



BX-9 – Aluminium Oxide 99,7%

MATERIAL TECHNICAL DATA SHEET

TRADE NAME: BX-9

MATERIAL DESCRIPTION

Chemical Name & Formula: Aluminium Oxide – Sintered Alumina – Al_2O_3

MAIN COMPONENTS

Al_2O_3 :	99,6% min
SiO_2 :	0,04% max
Fe_2O_3 :	0,02% max
Na_2O_3 :	0,08% max
MgO:	0,1% max

PHYSICAL DATA

Physical Form:	Polycrystalline structure
Boiling Temperature:	N.A.
Melt Temperature:	2000°C
Vapour Pressure:	N.A.
Evaporation Rate:	N.A.
Specific gravity:	N.A.
Density:	3,89g/cm ³
Water solubility:	Insoluble
Colour:	White - Creamy
Odour:	None

MECHANICAL PROPERTIES AT ROOM TEMPERATURE

Water Absorption	%	0
Vickers Hardness	(HV 0,5)	1750
Flexural Strength	MPa	380
Compressive Strength	MPa	2900
Young's Modulus	GPa	360
Maximum service temperature	°C	1650
Thermal Conductivity @20°C	W/(m·K)	31
Thermal Expansion Coefficient (RT-800°C)	10 ⁻⁶ /°C	8
Thermal Shock Resistance (ΔT)	°C	110

PHYSICAL AND CHEMICAL PROPERTIES

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

Please, note that all 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.

BETTINI s.r.l.

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