

ULTRON™ - SINTERED SILICON CARBIDE

ULTRON™ - Sintered Silicon Carbide (SSiC) is produced using very fine silicon carbide powder containing sintering additives and is processed using forming methods typical for other ceramics and sintered at 2,000 to 2,200°C in an inert gas atmosphere. SSiC is distinguished by high strength that stays nearly constant up to very high temperatures (approximately 1,600°C), maintaining strength over long periods.

Key Material Properties

Temperature of Application	1600 °C
Density	> 3.08 g/cm ³
Open Porosity	< 0.1%
Bending Strength	480-600 MPa
Broken Strength	1950-2600 MPa
Modulus Elasticity	420-450 GPa
Thermal Conductivity	74 W/m.k
Coefficient of Thermal Expansion	4.5 K ⁻¹ x10 ⁻⁶
Rigidity	2150-2450
Acid-proof Alkaline	Excellent

Benefits of ULTRON:

- Extremely high corrosion resistance in acidic and basic media, maintained up to very high temperatures.
- Properties are outstanding among high temperature ceramics, complemented by high thermal shock resistance, high thermal conductivity, high resistance to wear and a hardness close to that of a diamond.
- Ideal for extremely demanding applications, for example, slip ring seals in chemical pumps, bearing bushes, high temperature burner nozzles, or as kiln furniture for very high application temperatures.

