



#### Description

First developed for use in manufacturing the tile sheathing for the U.S. Space Shuttle, Q-Fiber® has extremely high thermal capabilities combined with ultra-light weight. The pure silica fiber is exceptionally pure and extremely stable, with no thermal expansion, contraction, or distortion.

#### Uses

Due to its high degree of stability and pure, fibrous silica material, Q-Fiber is well-suited to applications requiring a fiber that does not degrade under extreme conditions or applications requiring high-performance filtration. As a lightweight temperature-resistant insulation material, Q-Fiber is perfect for a variety of aircraft and automotive uses. Q-Fiber is used for environmental test filters used in a variety of analytical applications.

#### Advantages

Low density, non-crystalline Q-Fiber features superior characteristics including:

- Pure silica fiber for the highest degree of thermal resistance and stability.
- No degradation in extreme usage conditions, making it an ideal filter for highly accurate testing results.
- Extremely lightweight for applications requiring a minimum of weight and maximum thermal protection.
- Furnished in bulk form and felt form for specialty applications.



Thermal Conductivity (k) (Btu · in)/(Ft² · hF)

Density (lbs/Cu.ft.)	Mean Temp., Deg. hF (between hot surface and cold surface)							
	300	400	500	600	700	800	900	1000
3.0	.36	.43	.50	.57	.65	.73	.82	.91
3.5	.33	.39	.46	.53	.60	.67	.76	.83
6.0	.30	.34	.39	.44	.50	.56	.62	.68

Typical Chemical Composition	
Oxide	Nominal Wt., %
SiO <sub>2</sub>	99.9
B <sub>2</sub> O <sub>3</sub>	<0.01
Fe <sub>2</sub> O <sub>3</sub>	<0.01
Al <sub>2</sub> O <sub>3</sub>	<0.05
CaO	<0.02
MgO	<0.01
Na <sub>2</sub> O	<0.05

Typical Shrinkage	
Temperature, F	Linear Shrinkage
1000	0.7
1200	1.4
1400	1.8
1600	2.0
1800	2.6
2000	6.2

The physical and chemical properties of these Johns Manville products 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. Check with your Johns Manville representative to assure current information. Johns Manville standard "Terms and Conditions" and "Limited Warranty" apply.



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