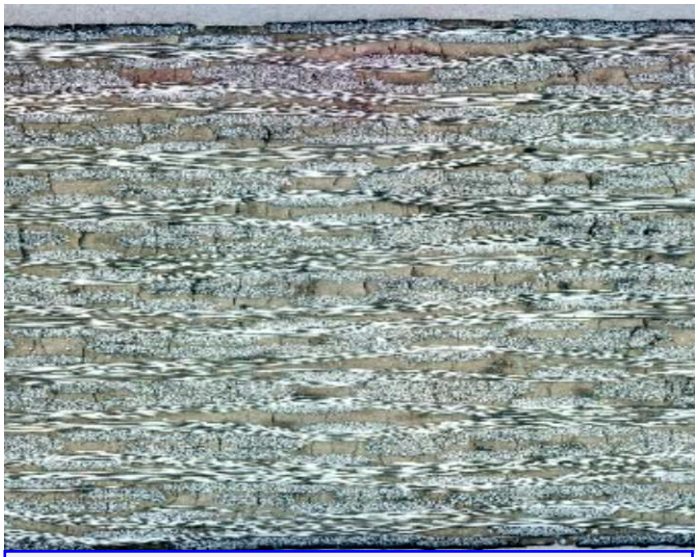
AM/N720 CMC

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

PHYSICAL PROPERTIES

Fiber/Fabric	3000D 8HS Nextel™ N720
Fiber Coating	None
Matrix	Alumina/Mullite
Filler	Alumina/silicate
Typical Ply Thickness, mils	16.5
Fiber Volume Fraction, %	43
Bulk Density, *g/cc (pci)*	2.69 (0.10)
Open Porosity, *%*	~24
Max Use Temperature (Continuous/Short-Term)	1200°C/1400°C

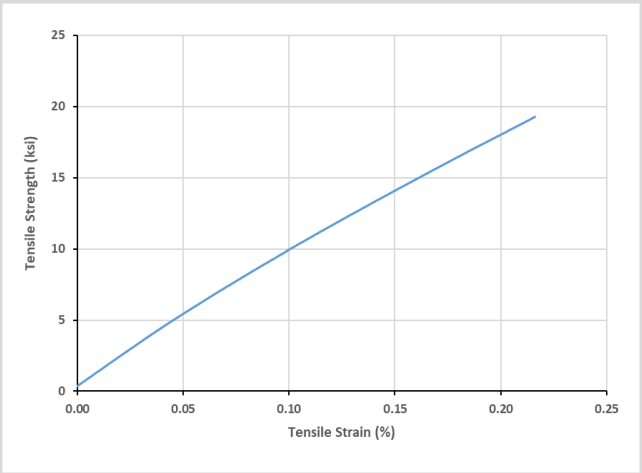


Fiber Diameter 12 - 14 µm

MECHANICAL PROPERTIES

Tensile Strength, *ksi*	21.0
Tensile Modulus, *Msi*	9.8
Tensile Strain-at-Failure, *%*	0.24
Interlaminar Tensile Strength, *ksi*	0.47
Flexure Strength, *ksi*	7.2
Flexure Modulus, *msi*	4.2
Compressive Strength, *in-plane, ksi*	19.7
Compressive Modulus, *in-plane., Msi*	10.2
Iosipescu Shear Strength*, in-plane, ksi*	2.4
Iosipescu Shear Modulus, *in-plane, Msi*	1.8
Shear Strength, Interlaminar *(SBS), ksi*	1.3

In-Plane Tensile Stress-Strain Behavior



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THERMAL PROPERTIES			
Temperature	**93C** (200°F)	**600°C** (1292°F)	**1200°C** (2192°F)
Specific Heat, cal/g.°C	0.21	0.29	0.35
Thermal Diffusivity, in-plane, cm^2/s	0.0119	0.0065	0.0060
Thermal Conductivity, in-plane, W/mK	2.74	2.25	2.29
***Coeff. of Thermal Expansion, in-plane**, ppm/°C*	-	6.03	6.95
***Coeff. of Thermal Expansion, transverse**, ppm/°C*	-	5.96	6.74