




Description	
Description	In applications where ceramic components are metallised, our customers often choose 97.6% aluminium oxide. We generally process isostatically pressed material for our precision components, but injection moulding, dry pressing etc. are also possible.
Common applications	Electrical feedthroughs, groove insulators, components for X-ray applications, measuring instruments
Production options	Round components up to Ø 600 mm, flat components up to an edge length of 600 mm, drilled holes from Ø 0.3 mm, female threads from M1.6, tolerances in the micron range, polished surfaces, cylindrical grinding, surface grinding, 5-axis simultaneous grinding, wall

General properties		
Colour		White
DIN designation		C795
Chemical composition		Al ₂ O ₃ 97.6%
Density	g/cm ³	3.76
Open porosity		0

Mechanical properties		
Transverse rupture	MPa	296
Compressive strength	MPa	> 1700
Modulus of elasticity	GPa	> 300

Electrical properties		
Volume resistivity	Ω cm	> 10 ¹⁴
Electric strength	kV/mm	> 32.6
Dielectric constant at 25 °C and 1 GHz		9

Industries	
Semiconductors	Vacuum technology
Lasers	Analysis equipment
Nanotechnology	Soldering applications
Lithography systems	Mechanical engineering
Electronics	Research & development
Welding	Coating technology
Plastic injection moulding	Aerospace
Joining	

Thermal properties		
Max. service temperature (in air)	°C	1600
Coefficient of linear expansion	10 ⁻⁶ K ⁻¹	8.2
Thermal conductivity at 20 °C	W/mK	26.8

The preliminary remark to DIN 40685 applies analogously to the property values given in the table, whereby the values provided here only apply to the test specimens on which they were measured. All information reflects our current knowledge and is subject to change without notice. Its applicability to other geometries is not assured. In other words, the values given here are merely intended as a guide.

Special materials:

Are you looking for a precision component made of a specific ceramic? Contact us for more information! Since every production step is traceable, we can also process and procure special materials according to each customer's specifications.