

**MATERIAL SAFETY AND TECHNICAL DATA SHEET**

**TRADE NAME : BX-6**

**I. Material Description**  
 Chemical Name & Formula: Aluminium Oxide - Sintered Alumina - Al<sub>2</sub>O<sub>3</sub>

II. Components	III. Physical Data
Al <sub>2</sub> O <sub>3</sub> : 96	Physical form : Polycrystalline Structure
TiO <sub>2</sub> : MIN % 1,5	Boiling Temperature : NA
MnO <sub>2</sub> : MIN % 2,0	Melt Temperature °C : NA
MgO : MAX % 0,1	Vapore Pressure : NA
*Fe <sub>2</sub> O <sub>3</sub> : MAX % 0,1	Evaporation Rate : NA
	Specific Gravity : NA
	Density g/cm <sup>3</sup> : 3,8
	Water Solubility : Insoluble
	Color : Brown
	Odor : None

**IV. Mechanical Properties at Room Temperature**

Water Absorption	%	:	0
Vickers Hardness (HV 0.5)	Gpa	:	15,5
Flexural Strength	Mpa	:	320
Compressive Strength	Mpa	:	2200
Young's Modulus	Gpa	:	310
Fracture Toughness	MPa *m <sup>1/2</sup>	:	4
Maximum service temperature	°C	:	130 0
Thermal Conductivity at 20°C	W/M*k	:	25
Thermal Expansion Coeff.	x10 <sup>-6</sup> /°C	20 ÷ 400°C	: 7,1
		20 ÷ 800°C	: 7,5
Thermal Shock Resistance	ΔT°C	:	110

**V. Physical and Chemical Properties**

Excellent wear resistance, suitable for thread guides and textile components thanks to very smooth surface and low coefficient of friction, suitable for mechanical parts like shafts, bearings, etc.

**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.