



BC-4 – Sintered Silicon Carbide (SSiC)

MATERIAL TECHNICAL DATA SHEET

TRADE NAME: BC-4

MATERIAL DESCRIPTION

Chemical Name & Formula: Silicon Carbide – SiC

MAIN COMPONENTS

SiC: 99% min

PHYSICAL DATA

Physical Form: Polycrystalline structure

Boiling Temperature: N.A.

Melt Temperature: 2400°C

Vapour Pressure: N.A.

Evaporation Rate: N.A.

Specific gravity: N.A.

Density: $\geq 3,10 \text{ g/cm}^3$

Water solubility: Insoluble

Colour: Black

Odour: None

MECHANICAL PROPERTIES AT ROOM TEMPERATURE

Water Absorption	%	0
Vickers Hardness	(HV 0,5)	≥ 2200
Flexural Strength	MPa	≥ 400
Compressive Strength	MPa	≥ 2000
Young's Modulus	GPa	≥ 3800
Maximum service temperature	°C	1600
Thermal Conductivity @20°C	W/(m·K)	> 160
Thermal Expansion Coefficient (RT-1000°C)	$10^{-6}/^{\circ}\text{C}$	$\leq 5,0$
Thermal Shock Resistance (ΔT)	°C	250

PHYSICAL AND CHEMICAL PROPERTIES

Excellent chemical and wear resistance, suitable for rotating and sliding parts, thanks to low friction coefficient.

Suitable for HF (HydroFloric acid) at room temperature.

Please, note that all values quoted are based on test pieces and may vary according to component design. These values are not guaranteed in any way and should only be treated as indicative values. They should be used for guidance only and for no other purpose.

BETTINI s.r.l.

Via Industriale, 11 I - 23804 - Monte Marengo (LC) - ITALY

Tel. +39 0341 63.15.88 - E-mail: box@bettini.srl

www.bettini.srl

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