

MATERIAL DATA SHEET

Material type: Silicon Carbide

Starceram S

Properties of Microstructure

Alumina Content	%	-
Density	g/cm ³	3.16
Water Absorption	%	0
Mean Grain Size	µm	-

Mechanical Properties

Hardness DPH	GPa	23
Compressive strength	MPa	-
Flexural strength	MPa	450
Modulus of Elasticity	GPa	440
Poisson's ratio		0.17
Fracture toughness	MPa*m ^{1/2}	2 - 3

Thermal Properties

Specific Heat 20°C	J/gK	0.67
Thermal Conductivity	W/mK	200
Expansion coefficient 40-400°C	10 ⁻⁶ /K	3.7
Expansion coefficient 40-800°C	10 ⁻⁶ /K	4.4
Thermal Shock Temperature Difference (in water)	°C	-

Electrical Properties

Dielectric strength	kV/mm	-
Specific Resistance 20°C	Ω•cm	10 ⁸
Specific Resistance 300°C	Ω•cm	10 ⁴
Specific Resistance 500°C	Ω•cm	10 ³
Dielectric constant (1 MHz)		-
Dielectric Loss Angle (1 MHz)	10 ⁻⁴	-
Typical Colour		black

The data indicated relates to the test specimen from which it was obtained and is not unconditionally applicable to other forms of the same material. The data must, therefore be regarded as indicative only.