A0484O (≥ 92%)

2023.04.03

SPECIFICATIONS

- Chemical formula: Al_2O_3
- Chemical name: Aluminium oxide
- Appearance: Dense sintered alumina
- Main characteristics: High mechanical strength, high temperature resistance, high frequency insulation, high chemical resistance, wear resistant
- Main applications: Wire-drawing parts, capstans, mechanical seal rings
- Colour: White

MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Density		[g/cm³]	JIS R 1634	3.6
Water absorption		[%]	JIS C 2141	0
Vickers hardness HV9.807N		[GPa]	JIS R 1610	12.3
Flexural strength 3 P.B.		[MPa]	JIS R 1601	370
Compressive strength		[MPa]	JIS R 1608	-
Young's modulus of elasticity		[GPa]	JIS R 1602	280
Poisson's ratio		[-]	JIS R 1602	0.23
Fracture toughness (SEPB)		[MPa*m$^{0.5}$]	JIS R 1607	-
Coefficient of linear thermal expansion	**40 - 400 °C** **40 - 800 °C**	[*10^{-6}/K]	JIS R 1618	6.8 7.7
Thermal conductivity		[W/(m*K)]	JIS R 1611	17
Specific heat capacity		[J/(g*K)]	JIS R 1611	0.78
Thermal shock temperature difference		[°C]	JIS R 1648	200
Dielectric strength		[kV/mm]	JIS C 2141	14
Volume resistivity	**20 °C** **300 °C** **500 °C**	[Ω*cm]	JIS C 2141	>10^{14} 10^{10} 10^{8}
Dielectric constant		-	JIS C 2141	8.9
Dielectric loss angle		[*10^{-4}]	JIS C 2141	9
Loss factor		[*10^{-4}]	JIS C 2141	80

The values are typical material properties and may vary according to products configuration and manufacturing process.
For more details, please feel free to contact us.

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