

MATERIAL TECHNICAL DATA SHEET

TRADE NAME: BX-2

I. Material Description
Chemical Name & Formula: Aluminium Oxide - Sintered Alumina - Al ₂ O ₃

II. Components <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Al₂O₃</td> <td style="width: 15%;">MIN %</td> <td style="width: 70%;">99,8</td> </tr> <tr> <td>*SiO₂</td> <td>MAX %</td> <td>0,003</td> </tr> <tr> <td>*Fe₂O₃</td> <td>MAX %</td> <td>0,007</td> </tr> <tr> <td>*MgO</td> <td>MAX %</td> <td>0,09</td> </tr> </table> <p style="margin-top: 10px;">*Expressed as oxide equivalent</p>	Al ₂ O ₃	MIN %	99,8	*SiO ₂	MAX %	0,003	*Fe ₂ O ₃	MAX %	0,007	*MgO	MAX %	0,09	III. Physical Data <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Physical form</td> <td>Polycrystalline Structure</td> </tr> <tr> <td>Boiling Temperature</td> <td>NA</td> </tr> <tr> <td>Melt Temperature</td> <td>2050 °C</td> </tr> <tr> <td>Vapor Pressure</td> <td>NA</td> </tr> <tr> <td>Evaporation Rate</td> <td>NA</td> </tr> <tr> <td>Specific Gravity</td> <td>NA</td> </tr> <tr> <td>Density</td> <td>3,92 g/cm³</td> </tr> <tr> <td>Water Solubility</td> <td>Insoluble</td> </tr> <tr> <td>Color</td> <td>White</td> </tr> <tr> <td>Odor</td> <td>None</td> </tr> </table>	Physical form	Polycrystalline Structure	Boiling Temperature	NA	Melt Temperature	2050 °C	Vapor Pressure	NA	Evaporation Rate	NA	Specific Gravity	NA	Density	3,92 g/cm ³	Water Solubility	Insoluble	Color	White	Odor	None
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IV. Mechanical Properties at Room Temperature			
Water Absorption	%		: 0
Vickers Hardness (HV 0.5)	Gpa		: 19
Flexural Strength	Mpa		: 400
Compressive Strength	Mpa		: 2900
Young's Modulus	Gpa		: 400
Fracture Toughness	MPa*m ^{1/2}		: 4,9
Maximum Service Temperature	°C		: 1600
Thermal Conductivity at 20 °C	W/m*k		: 30
Thermal Expansion Coeff.	x10 ⁻⁶ / °C	20 ± 400 °C	: 8
		20 ± 800 °C	: 8,9
Thermal Shock Resistance	ΔT °C		: 110

V. Physical and Chemical Properties <p>Excellent chemical and wear resistance, suitable for rotating and sliding parts, thanks to low friction coefficient. Suitable for HF (Hydrofluoric acid), but not for a prolonged period of time.</p>
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VI. Fire and Explosion Data <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Flashpoint</td> <td style="width: 30%;">: NA</td> </tr> <tr> <td>Auto - Ignition Temperature</td> <td>: NA</td> </tr> <tr> <td>Flammability Limits in Air</td> <td>: NA</td> </tr> </table> <p style="margin-top: 10px;">Product is non - flammable Not an explosion hazard</p>	Flashpoint	: NA	Auto - Ignition Temperature	: NA	Flammability Limits in Air	: NA
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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.