

KALSICA N

Silicon Carbide Ceramic

Material data sheet

Material description in general

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

Product properties

Feature	Unit	Data
Chemical composition	Wt.-% SiC	71
	Wt.-% Si ₃ N ₄ + Si ₂ ON ₂	23
Hardness	Vickers HV1	1100
Density	g/cm ³	≥ 2.55
	lb/ft ³	≥ 159
Open porosity	%	< 16
Thermal coefficient of expansion	K ⁻¹ (20 - 1000 °C)	5.3x10 ⁻⁶
	°F ⁻¹ (68 - 1832 °F)	2.9x10 ⁻⁶
Thermal conductivity	W/mK (20 - 1000 °C)	14
	Btu inch/ft ² h (68 – 1832 °F)	97.1
Max. application temperature	°C	1550
	°F	2822
Max. thermal shock resistance	K /h	500
	°F/h	932
Wear resistance acc. ASTM C704-15	cm ³ with 90°	≤ 1.9

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.