



AKOUSTI-LINER™

Temperature Limit: 250°F (121°C)

DESCRIPTION

Akousti-Liner insulation is a flexible duct liner providing both thermal and acoustical insulation. It is manufactured from inorganic glass fibers bonded by a thermosetting binder. The airstream surface is faced with a black mat bonded to the black glass mineral wool substrate. Akousti-Liner insulation is offered with or without edge coating to seal fibers.

APPLICATION

Manson Insulation Akousti-Liner insulation is a durable, flexible liner used extensively in flat and irregular shaped ductwork.

INSTALLATION

All duct liner shall be installed in accordance with the requirement of the NAIMA Fibrous Glass Duct Liner Standard or SMACNA HVAC Duct Construction Standard and the project specification. Liner shall be adhered with adhesive (complying with ASTM C916) and mechanical fasteners.

LIMITATION

Duct liner should be kept clean and dry during shipping, storage, installation and system operation. When condensation is permitted to occur between nested liner and galvanized steel panels, discoloration of the metal may occur.

SPECIFICATION COMPLIANCE

ASTM C1071 Type I

- Standard specification for Thermal and Acoustical Insulation (Glass, Fiber, Duct Lining Material)

NFPA 90A

- Standard for the Installation of Air-Conditioning and Ventilating Systems

NFPA 90B

- Standard for the Installation of Warm Air Heating and Air-Conditioning Systems

City of New York MEA 323-83-M

California Title 24

CAN/CGSB 51.11-92

PRODUCT FEATURES

Sustainability

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

Surface Burning Characteristics

- UL/ULC Listed
- Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E 84, CAN/ULC S102-M88, NFPA 255 and UL 723

Air Flow Characteristics (ASTM C1071)

- Air velocity rating 6,000 ft/min (30.5 m/s)

Water Vapor Sorption (ASTM C1104)

- Less than 3% by weight

Corrosiveness (ASTM C665)

- Will not accelerate corrosion

Bacteria Resistance (ASTM G22)

- Does not breed or promote growth

Fungi Resistance (ASTM C1338, ASTM G21)

- Airstream surface is coated with an EPA-registered anti-microbial agent; does not breed or promote growth

Hot Surface Performance (ASTM C411)

- Operating temperature limit: Max. 250°F (120°C)

DecaBDE Free

- Does not contain polybrominated diphenyl ethers (PBDE) such as: Penta – BDE, Octa – BDE or Deca – BDE

ACOUSTICAL PERFORMANCE
ASTM C423, TYPE A MOUNTING

DENSITY	THICKNESS	FREQUENCY						
		125	250	500	1000	2000	4000	NRC
2.0 PCF (32 kg/m ³)	½" (13 mm)	0.09	0.14	0.40	0.60	0.73	0.82	0.45
	1" (25 mm)	0.25	0.35	0.69	0.89	0.96	1.01	0.70
1.5 PCF (24 kg/m ³)	1" (25 mm)	0.18	0.36	0.59	0.86	0.95	0.90	0.70
	1½" (38 mm)	0.35	0.51	0.83	0.93	0.97	0.96	0.80
	2" (51 mm)	0.34	0.64	0.96	1.03	1.00	1.03	0.90

THERMAL PERFORMANCE
ASTM C177 - 75°F (24°C) MEAN TEMPERATURE

DENSITY	THICKNESS	C-VALUE		R-VALUE	
		BTU/ FT ² .HR.°F	W/M ² .°C	FT ² .HR.°F/ BTU	M ² .°C/W
2.0 PCF (32 kg/m ³)	½" (13 mm)	0.48	2.73	2.1	0.37
	1" (25 mm)	0.24	1.36	4.2	0.74
1.5 PCF (24 kg/m ³)	1" (25 mm)	0.24	1.42	4.2	0.74
	1½" (38 mm)	0.17	0.97	6.0	1.06
	2" (51 mm)	0.13	0.74	8.0	1.41

GLASS MINERAL WOOL AND MOLD

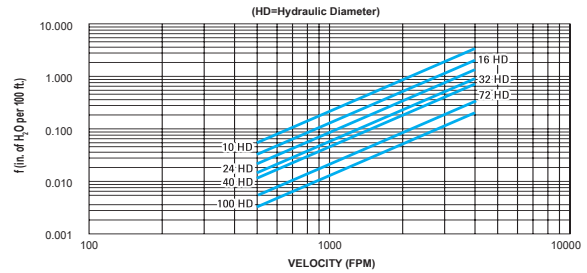
Glass mineral wool insulation will not sustain mold growth. However, mold can grow on almost any material when it becomes wet and contaminated. Carefully inspect any insulation that has been exposed to water. If it shows any sign of mold, it must be discarded. If the material is wet but shows no evidence 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 Akousti-Liner insulation represent 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.

FRICTION LOSS (INCHES OF WATER PER 100')



FPM	HYDRAULIC DIAMETER						
VELOCITY	10"	16"	24"	32"	40"	72"	100"
500	0.054	0.030	0.018	0.012	0.009	0.005	0.003
600	0.077	0.042	0.025	0.018	0.013	0.007	0.004
700	0.104	0.057	0.034	0.024	0.018	0.009	0.006
800	0.134	0.074	0.044	0.031	0.023	0.011	0.008
900	0.169	0.093	0.056	0.039	0.029	0.014	0.010
1000	0.207	0.114	0.068	0.048	0.036	0.018	0.012
2000	0.806	0.443	0.266	0.186	0.141	0.069	0.046
3000	1.797	0.988	0.594	0.415	0.315	0.153	0.103
4000	3.179	1.748	1.050	0.734	0.557	0.271	0.181
5000	4.952	2.724	1.636	1.143	0.867	0.422	0.283

MECHANICAL FASTENER LOCATION

	VELOCITY/FPM (METERS/SECOND)	0-255 (0-12.7)	2501-5000 (12.7-25.4)
A	From corners of duct	4" (102 mm)	4" (102 mm)
B	From transverse of duct	3" (76 mm)	3" (76 mm)
C	Across width of duct, on centers (min. 1/side)	12" (305 mm)	6" (152 mm)
D	Across length of duct, on centers (min. 1/side)	18" (457 mm)	16" (406 mm)

