

# MATECH

*Introducing*

## SiC-1900X Stoichiometric SiC Ceramic Fiber

SiC-1900X is a stoichiometric beta silicon carbide fiber with high strength and modulus for demanding CMC applications, such as 2700F CMCs for potential use in gas turbine hot section components, hypersonic leading edge materials, and nuclear fuel clad tubes in light water reactors (LWR). MATECH's SiC ceramic fiber is entirely domestic. Development has been funded by the Air Force Research Lab (AFRL). Limited Commercial availability in late 2012.

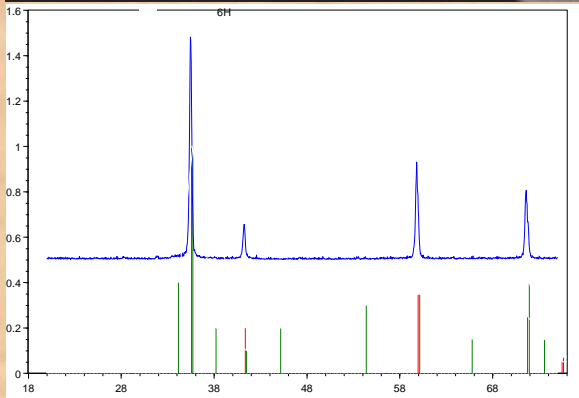
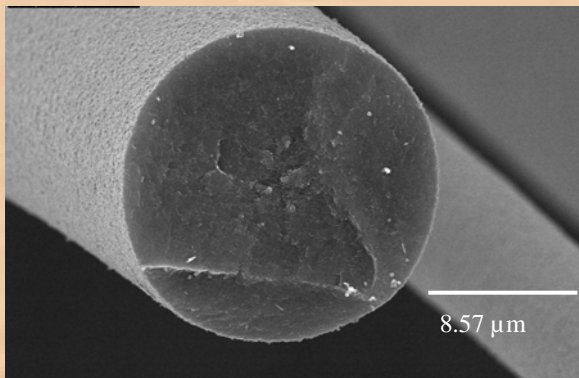


Figure 1: XRD pattern for the B-183 sample with stick patterns for cubic (red) and 6H SiC (green)



Black Fiber  
Continuous 500 Filament Tow

Average Diameter 10 - 12  $\mu\text{m}$

Tensile Strength 2.5 GPa  
St. Deviation 0.8 GPa

Young's Modulus 367 GPa  
St. Deviation 39.5 GPa

Density 3.14 g/cc

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