



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

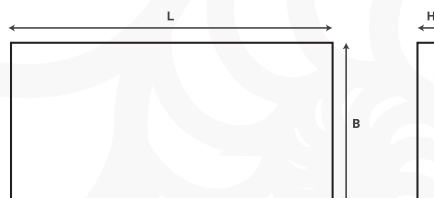
Alumina 99,7%
Silicon : 0,05%
Magnesia : 0,03 %
Sodium Oxide : 0,15%
Iron Oxide : 0,02%
Calcium Oxide : 0,03%
Titanium Oxide : <0,01%
Boric Oxide : <0,02%

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.

ALUMINA 99,7% PLATE (in mm)

L	I	Thick.
310	310	10
310	310	15
310	310	20
310	310	30



SCERAM can provide any dimension on request. Please contact us for more information.