

Mat-Faced Micro-Aire®

Fiber Glass Duct Board Type 475 & Type 800

Closure Systems

In order to meet the requirements of UL 181 for a Class 1 Air Duct System, closures meeting the requirements of UL 181A must be used with Mat-Faced Micro-Aire. For additional fabrication instruction information, reference AHS-30 or NAIMA Fibrous Glass Duct Construction Standards (www.naima.org).

Closure I

UL 181A-H Closures

Use tapes listed and labeled in accordance with Standard UL 181A and marked "181A-H". Tapes in compliance with this standard must be imprinted with this information. Heat seal all longitudinal and circumferential joints according to tape manufacturers' recommendations. Center strip over edge of stapling flap. Staples are not required when automatic closure equipment is used for the longitudinal joint.

Closure II

UL 181A-P Pressure Sensitive Tapes

Use tapes listed and labeled in accordance with Standard UL 181A and marked "181A-P". Tapes in compliance with this standard must be imprinted with this information.

Use tape that is a minimum 1" (25 mm) wider than the thickness of the board. Apply to all longitudinal and circumferential joints and rub in carefully using a squeegee or similar tool. The tape should be rubbed in until the scrim pattern from the duct board facing shows through the tape. Center tape over the edge of stapling flap. Heat seal if temperature is below 40°F (4°C).

Closure IV

UL 181A-M Mastic Closure

Use mastics listed and labeled in accordance with Standard UL 181A and marked "181A-M". Before applying, stir the mastic thoroughly. Brush on a 4" (102 mm) wide coating over the stapled flap. Embed the open mesh glass tape in the mastic. Apply an additional coat of mastic over the tape, filling in the mesh.

Limitation of Liability

If the closure system used is not one of the approved systems noted above, and if application is not in accordance with the tape or glass fabric and mastic manufacturer's stated procedures, the UL 181 Class 1 air duct rating, and the Johns Manville product warranty are void.

Maximum Unreinforced Duct Dimensions

| Thickness | Internal Pressure in. water column | Positive inches | Negative inches |
|---------------------|---------------------------------------|--------------------|--------------------|
| Type 475 1" | 0.5 | 36 | 34 |
| | 1.0 | 24 | 22 |
| | 2.0 | 15 | 14 |
| Type 800 1½", 2" | 0.5 | 36 | 36 |
| | 1.0 | 24 | 24 |
| | 2.0 | 18 | 18 |

| Thickness | Internal Pressure Pa | Positive mm | Negative mm |
|-----------------------|-------------------------|----------------|----------------|
| Type 475 25 mm | 125 | 914 | 864 |
| | 249 | 610 | 559 |
| | 498 | 381 | 356 |
| Type 800 38, 51 mm | 125 | 914 | 914 |
| | 249 | 610 | 610 |
| | 498 | 457 | 457 |

This table summarizes span/pressure limitations for unreinforced duct. For larger duct sizes, see The Pocket Installer, AHS-3.

Thermal Conductivity ("k")

| Thickness | 75°F Mean Temp. Btu•in/(hr•ft•°F) | 24°C Mean Temp. W/m•°C |
|-----------|--------------------------------------|---------------------------|
| 1 in | .23 | .033 |
| 1½ | .23 | .033 |
| 2 | .23 | .033 |

Conductivity per ASTM C 518.

Thermal Performance

| Thickness | R-Value (hr•ft²•°F)/Btu | m²•°C/W |
|-----------|----------------------------|---------|
| 1 in | 4.3 | 0.76 |
| 1½ | 6.5 | 1.15 |
| 2 | 8.7 | 1.53 |

Mat-Faced Micro-Aire Sound Absorption Coefficients

(Type "A" Mounting)

| Type | Thickness | Sound Absorption Coefficient at Frequency (Cycles per Second) of: | | | | | |
|------|-----------|--|-----|------|------|------|------|
| | | 125 | 250 | 500 | 1000 | 2000 | 4000 |
| 475 | 1 | .07 | .25 | .63 | .90 | .97 | 1.00 |
| 800 | 1½ | .10 | .42 | .91 | 1.04 | 1.04 | 1.04 |
| 800 | 2 | .17 | .63 | 1.10 | 1.05 | 1.04 | 1.06 |

Coefficients were tested in accordance with ASTM C 423 and ASTM E 795.

ISO 9000 Certification

Johns Manville commercial and industrial insulation products are designed, manufactured, and tested in our own facilities, which are certified and registered to stringent ISO 9000 (ANSI/ASQC 90) series quality standards. This certification, along with regular, independent third-party auditing for compliance, is your assurance that Johns Manville products deliver consistent high quality.

The physical and chemical properties of Mat-Faced Micro-Aire® Fiber Glass Duct Board 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.**



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