

MATERIAL DATA SHEET

Material type: SSiC

Silicon Carbide SiC 198D

Properties		Unit	Specific value
Density		g / cm ³	3.1
Open Porosity		vol.-%	≤ 3
Bending Strength σ_B RT	DIN EN 843-1	MPa	450
Weibulls Modulus RT		-	≥ 12
Compressive Strength		MPa	> 3000
Young's Modulus	static	GPa	400
Poisson's Ratio		-	0.16
Hardness	Vickers	GPa	26
Maximum Service Temperature in Air	inert atmosphere	°C	1900
	air	°C	1650
Linear Coefficient of Expansion	20 - 1000 °C	10 ⁻⁶ / K	4.5
Specific Heat	20 °C	J / (kg * K)	1000
Thermal Conductivity	20 °C	W / (m * K)	125
Resistivity	20 °C	Ω * cm	1 * 10 ⁷
Chemical Composition	SiC	vol.-%	> 98
	B ₄ C	vol.-%	< 1
	C	vol.-%	< 1
Typical Colour		-	black

The data indicated on this table are in line with the introductory German Industrial Standard DIN 40680 and relate to test specimens from which they were obtained. They are not unconditionally applicable to other forms of the same material. The data must be regarded as indicative only. All data refer to a temperature of 20 °C, unless otherwise specified.