

Ceramic Textiles and Composites

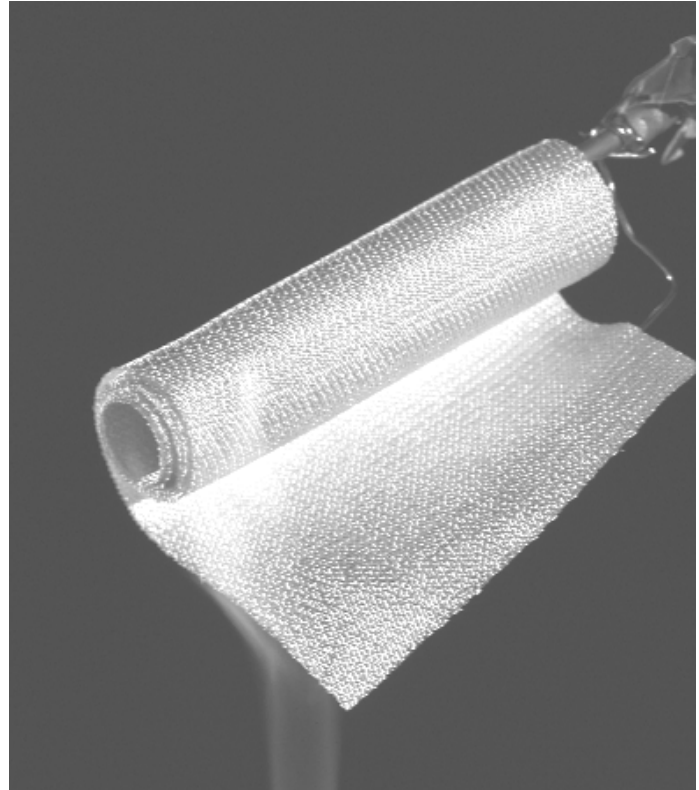
3M™ Nextel™ 440 Woven Fabrics

Nextel™ 440 Fabrics are woven from strong continuous Nextel 440 Fibers without the aid of organic, glass or metal inserts. Nextel 440 Fibers are a mullite composition with 2% added boria. Alumina-Boria-Silica fibers.

Nextel 440 Fabrics retain strength and flexibility with little shrinkage at continuous temperatures of up to 2500°F (1371°C).

Typical Applications

- Furnace curtains and zone dividers
- Vacuum furnace linings
- Flexible seals and gaskets
- Sewn refractory parts and shapes
- Flexible aircraft thermal barriers
- Composite fire barriers
- Structural reinforcement
- Radomes
- Furnace and duct linings



Typical Properties:

Style	Weight (Sized)	Available Width	Thickness (Sized)	Thread Count		Yarn Type	Air Permeability	Weave	Breaking Strength without Sizing	
				Warp	Fill				Warp	Fill
	oz/yd ² (g/m ²)	inch (m)	inch (mm)	per inch (cm)	per inch (cm)		ft ³ /min/ft ² (l/min/dm ²)		lb/inch (kg/cm)	lb/inch (kg/cm)
BF-20	14.9 (505)	36 (0,91)	0.020 (0,51)	30 (12)	26 (10)	2000d roving	15 (46)	5 harness satin	250 (45)	220 (39)
BF-30	20.4 (692)	36 (0,91)	0.030 (0,76)	21 (8)	20 (8)	2000d 1/2	35 (107)	Crow foot satin	290 (52)	260 (46)
BF-40	26.4 (895)	36 (0,91)	0.038 (0,97)	32 (13)	20 (8)	2000d 1/2	35 (107)	5 harness satin	340 (61)	260 (46)

Fiber Properties:

Composition – Alumina-Boria-Silica

Density (non-porous) –
.11 lb/in³ (3.05 gm/cc)

Tensile Strength –
300 x 10³ psi (2070 MPa)

Tensile Modulus –
27 x 10⁶ psi (187 GPa)

Continuous Use Temperature
2500°F (1371°C)

Melt Temperature – 3272°F (1800°C)

Other Characteristics – Non-oxidizing,
non-hygroscopic, essentially chemically
resistant, low thermal conductivity,
good abrasion, fire and flame resistance.

Important Processing Information

3M™ Nextel™ 440 Ceramic
Fibers are coated during
manufacture with sizings or
finishes which serve as aids in
textile processing. These sizings
or finishes consist of organic
polymers which may ignite

and/or decompose to hazardous
byproducts or process
contaminants when first heated.
Heat cleaning is available to
meet your safety or process
requirements.

See our “Nextel 440 Heat
Cleaning/Heat Treating
Instructions” and Health Safety
Bulletin for more information.

IMPORTANT NOTICE TO PURCHASER

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3M Center, Building 207-1W-11
St. Paul, MN 55144-1000
Toll Free within the USA: (877) 992-7749
FAX: (651) 736-6580
www.mmm.com/ceramics



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