

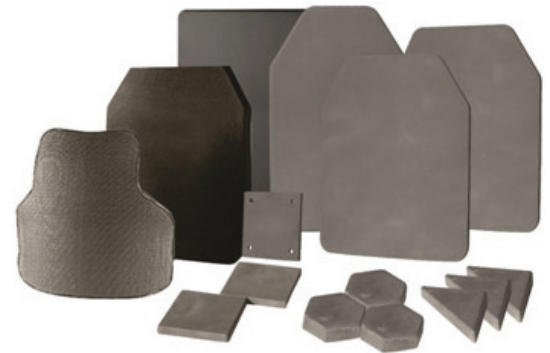


DuraShock Ballistic

Lightweight Ceramic - Ceramic Composites

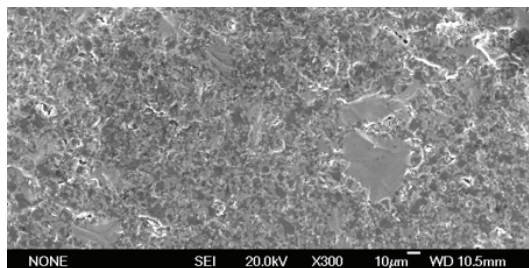
Tough and hard ceramic composites for ballistic protection applications

- Boron Carbide/Silicon Carbide ceramic hybrid – best combination of high ballistic performance and low areal density due to Boron Carbide component
- Low cost owing to high percentage of Silicon Carbide
- Improved impact behaviour
- Lightweight for ballistic protection applications where 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

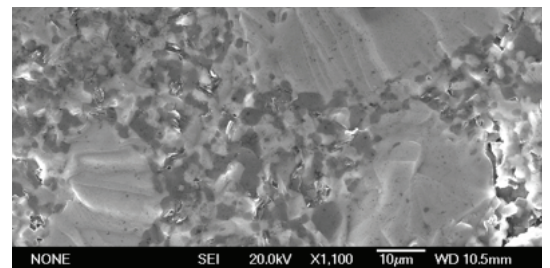


| Durashock |
|--|
| Density = 2.8 g/cm ³ |
| Hardness HV _{0.05} = 28 GPa |
| Toughness K _{IC} = 4 MPa/m ² |

K_{IC} toughness as measured by the Indentation method



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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