



# Ceramic Textiles & Composites

## Nextel™ Roving 610, 3,000 Denier, 324 Sized

Nextel™ Roving 610, 3,000 denier, is made from 12 micron continuous ceramic fibers with sizing 324.

The high strength and modulus of these ceramic fibers make them ideal for reinforcing metallic, polymer, and ceramic matrix composites.

### TYPICAL PROPERTIES:

Composition	$\alpha$ -Al <sub>2</sub> O <sub>3</sub>	>99 wt. %
Roving Tensile Break Load @ 6" Gage		20 pounds
Filament Tensile Strength @ 1.0" Gage		450 kpsi
Filament Tensile Modulus of Elasticity		55 mpsi
Creep Rate (10 ksi)	1000°C	2.0 x 10 <sup>-9</sup> /sec
	1100°C	1.8 x 10 <sup>-7</sup> /sec
	1200°C	1.7 x 10 <sup>-5</sup> /sec
Coefficient of Thermal Expansion		8.0 x 10 <sup>-6</sup> /°C
Dielectric Constant		9.0 @ 9.375 x 10 <sup>9</sup> Hertz
Sizing		2.0 %
Sized Denier		3000
Filament Diameter		12 μm
Filament Count		750
Filament Density		3.9 gm/cm <sup>3</sup>
Surface Area		<1 m <sup>2</sup> /gm

**SPECIAL INSTRUCTIONS:** This fiber contains an organic sizing to aid handling. It can be removed by heating above 1022°F (550°C) in air.

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