

# Ceramic Textiles and Composites

## 3M™ Nextel™ 312 Aerospace Fabrics

Nextel™ 312 Aerospace Fabrics are lightweight fabrics specifically designed to pass the FAA's 2000°F (1093°C) 15-minute flame penetration test.

Woven from strong continuous Nextel 312 alumina-boria-silica fibers, Nextel 312 aerospace fabrics retain strength and flexibility with little shrinkage at continuous temperatures of up to 2012°F (1100°C).

### Typical Applications:

- Composite Fire Barriers
- Flexible Thermal Barriers
- Gaskets and Seals

### Typical Properties:

Style	Weight (Sized)	Available Width	Thickness (Sized)	Thread Count		Yarn Type	Air Permeability w/o Sizing	Weave	Breaking Strength without Sizing	
				Warp	Fill				Warp	Fill
	oz/yd <sup>2</sup> (g/m <sup>2</sup> )	inch (m)	inch (mm)	per inch (cm)	per inch (cm)		ft <sup>3</sup> /min/ft <sup>2</sup> (l/min/dm <sup>2</sup> )		lb/inch (kg/cm)	lb/inch (kg/cm)
AF-10	8.6 (292)	38 (0,97)	0.015 (0.38)	46 (18)	46 (18)	600d served roving	75 (229)	5 harness satin	220 (39)	220 (39)
AF-10 w/o sizing	7.2 (244)	38 (0,97)	0.010 (0.25)	46 (18)	46 (18)	600d served roving	15 (46)	5 harness satin	115 (20)	140 (25)
AF-11	7.6 (258)	38 (0,97)	0.010 (0.25)	24 (9)	23 (9)	1200d roving	75 (229)	Plain	140 (25)	140 (25)
AF-11 w/o sizing	7.4 (251)	38 (0,97)	0.009 (0.23)	24 (9)	23 (9)	1200d roving	40 (122)	Plain	120 (21)	135 (24)
AF-12	8.1 (275)	58 (1,47)	0.013 (0.33)	25 (10)	25 (10)	1200d roving	100 (305)	5 harness satin	220 (39)	220 (39)
AF-12 w/o sizing	7.9 (268)	58 (1,47)	0.011 (0.28)	25 (10)	25 (10)	1200d roving	16 (46)	5 harness satin	130 (23)	150 (27)

### **Important Processing Information**

Nextel™ 312 Ceramic Textiles are coated during manufacture with sizings which serve as processing aids. After processing, the sizing is removable through heat cleaning. Consult 3M's technical literature for proper handling instructions since the sizings may decompose to hazardous byproducts or process contaminants.

Heat Cleaning is available to meet your safety or process requirements. See our Nextel 312 Heat Cleaning/Heat Treating Instructions and our Health and Safety Bulletin for more information.

### **For ordering contact:**

3M Ceramic Textiles and Composites  
3M Center, Building 207-1W-11  
St. Paul, MN 55144-1000  
Phone: 800-223-1687  
Fax: 651-736-5860

Terms: Net 30 days

Transportation: F.O.B. shipping point with transportation charges prepaid and charged back. Prices subject to change without notice.

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**IMPORTANT NOTICE TO PURCHASER:** All statements, technical information, and recommendations contained in this brochure are based on tests conducted with 3M approved equipment, and are believed to be reliable. However, the accuracy or completeness of the tests is not guaranteed. **THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE:** The seller's and manufacturer's only obligation will be to replace the quantity of the product proved to be defective. Neither the seller nor 3M will be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, the user must determine the suitability of the product for his or her intended use.

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*Recycled Paper  
10% pre-consumer*

Printed in USA  
05/2000  
98-0400-4842-7