

**Micro-Fiber® Felt**  
Binderless Felt

**Description**

Micro-Fiber® Felt is formed from borosilicate glass fibers using a water deposition process. The result is a clean, flexible, binderless felt with excellent handling qualities and not dimensioned by thickness. Micro-Fiber® Felt is produced from Type 475 glass.

**Applications**

Micro-Fiber® Felt is intended for use in applications where highly effective thermal and acoustical insulation is required in a medium temperature range. Primary applications include thermal/acoustical insulation for aircraft and jet engines. However, these materials are also highly effective when used as air and gas filtration media in a medium temperature range.

Type 475 felt is intended for continuous exposure to hot face temperatures up to 900°F.

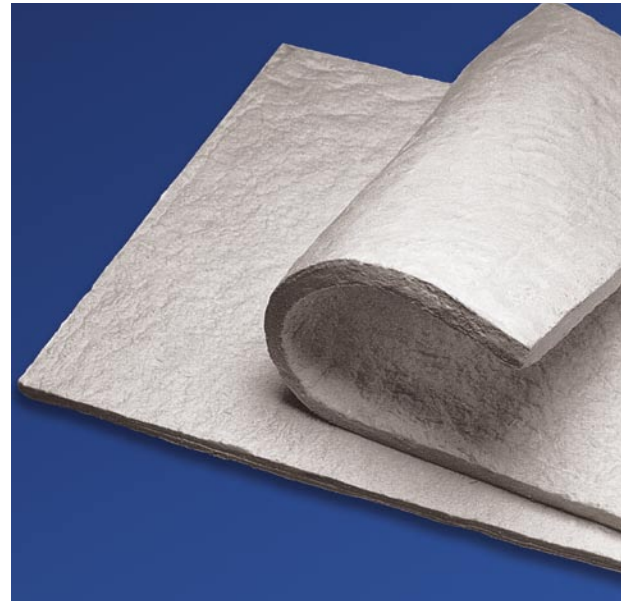
**Advantages**

Because it is lightweight and flexible, Micro-Fiber® Felt is easy to handle and apply. Made from borosilicate glass fibers, this felt features excellent chemical stability. The fibers of Type 475 felt are relatively unaffected by moisture or water and, under normal use, will not accelerate or cause corrosion.

**Available Forms**

Micro-Fiber® Felt is available in sheets 36" (91 cm) width and 60" (152 cm) or 120" (305 cm) length.

Micro-Fiber® Felt is manufactured based on areal weight (weight per area), and is not produced or dimensioned to an exact thickness or density. For approximation purposes, refer to the Available Densities, Thicknesses and Weights Table.



**Applications**

- Aircraft Component
- Insulation Aerospace Jet Engine
- Insulation Air and Gas Filtration
- Media Cryogenics

**Properties**

- Lightweight
- Flexible
- Easy Workability
- No Outgassing
- Excellent Acoustical Properties
- Excellent Chemical Stability

**Specifications**

Temperature Limit 900°F (482°C)

**Type:**

Binderless Felt

**Available Densities, Thicknesses and Weights**

Nominal Density		Nominal Thickness		Areal Weight	
pcf	kg/m <sup>3</sup>	in.	mm	lb/ft <sup>2</sup>	kg/m <sup>2</sup>
3	48	3/8	9.5	0.094	0.46
		1/2	12.7	0.125	0.61
		3/4	19.1	0.188	0.92
		1	25.4	0.250	1.22
4	64	3/16	4.8	0.063	0.31
		1/4	6.4	0.083	0.41
		3/8	9.5	0.125	0.61
		1/2	12.7	0.167	0.81
		3/4	19.1	0.250	1.22
		1	25.4	0.333	1.63
6	96	3/16	4.8	0.094	0.46
		1/4	6.4	0.125	0.61
		3/8	9.5	0.188	0.92
		1/2	12.7	0.250	1.22

# Micro-Fiber® Felt

## Binderless Felt

### Thermal Conductivity (k) Per ASTM C 518

Density pcf	Mean Temperature (Btu•in)/(ft <sup>2</sup> •hr•°F)								
	100°F	200°F	300°F	400°F	500°F	600°F	700°F	800°F	900°F
3	.23	.27	.32	.37	.42	.48	.55	.62	.70
4	.23	.26	.31	.35	.40	.45	.51	.57	.64
6	.22	.26	.30	.33	.37	.40	.44	.48	.54

Density kg/m <sup>3</sup>	Mean Temperature (Watts/Meter•°C)								
	38°C	93°C	149°C	204°C	260°C	316°C	371°C	427°C	482°C
48	0.033	0.039	0.046	0.053	0.061	0.069	0.079	0.089	0.101
64	0.033	0.038	0.045	0.051	0.058	0.065	0.074	0.082	0.092
96	0.032	0.038	0.043	0.048	0.053	0.058	0.063	0.069	0.078

### Acoustical Performance (ASTM E90 Sound Transmission Loss)\*

Transmission Loss (dB)	Frequency (Hz)							STC
	125	250	500	1000	2000	4000		
	5.3	6.4	8.9	12.5	11.9	23.8	12	

\* Test performed on Type 475 @ 3 pcf x 1 inch (48 kg/m<sup>3</sup> x 25 mm)



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Littleton, CO 80162  
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**Technical Information**  
(800) 458-7198

The physical and chemical properties of Micro-Fiber® Felt 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.**