



AO482R ($\geq 76\%$)

2023.04.03

SPECIFICATIONS

- ▶ Chemical formula: Al_2O_3
- ▶ Chemical name: Aluminium oxide
- ▶ Appearance: Porous sintered aluminum oxide
- ▶ Main characteristics: High mechanical strength, high temperature resistance, high frequency insulation, high chemical resistance, high heat resistance
- ▶ Main applications: Welding nozzle, nozzle for glass fiber manufacturing
- ▶ Colour: Pink

MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Density		[g/cm ³]	JIS R 1634	3.6
Water absorption		[%]	JIS C 2141	0.6
Vickers hardness HV9.807N		[GPa]	JIS R 1610	9.0
Flexural strength 3 P.B.		[MPa]	JIS R 1601	120
Compressive strength		[MPa]	JIS R 1608	-
Young's modulus of elasticity		[GPa]	JIS R 1602	160
Poisson's ratio		[-]	JIS R 1602	0.17
Fracture toughness (SEPB)		[MPa*m ^{0.5}]	JIS R 1607	-
Coefficient of linear thermal expansion	40 - 400 °C	[*10 ⁻⁶ /K]	JIS R 1618	7.1
	40 - 800 °C			7.5
Thermal conductivity		[W/(m*K)]	JIS R 1611	8
Specific heat capacity		[J/(g*K)]	JIS R 1611	0.75
Thermal shock temperature difference		[°C]	JIS R 1648	320
Dielectric strength		[kV/mm]	JIS C 2141	12
Volume resistivity	20 °C	[Ω*cm]	JIS C 2141	>10 ¹⁴
	300 °C			10 ¹⁰
	500 °C			10 ⁸
Dielectric constant		-	JIS C 2141	8.4
Dielectric loss angle		[*10 ⁻⁴]	JIS C 2141	180
Loss factor		[*10 ⁻⁴]	JIS C 2141	1,500

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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