

SPECIFICATIONS

- ▶ Chemical formula: SiSiC
- ▶ Chemical name: Reaction-bonded silicon carbide
- ▶ Characteristics: Non-shrinking reaction-bonded silicon carbide
- ▶ Description of product: Parts made of reaction-bonded silicon carbide
- ▶ Colour: black, anthracite

CHEMICAL CHARACTERISTICS (TYP.)

SiC	[wt%]	> 85
→ free Si		balance

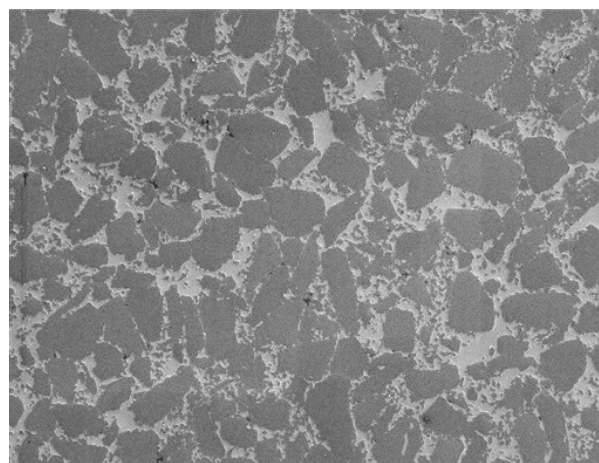
MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Density	[g/cm ³]	3.05
Closed porosity	[vol%]	< 2
Fracture strength $\sigma_{b4,m}$ (RT) ¹	[MPa]	300
Weibull modulus (RT)	[-]	> 10
Young's modulus (RT)	[GPa]	380
Fracture toughness ²	[MPa √m]	3.6
Thermal conductivity (RT)	[W/mK]	180
Thermal expansion CTE (RT-1,000°C)	[×10 ⁻⁶ /K]	4.0
Hardness (DPH)	[GPa]	20
Thermal shock coefficient R1	[K]	190
Max. working temperature	[°C]	1,350

¹ 4-point-bending 40/20 mm

² ICL method

SEM PHOTOMICROGRAPH



SiSiC, 6kV, 6mm, 200x

100 μm

PACKAGING

StarCeram® Si products are individually packed, depending on size.

Packaging acc. to transport regulations.



STARCERAM® SI

2023.01.24

STORAGE & HANDLING

Handle with care! Ceramic products may break if not treated properly. Storage and handling are subject to the rules and regulations in the country of use.

HAZARDS IDENTIFICATION IN ADVERTISING (REGULATION (EC) NO 1272/2008 ARTICLE 48)

none

DOCUMENTATION

An inspection document in accordance with EN 10204 is supplied with every shipment.

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