


Description	
Description	<p>High mechanical strength, isostatically pressed, yttrium-stabilised, zirconia ceramic.</p> <p>Z2000 is an electrically insulating, high-strength material that also has a good modulus of elasticity and coefficient of expansion. It is a perfect structural material in the steel industry for components subjected to high mechanical loads.</p>
Common applications	Ceramic screws, dowel pins, sensor housings, punching tools, clamping tools, positioning aids in welding applications
Production options	Round components up to Ø 150 mm, flat components up to an edge length of 300 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 thicknesses

Industries	
Welding	Control technology
Punching	Medical technology
Drawing	Soldering
Pressing	Cable assembly
Metalworking	Crimping tools
Screw production	Paper industry
Thermo processing	Wire industry
Measurement technology	Casting

General properties		
Colour		White
DIN designation		TZP
Chemical composition		ZrO ₂ -Y ₂ O ₃
Density	g/cm ³	6.05
Open porosity		0

Mechanical properties		
Transverse rupture	MPa	1000
Compressive strength	MPa	2000
Modulus of elasticity	GPa	205

Electrical properties		
Volume resistivity	Ω cm	> 10 ¹²
Electric strength		
Dielectric constant at 25 °C and 1 GHz		

Thermal properties		
Max. service temperature (in air)	°C	1200
Coefficient of linear expansion	10 ⁻⁶ K ⁻¹	10
Thermal conductivity at 20 °C	W/mK	2

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.