

Microlite® XG™
Formaldehyde-free™ Fiber Glass Duct Wrap Insulation

Description

Microlite XG Formaldehyde-free™ duct wrap insulation is a white, light-weight, highly resilient, blanket-type thermal insulation. The insulation blanket is manufactured from rotary-process fiber glass bonded with a special thermosetting acrylic resin.

Available Forms

Microlite XG Formaldehyde-free™ insulation is available in a variety of densities, thicknesses, and roll lengths. It is supplied with an FSK (foil-scrim-kraft) vapor barrier facing to meet installed performance requirements, with a 2" (51 mm) stapling tab.

Uses

Microlite XG is recommended as thermal insulation for the exterior of HVAC systems or other spaces or surfaces where temperature control is required.

Facing Information

FSK Aluminum Foil

Reinforced with fiber glass scrim laminated to UL rated kraft.

Permeance: .02 perms*

* Per ASTM E 96, Procedure A for facing material prior to lamination. After lamination, permeance values may be higher.

General Properties

Temperature (max.) - ASTM C 411	250°F (121°C)
Water vapor sorption - ASTM C 1104	<5% by weight
Corrosivity with steel - ASTM C 665	Does not accelerate
Fungi resistance - ASTM C 1338	Does not breed or promote

Standard Thicknesses and Packaging

Type	Thickness, in (mm)		
	100' Roll (31 m)	75' Roll (23 m)	50' Roll (15 m)
75	1½ (38)	2, 2½ (51, 58)	3 (76)
100	1½ (38)	2 (51)	—
150	—	1½ (38)	2 (51)

Note: Additional thicknesses, widths and other lengths available on special order. Contact Regional Sales Office for availability.



Surface Burning Characteristics

Microlite XG meets the Surface Burning Characteristics and Limited Combustibility of the following standards:

Standard/Test Method

- ASTM E 84
- UL 723
- NFPA 90A and 90B
- UL Guide No. 40 U8.3. Card R3711
- CAN/ULC S102-1188

Maximum Flame Spread Index	25
Maximum Smoke Developed Index	50

Notes: Faced materials are tested as composite products (insulation, adhesive and facing). UL labels supplied on packages when requested on order.

Specification Compliance

ASTM C 1290 Type 75, 100 & 150
ASTM C 553*

Type II Type 75, 100 & 150
Type III Type 150

* For faced material: 250°F (121°C) maximum temperature.

ASTM C 1136s

Type II FSK Facing

* Replaces HH-B-100B, Type II.

Canada: CGSB 51-GP-11M

NYC MEA 40-75-M

Green Building Certifications

Recycled Content	SCS Certified
ES 1350	Meets Requirements
ENERGY STAR®	Yes
LEED® Credits	See JM.com/buildgreen,
LEED®-NC	JM LEED® Credit Guide (HIG-1231)



Microlite XG contains 20% post-consumer recycled glass.

JM Formaldehyde-free™ Fiber Glass Insulation

JM Formaldehyde-free™ fiber glass 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 (U.S. EPA) recommends limiting exposure to formaldehyde as much as possible, and the California Air Resources Board, a division of the California EPA, recommends that builders and architects use building materials and insulation made without formaldehyde.

Microlite® XG™

Formaldehyde-free™ Fiber Glass Duct Wrap Insulation

Application Recommendations

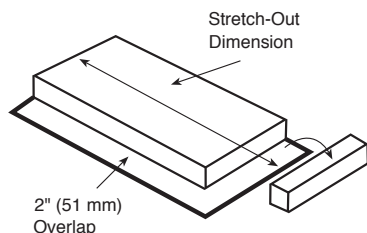
The R-Value will vary depending upon how much the insulation is compressed during installation. To obtain the published, installed R-Values, the insulation stretch-out should be determined using the following table.

Duct Wrap Stretch-Outs

Labeled Thick. (in)	Installed Compressed Thickness (in)	Round	Square	Rectangular
1	0.75	P+ 7.0"	P+ 6.0"	P+ 5.0"
1½	1.125	P+ 9.5"	P+ 8.0"	P+ 7.0"
2	1.50	P+ 12.0"	P+ 10.0"	P+ 8.0"
2½	1.75	P+ 13.0"	P+ 11.0"	P+ 8.5"
3	2.25	P+ 17.0"	P+ 14.5"	P+ 11.5"

Stretch-outs include 2" (51 mm) for overlap. P = Perimeter of duct to be insulated.

Prepare overlap by removing approximately 2" (51 mm) of insulation from facing.



Before applying duct wrap, sheet metal duct shall be clean, dry and tightly sealed at all joints and seams.

Wrap insulation around duct with facing to the outside so the 2" (51 mm) flap completely overlaps facing and insulation at the other end of stretch out. Insulation shall be snugly butted.

Secure seams with mechanical fasteners placed approximately 6" (152 mm) on center. If required, seal seam with pressure-sensitive tape designed for use with duct insulation. Insulation on the underside of ducts spanning 24" (610 mm) or greater shall be secured with mechanical fasteners and speed clips spaced approximately 18" (457 mm) on center. Fasteners should be cut off flush after the speed clips are installed, and when required, sealed with the same tape as specified above.

Adjacent sections of duct wrap insulation shall be snugly butted with the circumferential 2" (51 mm) tape flap overlapping and secured as recommended for the longitudinal seam. When a vapor seal is required, two coats of vapor retarder mastic reinforced with one layer of 4" (102 mm) wide, open weave glass fabric may be used in lieu of pressure-sensitive tape.

Guide Specifications

Insulation for Metal Ducts. All ducts shall be insulated on the outside with a Formaldehyde-free™, flexible glass fiber blanket. Microlite XG Formaldehyde-free™ Fiber Glass Duct Wrap Insulation should have a minimum installed R-Value* of _____, and a Type _____ facing. Insulation shall be furnished with a factory-applied facing with a composite UL FHC rating of 25/50.

* The minimum insulation installed R-Value should be determined in accordance to the duct operating and ambient conditions.

Thermal Conductivity (ASTM C 518)

Type	k*		k	
	Compressed Thickness		Labeled Thickness	
	Btu•in/(hr•ft²•°F)	W/m•°C	Btu•in/(hr•ft²•°F)	W/m•°C
75	0.27	0.039	0.29	0.042
100	0.25	0.036	0.27	0.039
150	0.24	0.035	0.25	0.036

Conductivity at 75°F (24°C) mean temperature.

* Tested with material thickness compressed 25%.

Installed R-Values

Type	Labeled Thickness	Installed "R"†		Out-of-Package "R"		
		(hr•ft²•°F)/Btu	m²•°C/W	(hr•ft²•°F)/Btu	m²•°C/W	
75	1½	38	4.2	0.74	5.2	0.92
	2	51	5.6	0.99	6.9	1.22
	2½	58	6.5	1.15	8.0	1.41
100	3	76	8.3	1.46	10.3	1.81
	1½	38	4.5	0.79	5.6	0.99
150	2	51	6.0	1.06	7.4	1.30
	1½	38	4.7	0.83	6.0	1.06
	2	51	6.3	1.11	8.0	1.41

† Installed R-Value calculated with a material thickness compressed to a maximum of 25% following recommended duct wrap stretch-outs.

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The physical and chemical properties of Microlite® XG™ Formaldehyde-free™ Fiber Glass Duct Wrap 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. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to assure current information. **All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions including Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions, Limited Warranty and Limitation of Remedy, and information on other Johns Manville thermal insulations and systems, call (800) 654-3103.**