

KALSICA S

Silicon Carbide Ceramic

Material data sheet

Material description in general

KALSICA S is a sintered silicon carbide ceramic with outstanding abrasion resistance and outstanding micro impact resistance. The thermal shock resistance is extraordinary. KALSICA S has an outstanding chemical resistance. KALSICA S can be manufactured in high-precision prefabricated components, even for complex geometries as wear-protection fittings in pumps, fans or hydraulic cyclones. KALSICA S is available in form of tiles, individual shapes and cylinders.

Product properties

Feature	Unit	Data	
Chemical composition	Wt.-% SiC	> 81	
	Wt.-% Si	13	
Hardness	Vickers	Vickers HV1	1700
Density	g/cm ³	≥ 3	
	lb/ft ³	≥ 187	
Open porosity	%	0	
Thermal coefficient of expansion	K ⁻¹ (20 - 1000 °C)	4.5x10 ⁻⁶	
	°F ⁻¹ (68 - 1832 °C)	2.4x10 ⁻⁶	
Thermal conductivity	W/mK (20 - 1000 °C)	40	
	Btu inch/ft ² h (68 - 1832 °F)	277	
Max. application temperature	°C	1250	
	°F	2282	
Max. thermal shock resistance	K/h	500	
	°F/h	932	
Wear resistance acc. ASTM C704-15	cm ³ with 90°	≤ 1.1	

Approximate figures are given for all technical data. They are based on assessment of tests on specific samples and cannot be considered as a guarantee for which Kalenborn would have to assume legal responsibility. Subject to technical changes and errors.