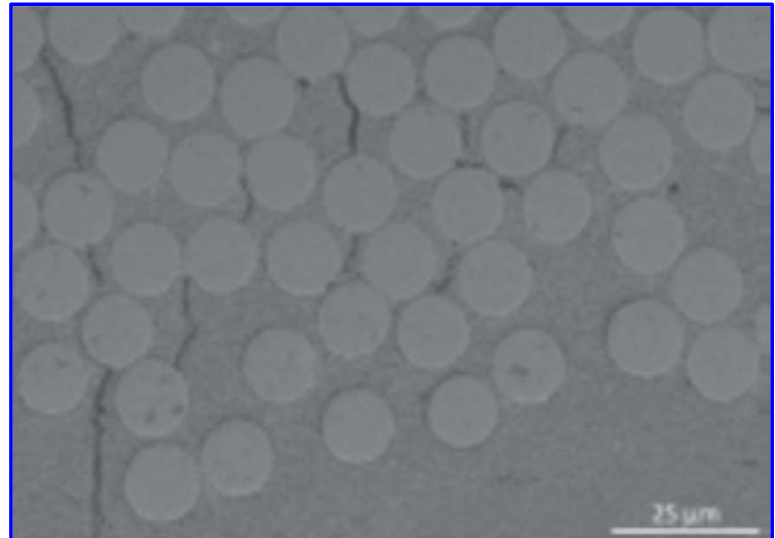


AS/N610 CMC

AS/N610 ceramic matrix composite is comprised of **Nextel™ N610 fiber in an Aluminosilicate matrix**. This datasheet provides nominal properties for a typical layered-fabric composite architecture with 0/90 fiber reinforcement.

PHYSICAL PROPERTIES

Fiber/Fabric	1500D 8HS Nextel™ N610
Matrix	Aluminosilicate
Filler	Alumina
Typical Ply Thickness, mils	8.0
Fiber Volume Fraction, %	50.2
Bulk Density, g/cc (pci)	2.86 (0.103)
Open Porosity, %	~23
Max Use Temperature (Continuous/Short-Term)	982°C/1093°C

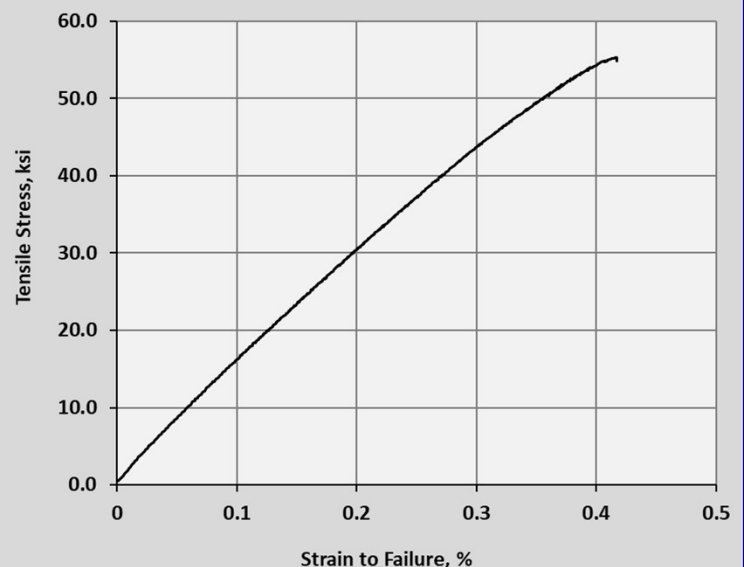


Fiber Diameter: 10 - 12 μm

MECHANICAL PROPERTIES

Tensile Strength, ksi	53.4
Tensile Modulus, Msi	14.1
Tensile Strain-at-Failure, %	0.43
Interlaminar Tensile Strength, ksi	1.4
Flexure Strength, ksi	47.1
Flexure Modulus, Msi	11.4
Compressive Strength, in-plane, ksi	30.9
Compressive Modulus, in-plane, Msi	15.1
Iosipescu Shear Strength, in-plane, ksi	5.8
Iosipescu Shear Modulus, in-plane, Msi	1.6
Shear Strength, Interlaminar (SBS), ksi	1.1

In-Plane Tensile Stress-Strain Curve



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AS/N610 CMC

THERMAL PROPERTIES			
Temperature:	23°C (73°F)	600°C (1112°F)	1000°C (1832°F)
Specific Heat, W-sec/gm K	0.78	1.20	1.26
Thermal Diffusivity, in-plane, cm ² /sec	0.025	0.012	0.011
Thermal Conductivity, in-plane, W/m·K	4.90	3.52	3.63
Coefficient of Thermal Expansion, in-plane, ppm/°C	2.6	7.4	8.0

