

MANSON INSULATION

KEEPING IT SIMPLE.™

ALLEY WRAP®

Glass Mineral Wool Blanket Insulation
Temperature Limit: UNFACED: 350°F (177°C) | FACED: 250°C (121°C)



ALLEY WRAP® glass mineral wool blanket insulation is a thermal and acoustical insulation product made from highly resilient, inorganic glass fibers bonded by a thermosetting resin. It is available unfaced or with a multi-purpose foil-scrim kraft (FSK) jacket and with a white metalized polypropylene scrim-kraft (PSK) jacket. Vapor retarders have a 2" (51mm) stapling flange on one edge, and the factory-applied facing assures uniform quality.

USES

Manson ALLEY WRAP® is used as an external insulation on commercial or residential heating or air conditioning ducts. It is suitable for the exterior of rectangular or round sheet metal ducts and spaces, or surfaces where temperature and condensation must be controlled.

AVAILABILITY

Manufactured dimensions are listed in the Manson Insulation product catalog.

PRODUCT FEATURES

Surface Burning Characteristics

- UL/ULC Classified FCH 25/50 (FSK, unfaced)
- Unfaced and FSK wrap have a Flame Spread 25 and Smoke Developed 50 when tested in accordance with ASTM E 84, CAN/ULC S102-M88, NFPA 255 and UL 723. PSK wrap has a Flame Spread 25 and Smoke Developed 50 when tested in accordance with ASTM E 84

Temperature Range (ASTM C 411)

- Faced, can be used on ducts operating up to 250°F (121°C)
- Unfaced, up to 350°F (177°C)

Water Vapor Permeance (ASTM E 96, Procedure A)

- FSK and white PSK facings have maximum water vapor permeance of .02 perms

Water Vapor Sorption (ASTM C 1104)

- Less than 5% by weight when tested for 96 hours at 120°F (49°C) and 95% relative humidity

Corrosiveness (ASTM C 665)

- Will not accelerate corrosion of a steel panel compared to sterile cotton

Mold Growth (ASTM C 1338)

- No growth

Puncture Resistance (TAPPI Test T803) (Beach Units)

- FSK and PSK: 25

SPECIFICATION COMPLIANCE

Canada

- CAN/ULC S102-M88
- CAN/CGSB 51.5m; Type II (FSK facing)
- CAN/CGSB 51.11-92

USA

- ASTM C 553; Type I, II, III
- ASTM C 1136; Type II
- ASTM C 1290

GREENGARD Environmental Institute™

- Gold Certified for superior indoor air quality (IAQ) performance

California Title 24 (installed at 25% compression)

- HH-I-558C; Form B, Type I, Class 7
- NFPA 90A and 90B
- NRC Reg. Guide 1.36

City of New York MEA 325-83-M

CONTRACTOR:

JOB NAME:

DATE:

MANSON
INSULATION
KEEPING IT SIMPLE.™

Manson Insulation Products Ltd.

4805 Lapiniere Blvd, Suite 3000
Brossard, QC J4Z 0G2 Canada
Telephone : (800)-626-7661
Fax: (450)-443-0042
www.imanson.com

ALLEY WRAP®

Glass Mineral Wool Blanket Insulation

Temperature Limit: UNFACED: 350°F (177°C) |

FACED: 250°F (121°C)



ACOUSTICAL PERFORMANCE	INSERTION LOSS										
	(Reduction of Sound Transmitted Through Duct Wrap) (Sound and Vibration Design and Analysis, National Environmental Balancing Bureau, 1944)										
	DUCT WRAP				INSERTION LOSS, dB						
	DUCT DIMENSIONS	SHEET METAL	NOMINAL THICKNESS	NOMINAL DENSITY	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	400Hz
	12" X 12" (305mm x 305mm)	24 GA	1.5" (38mm)	0.75PCF (12kg/m³)	0.6	0.6	0.6	0.7	7.4	14.2	20.9
24" X 12" (610mm x 305mm)	24 GA	1.5" (38mm)	0.75PCF (12kg/m³)	0.6	0.6	0.6	0.7	7.4	14.2	20.9	
48" X 12" (1219mm x 305mm)	22 GA	1.5" (38mm)	0.75PCF (12kg/m³)	0.6	0.5	0.5	0.6	7.4	14.1	20.9	
24" X 24" (610mm x 610mm)	22 GA	1.5" (38mm)	0.75PCF (12kg/m³)	0.6	0.5	0.5	0.6	7.4	14.1	20.9	
24" X 12" (610mm x 305mm)	26 GA	1.5" (38mm)	0.75PCF (12kg/m³)	0.8	0.8	0.8	0.8	7.5	14.2	21.0	
24" X 8" (610mm x 203mm)	26 GA	2" (51mm)	0.75PCF (12kg/m³)	1.0	1.0	1.0	3.6	10.4	17.1	23.9	

THERMAL PERFORMANCE (ASTM C 177)	THERMAL EFFICIENCY							
	MEAN TEMPERATURE		0.75 PCF (12Kg/m³)		1.0 PCF (16Kg/m³)		1.5 PCF (24Kg/m³)	
			k	k (SI)	k	k (SI)	k	k (SI)
	50°F	(10°C)	0.28	0.040	0.26	0.037	0.23	0.033
75°F	(24°C)	0.29	0.042	0.27	0.039	0.24	0.035	
100°F	(38°C)	0.31	0.045	0.29	0.042	0.26	0.037	
125°F	(52°C)	0.33	0.048	0.31	0.045	0.28	0.040	
150°F	(66°C)	0.36	0.052	0.34	0.049	0.31	0.045	
175°F	(80°C)	0.39	0.056	0.37	0.053	0.33	0.048	
200°F	(93°C)	0.43	0.063	0.40	0.058	0.36	0.052	

