Multi-bore Alumina Tube

Nextgen Advanced Materials supplies high-quality multi-bore alumina tube in different sizes and specification. Customized production is available.

Product Description

As the professional manufacture, we would like to provide you high quality Nextgen Multi-bore Alumina Tube. Multi-bore alumina tube is made of a ceramic material with high thermal conductivity, compressive strength, and thermal shock resistance. Alumina ceramic also has a low thermal expansion, making it a suitable material for furnace use in the crucible, tube, and thermocouple sheath form. Alumina is high hardness and good wear resistance, making it a suitable material for ball valves, piston pumps, and deep drawing tools. In addition, it can be easily combined with metals and other ceramic materials using brazing techniques and metalizing.

Ceramic characteristic table

	Name	99 Porcelain	95 Porcelain	Zirconium oxide
	Ingredients	$Al_2O_3 \geqslant 99\%$	$Al_2O_3 \geqslant 95\%$	$ZrO_2 \geqslant 94\%$
Physical characteristics	Density	3.85	3.6	5.9
	Water absorption rate %	0	0	0
	Sintering temperature ℃	1690	1670	1650
Physical characteristics	Hardness HV	1700	1600	1400
	Flexural strength 4pt	>3500	>2900	>11000
	Compressive strength kgf/cm2	30000	25000	25000
Thermodynamic characteristics	Maximum operating temperature: ℃	1500	1400	1600
	Coefficient of thermal expansion	8	7.8	10
	10-6/℃			
	0-1000℃			
	Heat shock force T (℃)	200	220	350
	Heat conductivity W/m.k	31	22	3
Electrical characteristics	Volume resistivity Ω.cm	$>10^{12}$	$>10^{12}$	$>10^{12}$
	Insulation breaking strength KT/m	18	16	15
	Dielectric constant 1MHZ (E)	9.2-10.5	9.0-10	12.5

Specification

Parameters	UNIT	Al 99	Al 95
Al_2O_3 Content	%	99	95
Density	g/m3	3.85	3.6
water absorption	%	0	0
Sintering temperature	°C	1690	1670
Hardness	HV	1700	1600
Compressive strength	Kgf/cm2	30000	25000
Max. Working Temperature	°C	1500	1400
Thermal Conductivity	W/(m K)	31	22
Volume Resistivity	Ω.cm	>1012	>1012
Dielectric Constant	MHZ(E)	9.2-10.5	9.0-10
Customization		Available	Available