

MATERIAL TECHNICAL DATA SHEET

TRADE NAME: BX-9

I. Material Description

Chemical Name & Formula: Aluminium Oxide - Sintered Alumina - Al₂O₃

II. Components

Al ₂ O ₃	MIN %	99,6
*SiO ₂	MAX %	0,04
*Fe ₂ O ₃	MAX %	0,02
*Na ₂ O	MAX %	0,08
*MgO	MAX %	0,1

*Expressed as oxide equivalent

III. Physical Data

Physical form	Polycrystalline Structure
Boiling Temperature	NA
Melt Temperature	2000 °C
Vapor Pressure	NA
Evaporation Rate	NA
Specific Gravity	NA
Density	3,89 g/cm ³
Water Solubility	Insoluble
Color	White
Odor	None

IV. Mechanical Properties at Room Temperature

Water Absorption	%	:	0	
Vickers Hardness (HV 0.5)	Gpa	:	18	
Flexural Strength	Mpa	:	380	
Compressive Strength	Mpa	:	2900	
Young's Modulus	Gpa	:	360	
Fracture Toughness	MPa*m ^{1/2}	:	5,2	
Maximum Service Temperature	°C	:	1650	
Thermal Conductivity at 20 °C	W/m*k	:	31	
Thermal Expansion Coeff.	x10 ⁻⁶ / °C	20 ± 400 °C	:	7,5
		20 ± 800 °C	:	8
Thermal Shock Resistance	ΔT °C	:	110	

V. Physical and Chemical Properties

Excellent chemical and wear resistance, suitable for rotating and sliding parts, thanks to low friction coefficient. This material is also suitable for HF (Hydrofluoric acid), but not for prolonged use and at room temperature.

VI. Fire and Explosion Data

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

Product is non - flammable
Not an explosion hazard

Please, note that all the above-mentioned values 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.