

## MATERIAL TECHNICAL DATA SHEET

**TRADE NAME: BX-8**

### I. Material Description

Chemical Name & Formula: Aluminium Oxide - Sintered Alumina - Al<sub>2</sub>O<sub>3</sub>

### II. Components

Al <sub>2</sub> O <sub>3</sub>	MIN %	99
*SiO <sub>2</sub>	MAX %	0,3
*Fe <sub>2</sub> O <sub>3</sub>	MAX %	0,02
*Na <sub>2</sub> O	MAX %	0,08
*MgO	MAX %	0,04

\*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	3,85 g/cm <sup>3</sup>
Water Solubility	Insoluble
Color	White
Odor	None

### IV. Mechanical Properties at Room Temperature

Water Absorption	%	:	0	
Vickers Hardness (HV 0.5)	Gpa	:	17	
Flexural Strength	Mpa	:	350	
Compressive Strength	Mpa	:	2400	
Young's Modulus	Gpa	:	340	
Fracture Toughness	MPa*m <sup>1/2</sup>	:	5	
Maximum Service Temperature	°C	:	1600	
Thermal Conductivity at 20 °C	W/m*k	:	30	
Thermal Expansion Coeff.	x10 <sup>-6</sup> / °C	20 ± 400 °C	:	7,3
		20 ± 800 °C	:	7,8
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. Not suitable for HF (Hydrofluoric acid).

### 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.