

MATERIAL SAFETY AND TECHNICAL DATA SHEET

TRADE NAME : BC-4

I. Material Description
 Chemical Name & Formula: Silicon carbide - SiC

II. Components	III. Physical Data
SiC : MIN % 99,0 B4C : % 0,6	Physical form : Polycrystalline Structure Boiling Temperature : NA Melt Temperature °C : 2400 Vapore Pressure : NA Evaporation Rate : NA Specific Gravity : NA Density g/cm ³ : 3,10 Water Solubility : Insoluble Color : Black Odor : None

IV. Mechanical Properties at Room Temperature

Water Absorption	%	:	0
Vickers Hardness (HV 0.5)	Gpa	:	25,8 ÷ 26,3
Flexural Strength	Mpa	:	530
Compressive Strength	Mpa	:	2200
Young's Modulus	Gpa	:	400
Fracture Toughness	MPa *m ^{1/2}	:	4
Maximum service temperature	°C	:	130 0
Thermal Conductivity at 20°C	W/M*k	:	110
Thermal Expansion Coeff.	x10 ⁻⁶ /°C	20 ÷ 400°C	: 3,8
		20 ÷ 800°C	: 4,4
Thermal Shock Resistance	ΔT°C	:	250

V. Physical and Chemical Properties

Excellent chemical and wear resistance, suitable for rotating and sliding parts, thanks to low friction coefficient.
 Suitable for HF (Hydrofluoric acid) at room temperature.

VI. Fire and Explosion Data

Flashpoint : NA
 Auto - Ignition Temperature : NA
 Flammability Limits in Air : Upper: Lower : NA

Product is non - flammable
 Not an explosion hazard

Please, note that all the 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.