FSK FOILED FACED	DENSITY	THICKNESS	WIDTH	LENGTH	R-VALUE	R-VALUE (INSTALLED)
	0.75PCF (12kg/m³)	1 1/2"	48"	100'	R 5.1	R 4.2
		2"		75'	R 6.8	R 5.6
		2 3/16"		75'	R 7.4	R 6.0
		2 1/2"		75'	R 8.5	R 7.0
		3"		50'	R 10.2	R 8.4
	1.0PCF (16kg/m³)	1 1/2"		100'	R 5.6	R 4.5
		2"		75'	R 7.4	R 6.0
	1.5PCF (24kg/m³)	1 1/2"		75'	R 6.1	R 4.8
		2"		50'	R 8.2	R 6.4

GLASS MINERAL WOOL AND MOLD

Glass mineral wool insulation will not sustain mold growth. However, mold can grow on almost any material when it becomes wet and contaminated with organic materials.

Carefully inspect any insulation that has been exposed to water. If it shows any sign of mold, it must be discarded. If the material is wet but shows no evidence of mold, it should be dried rapidly and thoroughly. If it shows signs of facing degradation from wetting, it should be replaced.

Air handling insulation used in the air stream must be discarded if exposed to water.

Application & Specification Guidelines

Storage

- Protect stored insulation from water damage, construction damage and other abuse.
- If stored outside, proper protection from weather conditions should be provided.

Preparation

- Install Manson Insulation Alley Wrap® over clean, dry sheet metal ducts.
- All sheet metal joints and seams must be sealed to prevent air leakage from the duct.

ALLEY WRAP®

Glass Mineral Wool Blanket Insulation

Temperature Limit: UNFACED: 350°F (177°C) |

FACED: 250°F (121°C)

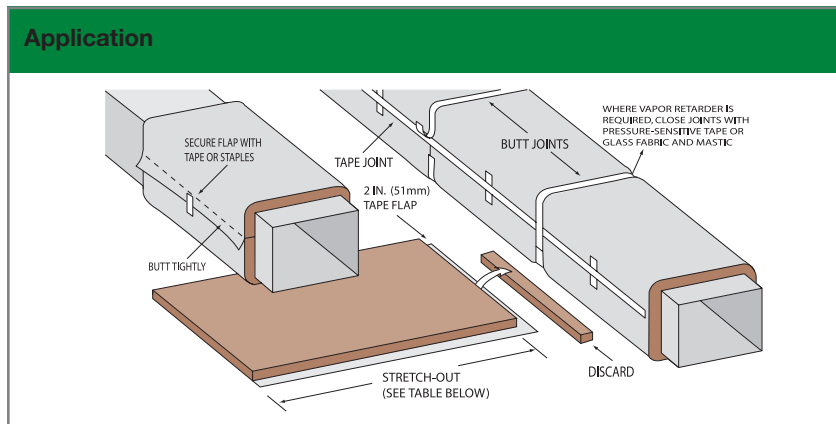


Application

- Install Manson Insulation Alley Wrap® with facing to the outside to obtain specified R-value using a maximum of 25% compression.
- Butt all insulation joints firmly together. Longitudinal seam of the vapor retarder must be overlapped a minimum of 2" (51 mm). A 2" (51 mm) tab is provided for the circumferential seam and must be overlapped.
- Where vapor retarder performance is necessary, all penetrations, joints, seams and damage to the facing should be sealed with an FSK, PSK or foil tape or glass fabric and mastic prior to system startup.
- Pressure sensitive tapes should be a minimum 3" (76 mm) wide and be applied with moving pressure using an appropriate sealing tool. Staples should be outward clinch and placed approximately 6" (152 mm) on centre.
- Closure systems should have a 25/50 F.H.C. per UL 723.
- For rectangular ducts over 24" (610 mm) wide, secure the insulation to the bottom side of the duct with mechanical fasteners spaced on 18" (457 mm) centers to reduce sag. Care should be taken to avoid over compressing the insulation with the retaining washer.
- It is neither necessary nor desirable to adhere Alley Wrap® to duct surfaces with adhesive.
- Unfaced Alley Wrap® should be overlapped with a minimum of 2" (51 mm) and fastened with 4" (102 mm) to 6" (152 mm) nails or skewers placed 4" (102 mm) apart, or secured with a wire or banding system. Care must be taken to avoid damaging the Alley Wrap®. Refer to diagram for staple stitching and butt-joint method.

Installation Procedures

- Use the table (below) to determine stretch-outs required for the nominal thickness of insulation to limit average compression of the insulation 25% or less.



NOTES

The chemical physical properties of Manson Alley Wrap® blanket insulation represent typical average values determined in accordance with accepted test methods. The data is subject to normal manufacturing and testing variations. The data is supplied as a technical service and is subject to change without notice. References to numerical flame spread ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

Check with your Manson Territory Manager to assure information is current.

Labeled Thickness	Installed Compressed Thickness	Round	Square	Rectangular
1½" (38 mm)	1⅛" (29 mm)	P+9½" (241 mm)	P+8" (203 mm)	P+7" (178 mm)
2" (51 mm)	1½" (38 mm)	P+12" (305 mm)	P+10" (254 mm)	P+8" (203 mm)
2⅜" (56 mm)	1⅝" (42 mm)	P+13" (330 mm)	P+11" (279 mm)	P+8½" (216 mm)
2½" (64 mm)	1⅞" (48 mm)	P+14½" (368 mm)	P+12½" (318 mm)	P+9½" (241 mm)
3" (76 mm)	2¼" (57 mm)	P+17" (432 mm)	P+14½" (368 mm)	P+11½" (292 mm)

P = Perimeter of duct to be installed.

