Johns Manville
A Berkshire Hathaway Company

HVAC INSULATION

MICROLITE® VINYL

FIBERGLASS DUCT WRAP INSULATION

DATA SHEET

DESCRIPTION

Microlite Vinyl Duct Wrap is a lightweight, highly resilient, blanket-type thermal and acoustical insulation made from flame-attenuated glass fibers bonded with a thermosetting phenolic resin and laminated onto a white vinyl facing.

AVAILABLE FORMS

Microlite Vinyl insulations are available in a variety of densities, thicknesses, widths and roll lengths. All Microlite Vinyl Duct Wrap is manufactured with a nominal density of 0.6 lb/ft^3 (10 kg/m^3). 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 E96, Procedure A for facing materials prior to lamination. After lamination, permeance values may be higher.*

GENERAL PROPERTIES

Operating temperature (max.) – ASTM C411	
Faced	250°F (121°C)
Water vapor sorption – ASTM C1104	<5% by weight
Corrosivity with steel – ASTM C665	Does not accelerate
Fungi resistance – ASTM C1338	Does not breed or promote

THERMAL CONDUCTIVITY (K) (ASTM C518)

	Compressed Thickness*		Labeled Thickness	
Type	BTU•in/(Hr•ft^2•°F)	W/M•°C	BTU•in/(Hr•ft^2•°F)	W/M•°C
60	0.29	0.42	0.31	0.045
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	0.36

Conductivity at 75°F (24°C) mean temperature.
**Tested with material thickness compressed 25%.*

SURFACE BURNING CHARACTERISTICS

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

Standard/Test Method
- ASTM E84
- 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 C1290*
*Facing provided free of print for aesthetic purposes
ASTM C553*
Type I, Type II Type III
*For faced material: 250°F (121°C) maximum temperature.

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APPLICATION RECOMMENDATIONS

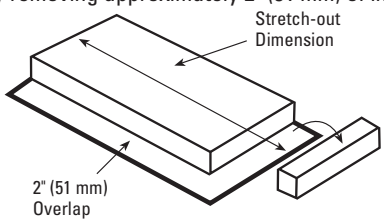
The R-value will vary depending upon how much the insulation is compressed during installation. To obtain the published, installed R-values, the insulation stretch-out should be determined using the following table.

DUCT WRAP STRETCH-OUTS

Labeled Thickness		Installed Compressed Thickness		Stretch-out		
in	mm	in	mm	Round	Square	Rectangular
1	25	0.75	19	P + 7.0"	P + 6.0"	P + 5.0"
1½	38	1.125	29	P + 9.5"	P + 8.0"	P + 7.0"
2	51	1.50	38	P + 12.0"	P + 10.0"	P + 8.0"
2⅓	58	1.75	44	P + 13.0"	P + 11.0"	P + 8.5"
2½	64	1.875	48	P + 14.5"	P + 12.5"	P + 9.5"
3	76	2.25	57	P + 17.0"	P + 14.5"	P + 11.5"

P = PERIMETER OF DUCT TO BE INSULATED.
STRETCH-OUTS INCLUDE 2" (51 MM) FOR OVERLAP.

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.

VINYL DUCT WRAP

Type	Thickness in	Width in	Length ft	R-values (hr•ft²•°F)/Btu	
				Out of Package	Installed
60	1½	48	100	4.8	3.9
	2	48	75	6.5	5.2

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 fiberglass blanket. Microlite® (R-Series Microlite®) fiberglass 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.

Johns Manville

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