, Type I and II <sup>††</sup>	Χ	Χ					
ASTM C665, Type I <sup>††</sup>	Χ	Χ					
ASTM C665, Type III, Class A, Category 1 <sup>††</sup>	Χ						
ASTM E136 (Noncombustible)	Χ	Χ	Χ	Χ			
ASTM E84 (Flame/Smoke 25/50 or less)	Χ	Χ	Χ	Χ	Χ	Χ	

<sup>&</sup>lt;sup>1</sup>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.

<sup>\*\*</sup>Black Mat Insul-SHIELD available for these thicknesses only. Other thicknesses available by special order and subject to minimums.

<sup>††</sup>Not tested for use at elevated temperatures.



## FOAM SHEATHING INSULATION PRODUCTS

MATERIALS PROVIDED	PRODUCT DESCRIPTION		LUE/SIZE (ness, nominal)	LOCATION	SPECIFICATION COMPLIANCE
AP™ FOIL-FACED	Rigid foam sheathing insulation for	<b>—</b>	-22.8/3½"		ASTM C1289
POLYISOCYANURATE FOAM SHEATHING	non-exposed uses in commercial and residential construction. Composed of a	R	-19.5/3"		 Type I Class 1
	polyisocyanurate foam core bonded on each	R	-16.3/2½"		 ASTM Test Method
	side to foil laminate facers.	R	-13.0/2"		C518 at 75°F
		R	-9.8/1½"		
		R	-6.5/1"		
		R	-4.9/¾"		
		R	-4.1/%"		
		R	-3.3/½"		
NAILBOARD® INSULATION	Rigid roof insulation composed of a	Includes 1/16" OSB:			ASTM C1289
	polyisocyanurate foam core attached to	R	-22.6/4"		Type V F.S. HH-I-1972/GEN
	7/6" or 5/6" OSB on one side and fiber glass reinforced facer on the other.	R	-19.4/3½"		HH-I-1972/2
		R	-16.2/3"		ASTM Test Method
		R	-13/2½"		C518 at 75°F
		R	-9.9/2"		1
		R	-6.8/1½"		

#### **SPRAY FOAM INSULATION PRODUCTS**

MATERIALS PROVIDED	PRODUCT DESCRIPTION	R-VALUE/SIZE (thickness, nominal)	RSI-VALUE/SIZE (thickness, nominal)	LOCATION	SPECIFICATION COMPLIANCE
JM CORBOND III® SPF	Closed-cell spray polyurethane foam (SPF) is dense, durable insulation that provides superior thermal and air isolation performance, while strengthening the structure of buildings.				AC377 NFPA 285 ASTM E2357 ABAA (evaluated and listed material and assembly)
JM CORBOND MCS™SPF	JM Corbond Multi-Climate Solution (MCS) SPF provides superior thermal, air and moisture isolation.				AC377 NFPA 285
JM OPEN-CELL SPRAY FOAM (JM OCSPF)	Open-cell spray polyurethane foam is low-density, nonstructural insulation that offers a high yield while still providing good thermal and acoustical performance and good air isolation.				AC377

### OTHER BUILDING PRODUCTS

MATERIALS PROVIDED	PRODUCT DESCRIPTION	SIZE	LOCATION	SPECIFICATION COMPLIANCE
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)		



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

#### **FIRE SAFETY**

Johns Manville Fiber Glass Building Insulation, without facing, has been tested in accordance with ASTM E84 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 E136 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 C665, Class A have achieved a flame spread rating of 25 or less, and a smoke developed rating of 50 or less per ASTM E84 test method. (See additional information in "Guide Specifications" section of this form.)

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, workman-like 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®] in roll, batt, board or loose-fill form, [thickness] thick, R-value\*\* [specify].
- \*Strike "Formaldehyde-free™" if specifying Insul-SHIELD.
- \*\*2 ¾" 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!
- **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 E136) like unfaced fiber glass insulation. Equipment and appliance manufacturers' 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 E136 test. Products that pass this test are considered noncombustible by the major build



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