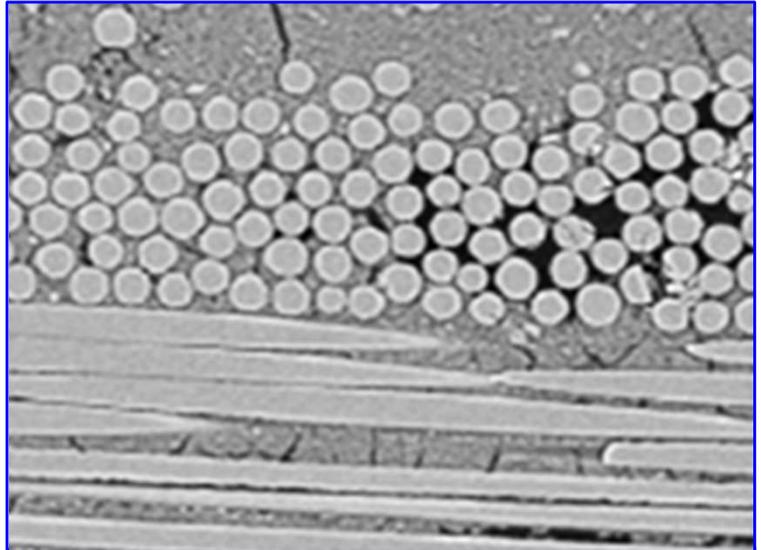


AS/N720 CMC

AS/N720 ceramic matrix composite is comprised of **Nextel™ N720 fiber in an Aluminosilicate matrix**. This datasheet provides nominal properties for a typical layered-fabric composite architecture with 0/90 fiber reinforcement.

PHYSICAL PROPERTIES

<i>Fiber/Fabric</i>	1500D 8HS Nextel™ N720
<i>Matrix</i>	Aluminosilicate
<i>Filler</i>	Alumina
<i>Typical Ply Thickness, mils</i>	~9.4
<i>Fiber Volume Fraction, %</i>	~45
<i>Bulk Density, g/cc (pci)</i>	2.6 (0.094)
<i>Open Porosity, %</i>	~25
<i>Max Use Temperature (Continuous/Short-Term)</i>	1000°C/1100°C

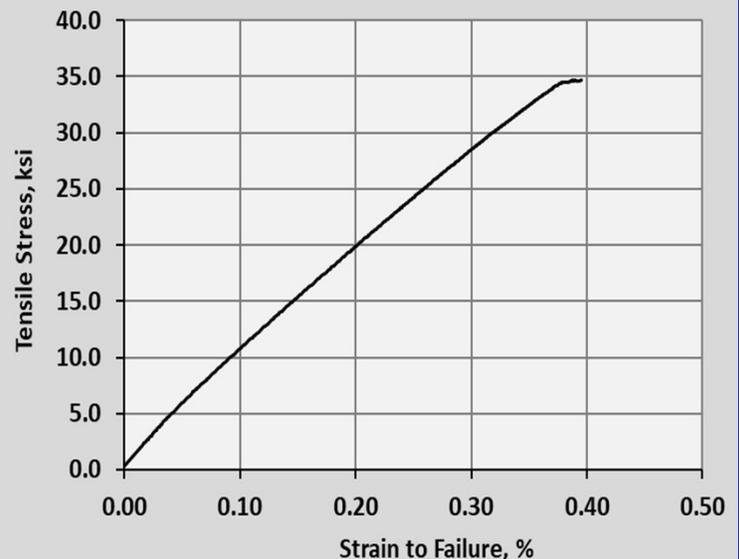


Fiber Diameter 12 - 14 μm

MECHANICAL PROPERTIES

<i>Tensile Strength, ksi</i>	33.0
<i>Tensile Modulus, Msi</i>	11.4
<i>Tensile Strain-at-Failure, %</i>	0.4
<i>Interlaminar Tensile Strength, ksi</i>	0.7
<i>Flexure Strength, ksi</i>	37.5
<i>Flexure Modulus, Msi</i>	13.6
<i>Compressive Strength, in-plane, ksi</i>	34.6
<i>Compressive Modulus, in-plane, Msi</i>	11.7
<i>Iosipescu Shear Strength, in-plane, ksi</i>	6.3
<i>Iosipescu Shear Modulus, in-plane, Msi</i>	2.0
<i>Shear Strength, Interlaminar (SBS), ksi</i>	2.1

In-Plane Stress/Strain Curve



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AS/N720 CMC

THERMAL PROPERTIES			
Temperature:	23°C (73°F)	600°C (1112°F)	1000°C (1832°F)
Specific Heat, $W \cdot sec/gm \cdot K$	0.76	1.18	1.24
Thermal Diffusivity, in-plane, cm^2/sec	0.012	0.008	0.009
Thermal Conductivity, in-plane, $W/m \cdot K$	2.40	2.50	2.90
Coefficient of Thermal Expansion, in-plane, $ppm/^\circ C$	2.9	5.6	6.2

