



Microlite® Standard Duct Wrap

Fiber Glass Duct Wrap Insulation

Description

Microlite Standard Duct Wrap is a light weight, highly resilient, blanket-type thermal and acoustical insulation made from flame-attenuated glass fibers bonded with a thermosetting phenolic resin.

For information regarding Formaldehyde-free™ Microlite® XG™ fiber glass duct wrap insulation, see AHS-331.

Available Forms

Microlite® and R-Series Microlite® insulations are available in a variety of densities, thicknesses, widths and roll lengths. All R-Series Microlite is manufactured with a nominal density of 0.6 lb/ft³ (10 kg/m³). Duct wrap can be supplied plain or with white Class 1 vinyl. All facings are supplied with a single 2" (51 mm) stapling tab.

Facing Information

Class I Vinyl (White)

Meets NFPA 90A and 90B. UL classified.

Permeance: 1.3 perms*

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

General Properties

Operating temperature (max.) - ASTM C 411

Unfaced 350°F (177°C)

Faced 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

Thermal Conductivity (ASTM C 518)

Type	k*		k	
	Btu•in/(hr•ft²•°F)	W/m•°C	Btu•in/(hr•ft²•°F)	W/m•°C
75	.27	.039	.29	.042
100	.25	.036	.27	.039
150	.24	.035	.25	.036
R-Series	.29	.042	.31	.045

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

*Tested with material thickness compressed 25%.



Surface Burning Characteristics

Microlite Standard Duct Wrap meets the Surface Burning Characteristics and Limited Combustibility of the following standards:

Standard/Test Method

- ASTM E 84
- UL 723
- NFPA 255
- NFPA 90A and NFPA 90B
- UL Guide No. 40 U8.3. Card R3711
- CAN/ULC S102-1188

Maximum Flame Spread Index	25
Maximum Smoke Developed Index	50

UL labels supplied on packages when requested on order.

Specification Compliance

ASTM C 1290 Type I and Type II
ASTM C 553* Unfaced, Type I and Type II

* To 350°F (177°C) unfaced; 250°F (121°C) faced.

ASTM C 1139[†] Type I and Type II^{††}

[†] Replaces MIL-I-22023D.

^{††} Type I to 350°F (177°C) unfaced; Type II to 250°F (121°C) faced.

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Application Recommendations

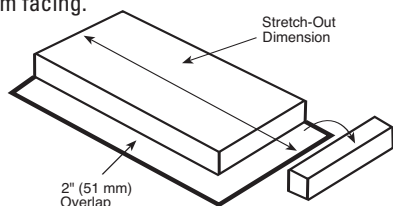
The R-Value will vary depending upon how much the insulation is compressed during installation. To obtain the published, installed R-Values, the insulation stretch-out should be determined using the following table.

Duct Wrap Stretch-Outs

Labeled Thickness		Installed Compressed Thickness		Round	Square	Rect-angular
in	mm	in	mm			
1.0	25	0.75	19	P + 7.0"	P + 6.0"	P + 5.0"
1.5	38	1.125	29	P + 9.5"	P + 8.0"	P + 7.0"
2.0	51	1.50	38	P + 12.0"	P + 10.0"	P + 8.0"
2.3	58	1.75	44	P + 13.0"	P + 11.0"	P + 8.5"
2.5	64	1.875	48	P + 14.5"	P + 12.5"	P + 9.5"
3.0	76	2.25	57	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 outward clinching staples placed approximately 6" (152 mm) on centers. 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 centers. 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.

Unfaced Microlite Duct Wrap should be installed with a minimum 2" (51 mm) overlap, and secured with a wire or banding system.

Unfaced Flame-Attenuated Duct Wrap

Type	Thickness in	Width in	Length ft	R-Values (hr•ft²•°F)/Btu	
				Out-of-Package	Installed
R	1	36	150	3.3	2.7
	1	48	150	3.3	2.7
	1	72	150	3.3	2.7
	1	90	150	3.3	2.7
	1	94	150	3.3	2.7
	1½	48	100	5.0	4.0
	2	48	100	6.7	5.4
	2½	48	50	8.3	6.7
	3	48	50	10.0	8.0
	75	1	48	100	3.6
1½		48	100	5.3	4.3
2		48	50	7.1	5.8
2		48	100	7.1	5.8
2½		48	50	8.9	7.2
3		48	50	10.7	8.7
100	1	48	100	3.8	3.0
	1½	48	100	5.8	4.5
	2	48	50	7.7	6.0
150	1	48	100	4.2	3.3
	1½	48	50	6.3	4.9
	2	48	50	8.3	6.5

Vinyl Duct Wrap

R-S*	Thickness	Width	Length	R-Value	Installed
1½	48	100	4.8	3.9	
2	48	75	6.5	5.2	
2½	48	50	8.1	6.5	
3	48	50	9.7	7.8	

* R-Series (Type R-S) Microlite.

Note: Not all products are stock items. Minimum order quantities may apply. Please contact your JM representative for information.

Guide Specifications

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

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

** Available facing materials are: FSK with a permeance of .02 or less; vinyl with a permeance of 1.3 or less. Unfaced.

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Defiance, OH 43512
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The physical and chemical properties of Microlite® Standard Duct Wrap Products 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.**