



## BX-7 – Aluminium Oxide 97,5%

### MATERIAL TECHNICAL DATA SHEET

**TRADE NAME:** BX-7

**MATERIAL DESCRIPTION**

**Chemical Name & Formula:** Aluminium Oxide – Sintered Alumina –  $\text{Al}_2\text{O}_3$

**MAIN COMPONENTS**

$\text{Al}_2\text{O}_3$ :	97,5% min
$\text{SiO}_2$ :	1,7% max
$\text{Fe}_2\text{O}_3$ :	0,08% max
$\text{Na}_2\text{O}$ :	0,1% max
$\text{MgO}$ :	0,6% max
$\text{Cr}_2\text{O}_3$ :	0,2% max (for Pink $\text{Al}_2\text{O}_3$ )

**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:	3,75g/cm <sup>3</sup>
Water solubility:	Insoluble
Colour:	White - Pink
Odour:	None

**MECHANICAL PROPERTIES AT ROOM TEMPERATURE**

Water Absorption	%	0
Vickers Hardness	(HV 0,5)	1500
Flexural Strength	MPa	330
Compressive Strength	MPa	2300
Young's Modulus	GPa	310
Maximum service temperature	°C	1500
Thermal Conductivity @20°C	W/(m·K)	23
Thermal Expansion Coefficient (RT-1000°C)	10 <sup>-6</sup> /°C	7,9
Thermal Shock Resistance ( $\Delta T$ )	°C	130

**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).

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.

Via Industriale, 11 I - 23804 - Monte Marenzo (LC) - ITALY  
Tel. +39 0341 63.15.88 - E-mail: [box@bettini.srl](mailto:box@bettini.srl)  
[www.bettini.srl](http://www.bettini.srl)