



BASIC PROPERTIES

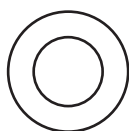
- Refractoriness up to 1700°C
- High mechanical strength
- High electrical resistivity
- Resist to chemical attacks e.g. hydrogen and other reduced gases
- Very hard
- Abrasion-resistant
- Can be milled with great precision
- Can be polished
- Stable at high temperatures
- No open porosity
- Excellent electrical properties
- High corrosion resistance
- Chemically inert
- Suitable for high vacuum

CHEMICAL COMPOSITION

Alumina 99,7%
Silicon : 0,05%
Magnesia : 0,03 %
Sodium Oxide : 0,15%
Iron Oxide : 0,02%
Calcium Oxide : 0,03%
Titanium Oxide : <0,01%
Boric Oxide : <0,02%

SCERAM stocks significant quantities of tubes, allowing great responsiveness and quick delivery.

- Standard length on stock: 1000 to 1500 mm (Longer tubes on demand: up to 4000 mm, depending on outer diameter)
- Dimensions not included in the table can be custom made upon request.
- General tolerances are in compliance with DIN 40680 norm.



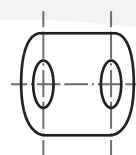
1 BORE TUBE



2 BORES TUBE



4 BORES TUBE



2 BORES OVAL TUBE

SCERAM provides tubes machining services :

- Cutting to requested length
- Hole drilling
- Outer and inner diameter extremities threading
- Extremities outer and inner diameter grinding
- Half tube longitudinal cutting (on limited length)
- Flanges cementing (with refractory cement)
- Customized tolerances upon request

MATERIAL	C799 according to DIN VDE 0335	ALUMINA 99,7%
Chemical Formula		Al ₂ O ₃
Aspect / color		
Porosity		Impervious
Mechanical	Measuring unit	
Poisson's ratio	-	
Hardness Mohs	Mohs	
Hardness Vickers		1800
Young modulus	GPa	310
Bending strength	MPa	250
Crushing strength at 20°	MPa	1800
Tenacity	MPa.m ^{1/2}	4,6
Max. use temperature	°C	1850
Max. use temperature in air	°C	1750
Opened porosity	%	0
Absolute density	g/cm ³	3,9
Density	g/cm ³	3,8
Melting point	°C	2050
Electrical		
Electrical resistivity at 20°	Ohm, m	1014
Electrical resistivity at 600°C	Ohm, m	108
Loss tangent for 1 Ghz	Hz	2,5 x 10 ⁻⁴
Loss tangent for 1 Mhz	Hz	6 x 10 ⁻³
Thermal		
Thermal conductivity at 1000°C	W/m. °K	9,1
Thermal conductivity at 20°C	W/m. °K	29
Thermal conductivity at 500°C	W/m. °K	12,1
Thermal choc resistance	°C	medium
Linear expansion	x 10 ⁻⁶	8,6

**These values are for informational purposes only and do not bind company's responsibility.*

1 BORE TUBE

D (in mm)	d (in mm)	L (in mm)
1	0,5	25
1	0,5	50
1,5	0,8	25
1,5	0,8	50
2	1	25
2	1	50
2,7	1,7	5
2,7	1,7	10
2,7	1,7	25
2,7	1,7	50
3	1,2	25
3	1,2	50
4	2	25
4	2	50
5	3	5
5	3	10
5	3	25
5	3	50
6	4	5
6	4	10
6	4	25
6	4	50
7	4,5	5
7	4,5	10
7	4,5	25
7	4,5	50

2 BORES TUBE

D (in mm)	Bores diam. (in mm)	L (in mm)
3	0,8	25
3	0,8	50
4	1	5
4	1	10
4	1	25
4	1	50
6	1,8	5
6	1,8	10
6	1,8	25
6	1,8	50
8	2	25
8	2	50
8,5	2,5	25
8,5	2,5	50
8,5	1,5	25
8,5	1,5	50

4 BORES TUBE

D (in mm)	Bores diam. (in mm)	L (in mm)
4,5	1	5
4,5	1	10
4,5	1	25
4,5	1	50
5,5	1,2	5
5,5	1,2	10
5,5	1,2	25
5,5	1,2	50
6	1,8	25
6	1,8	50
8,5	1,5	25
8,5	1,5	50

2 BORES OVAL TUBE

Outer Diam. (in mm)	Outer Diam.' (in mm)	Bores diam. (in mm)
3	2	0,8
3	2	0,8
12	8	4
12	8	4