

MATERIAL SAFETY AND TECHNICAL DATA SHEET

TRADE NAME : BC-5

I. Material Description

Chemical Name & Formula: Silicon carbide - SiC

II. Components

SiC : MIN % 90,0
Si : MAX % 10,0

III. Physical Data

Physical form : Polycrystalline Structure
Boiling Temperature : NA
Melt Temperature °C : NA
Vapour Pressure : NA
Evaporation Rate : NA
Specific Gravity : NA
Density g/cm³: 3,00
Water Solubility : Insoluble
Color : Black
Odor : None

IV. Mechanical Properties at Room Temperature

Water Absorption	%	:	0
Vickers Hardness	(HV 0.5) Gpa	:	24
Flexural Strength	Mpa	:	480
Compressive Strength	Mpa	:	2300
Young's Modulus	Gpa	:	380
Fracture Toughness	MPa *m ^{1/2}	:	4
Maximum service temperature	°C	:	130 0
Thermal Conductivity at 20°C	W/M*k	:	120
Thermal Expansion Coeff.	x10 ⁻⁶ /°C	20 ÷ 400°C :	3,7
		20 ÷ 800°C :	3,8
Thermal Shock Resistance	ΔT°C	:	180

V. Physical and Chemical Properties

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

Not suitable for HF (Hydrofluoric acid)

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.