Manson Insulation
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CONTRACTOR

JOB NAME

DATE

ALLEY WRAP B™

Temperature Limit: Unfaced 350°F (177°C) | Faced 250°F (121°C)

DESCRIPTION

Alley Wrap B glass mineral wool blanket insulation is a thermal and acoustical insulation product made from highly resilent, 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" (51 mm) stapling flange on one edge, and the factory-applied facing assures uniform quality.

APPLICATION

Manson Insulation Alley Wrap B is used as an external insulation on commerical 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.

SPECIFICATION COMPLIANCE

ASTM C1139 Unfaced, Type I, Type II
- Grade 1 - 0.75 lb/ft³
- Grade 2 - 1.0 lb/ft³
- Grade 3 - 1.5 lb/ft³

ASTM C553
- Type I, II, III

ASTM C1136
- Type II

ASTM C1290

California Title 24 (installed at 25% compression)

HH-I-558C
- Form B, Type I, Class 7

NFPA 90A and 90B

In Canada
- CAN/CGSB 51. 11-92

PRODUCT FEATURES

Greenguard Certification
- Greenguard GOLD certified for superior indoor air quality performance
- Over 50% post-consumer recycled glass
- No added formaldehyde

Surface Burning Characteristics
- UL/ULC Classified FCH 25/50 (FSK, unfaced)
- Unfaced and FSK wrap have a Flame Spread 25 and Smoke Delvelopped 50 when tested in accordance with ASTM E84, CAN/ULC S102-M88, NFPA 55 and UL 723 PSK wrap has a Flame Spread 25 and Smoke Developed 50 when tested in accordance with ASTM E84

Temperature Range (ASTM C411)
- Faced, can be used on ducts operating up to 250°F (121°C)
- Unfaced, up to 350°F (177°C)

Water Vapor Permeance (ASTM E96, Procedure A)
- FSK and white PSK facings have maximum water vapor permeance of 0.02 perms

Water Vapor Sorption (ASTM C1104)
- Less than 5% by weight when tested for 96 hours at 120°F (49°C) and 95% relative humidity

Corrosiveness (ASTM C665)
- Will not accelerate corrosion of a steel panel compared to sterile cotton

Corrosion (ASTM C1617)
- The corrosion rate in mils/yr will not exceed that of the 1 ppm chloride solution

Microbial Growth (ASTM C1338)
- No growth

Puncture Resistance (TAPPI Test T803) (Beach Units)
- FSK and PSK: 25

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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. 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.

NOTES

The chemical and physical properties of Manson Insulation Alley Wrap B 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 Insulation Area Manager to assure information is current.

ACOUSTICAL PERFORMANCE

			DUCT WRAP		INSERTION LOSS						
DUCT DIMENSIONS		SHEET METAL	NOMINAL THICKNESS	NOMINAL DENSITY	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
12" x 12"	(305 mm x 305 mm)	24 GA	1½" (38 mm)	0.75 PCF (12 kg/m³)	0.6	0.6	0.6	0.7	7.4	14.2	20.9
24" x 12"	(610 mm x 305 mm)	24 GA			0.6	0.6	0.6	0.7	7.4	14.2	20.9
48" x 12"	(1219 mm x 305mm)	22 GA			0.6	0.5	0.5	0.6	7.4	14.1	20.9
24" x 24"	(610 mm x 610 mm)	22 GA			0.6	0.5	0.5	0.6	7.4	14.1	20.9
24" x 12"	(610 mm x 305 mm)	26 GA			0.8	0.8	0.8	0.8	7.5	14.2	21.0
24" x 8"	(610 mm x 203 mm)	26 GA	2" (51 mm)		1.0	1.0	1.0	3.6	10.4	17.1	23.9

Insertion Loss: (Reduction of Sound Transmitted Through Duct Wrap) (Sound and Vibration Design and Analysis, National Environmental Balancing Bureau, 1944)

THERMAL EFFICIENCY (ASTM C177)

MEAN TEMPERATURE	0.75 PCF (12 kg/m³)		1.0 PCF (16 kg/m³)		1.5 PCF (24 kg/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

PSK, FSK AND UNFACED

DENSITY	THICKNESS	WIDTH	LENGTH	R-VALUE	R-VALUE (INSTALLED)
0.75 PCF (12 kg/m³)	1½"	48"	100'	R-5.1	R-4.2
	2"	48"	75'	R-6.8	R-5.6
	2 3/16"	48"	75'	R-7.4	R-6.0
	2½"	48"	75'	R-8.5	R-7.0
	3"	48"	50'	R-10.2	R-8.4
1.0 PCF (16 kg/m³)	1½"	48"	100'	R-5.6	R-4.5
	2"	48"	75'	R-7.4	R-6.0
1.5 PCF (24 kg/m³)	1½"	48"	75'	R-6.1	R-4.8
	2"	48"	50'	R-8.2	R-6.4

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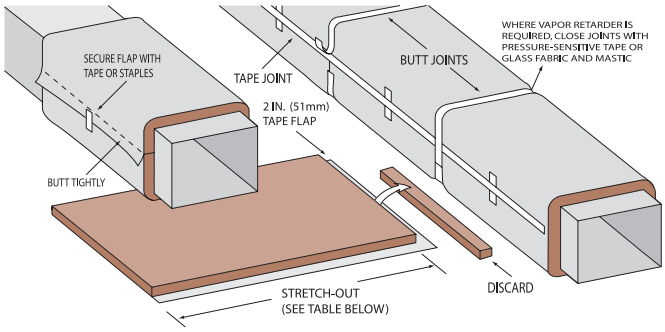
APPLICATION

- Install Manson Insulation Alley Wrap B 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 B to duct surfaces with adhesive.
- Unfaced Alley Wrap B 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 B. Refer to diagram for staple stitching and butt-joint method.

APPLICATION



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 B over clean, dry sheet metal ducts.
- All sheet metal joints and seams must be sealed to prevent air leakage from the duct.

INSTALLATION PROCEDURES

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

STRETCH-OUTS

LABELED THICKNESS	INSTALLED COMPRESSED THICKNESS	ROUND	SQUARE	RECTANGULAR
		P* +	P* +	P* +
1½" (38 mm)	1⅛" (29 mm)	9½" (241 mm)	8" (203 mm)	7" (178 mm)
2" (51 mm)	1½" (38 mm)	12" (305mm)	10" (254 mm)	8" (203 mm)
2 3/16" (56 mm)	1⅝" (42 mm)	13" (330 mm)	11" (279 mm)	8½" (216 mm)
2½" (64 mm)	1⅞" (48 mm)	14½" (368 mm)	12½" (318 mm)	9½" (241 mm)
3" (76 mm)	2¼" (57 mm)	17" (432 mm)	14½" (368 mm)	11½" (292 mm)

*P = Perimeter of duct to be installed.

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