CHINA CERAMIC PARTS INC.

DuraShock™ Ballistic

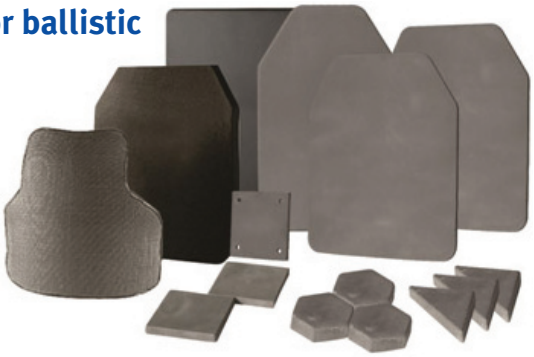
Lightweight Ceramic - Ceramic Composites

www.ceramicparts.cn

Advanced Technical Ceramic Solutions

Tough and hard ceramic composites for ballistic protection applications

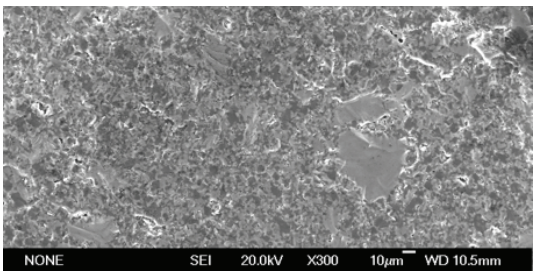
- Boron Carbide/Silicon Carbide ceramic hybrid – best combination of high ballistic performance and low areal density due to Boron Carbide component
- Low cost due to high percentage of Silicon Carbide
- Improved impact behavior
- Lightweight for ballistic protection applications where pure Silicon Carbide is too heavy
- Unique microstructure with aggregated SiC provides toughening by crack deflection
- Consolidation by pressureless sintering – economical process with ability to form complex shapes
- Further densification possible without changing the material characteristics



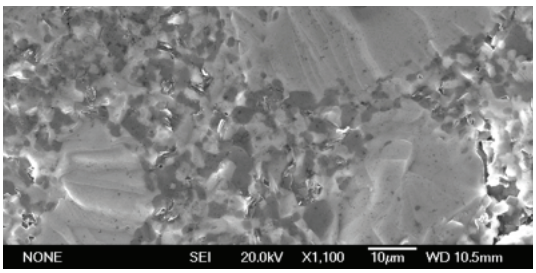
DuraShock
Density = 2.8 g/cm³
Hardness $HV_{0.5}$ = 28 GPa
Toughness K_c = 4 MPam$^{0.5}$

K_c toughness as measured by the Indentation method

The values presented are mean and typical of those resulted from test samples. They are provided as an indication only to serve as guidance in the design of ceramic components and are not guaranteed in any way. The actual values can vary according to the shape and size of the component.



Silicon Carbide aggregates - the key behind crack deflection and exceptional ballistic properties



- Superior performance vs. all other tested hybrids
- Only surpassed by HP Boron Carbide
- Can potentially protect against WC cored threats

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