



semiconductor



thermal



mechanical



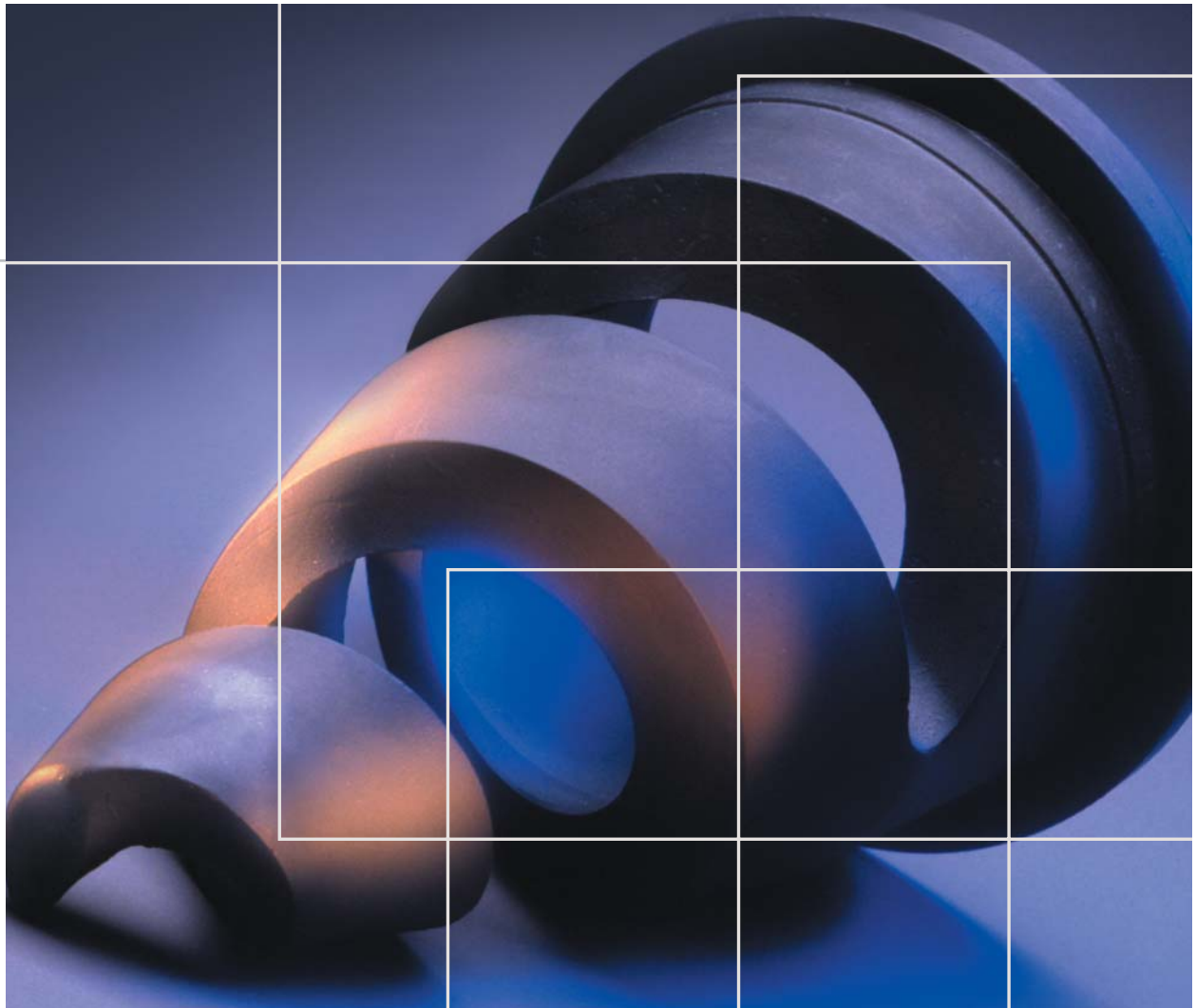
wear



fluid



electronic



For your toughest applications in nozzles, seals and other wear parts, call CoorsTek.

PURE SiC CVD SILICON CARBIDE FOR EXTREME WEAR APPLICATIONS

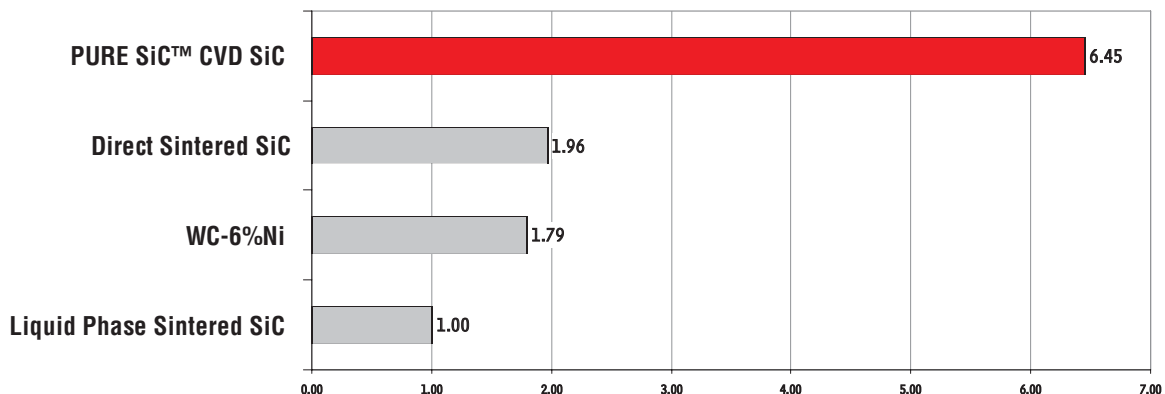
CoorsTek PURE SiC silicon carbide is ideal for hard to handle wear applications. PURE SiC is solid CVD silicon carbide, produced atom-by-atom using chemical vapor deposition. This process forms a full density silicon carbide with no porosity. Eliminating the porosity reduces material loss during abrasion, resulting in a longer life. Where surface finish is important, PURE SiC can be polished to less than one angstrom RMS.

Conventional materials wore three to six times faster than PURE SiC in an impingement wear test. The tests

used a grit blast stream at an 80 degree angle to remove material from the samples. PURE SiC easily outperformed tungsten carbide and two types of sintered silicon carbide. The lower erosion rate can mean **a significantly longer life with PURE SiC in many applications.**

CoorsTek Pure SiC is available as a solid CVD silicon carbide or as a CVD SiC coating on other materials. When used as a coating on conventional silicon carbides or on graphite, Pure SiC can be applied to the critical wear areas.

RELATIVE WEAR LIFE INDEX



Source: CoorsTek Analytical Laboratory, Standard Wear Test by Impingement, 10/12/01 and 12/27/01
Life index is the inverse of the wear loss index.



CoorsTek full-density Pure SiC for longer life



Porosity in Conventional Sintered Silicon Carbide



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