

SPECIFICATIONS

- ▶ Chemical formula: Y_2O_3
- ▶ Chemical name: Yttria
- ▶ Appearance: Dense sintered yttria
- ▶ Main characteristics: Good plasma resistance
- ▶ Main applications: SPE parts
- ▶ Colour: White

MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Density		[g/cm ³]	JIS R 1634	4.9
Water absorption		[%]	JIS C 2141	0
Vickers hardness HV9.807N		[GPa]	JIS R 1610	6.0
Flexural strength 3 P.B.		[MPa]	JIS R 1601	130
Compressive strength		[MPa]	JIS R 1608	-
Young's modulus of elasticity		[GPa]	JIS R 1602	160
Poisson's ratio		[-]	JIS R 1602	-
Fracture toughness (SEPB)		[MPa*m ^{0.5}]	JIS R 1607	1.1
Coefficient of linear thermal expansion	40 - 400 °C	[*10 ⁻⁶ /K]	JIS R 1618	7.2
	40 - 800 °C			7.6
Thermal conductivity		[W/(m*K)]	JIS R 1611	14
Specific heat capacity		[J/(g*K)]	JIS R 1611	0.45
Thermal shock temperature difference		[°C]	JIS R 1648	-
Dielectric strength		[kV/mm]	JIS C 2141	11
Volume resistivity	20 °C	[Ω*cm]	JIS C 2141	>10 ¹³
	300 °C			10 ¹⁰
	500 °C			10 ⁷
Dielectric constant		-	JIS C 2141	11
Dielectric loss angle		[*10 ⁻⁴]	JIS C 2141	5
Loss factor		[*10 ⁻⁴]	JIS C 2141	55

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.