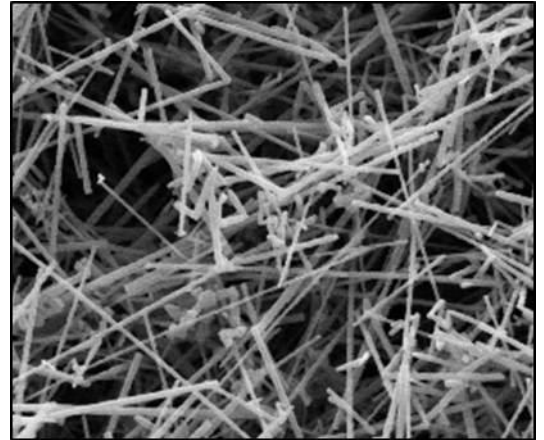


Typical Properties-Sintered Ceramic

Crystal type	Beta (Polytype)
Geometry	Long, rigid rod nanotube
Diameter, μm	0.65
Length, μm	10-12 (D50)
Modulus, GPa	450
Density, g/cm^3	3.21
Free carbon, wt%	0.05-0.30
Silica, wt%	0.35-0.75



Product Description

Silar® C-SCD silicon carbide whisker is a very high modulus rigid rod nanotube which is unbreakable at supplied lengths. It is used in high performance ceramic cutting tools and wear parts to dramatically enhance fracture toughness, abrasion and wear resistance, and thermal and dimensional stability. C-SCD has been processed using an intense mechanical process to eliminate agglomerations and allow for easy handling and uniform dispersion.

Application Information

For use in ceramic composites, to dramatically improve physical properties. For ceramic wear parts where improved wear resistance, modulus enhancement, and improved fracture resistance are desired, loading levels of 5-15% by weight are recommended. In high performance applications such as ceramic cutting tools, where ultimate fracture toughness is required, loading levels of 25 to 30% are recommended. Silar® C-SCD is used primarily in alumina-based composites (including Zirconia-Toughened Alumina and Alumina-TiC), although it has been used as well in monolithic SiC and cubic boron nitride.

Packaging and Product Handling

C-SCD is packaged as a dry powder in 50lb (16kg) bags contained in fiber drums. Smaller quantities are available for development purposes. Dry C-SCD powder is a respirable fiber and it is recommended to be handled in a controlled environment. Please consult the SDS (www.Haydale-technologies.com) for additional safety and handling information.

Contact Haydale Technologies Inc. For technical and sales assistance, please e-mail sales@haydale-technologies.com

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