

TECHNICAL DATA SHEET

Precision High performance Ceramic

General notes:

- » **Partially stabilized zirconia (PSZ)**
- » both hard and fracture tough
- » fine grain size: excellent surface finish and able to hold sharp edge
- » relatively low density
- » no open porosity
- » good abrasion and wear resistance
- » superior flexural strength and fracture toughness
- » good thermal properties and good temperature stability
- » extreme corrosion resistance, nearly chemically inert
- » electrically insulative until 400-500°C

Mechanical properties

| | |
|-------------------|-----------------|
| Flexural modulus | 200 GPa |
| Flexural strength | 1200 MPa |
| Vickers Hardness | 12 GPa |

Thermal properties

| | |
|--------------------------------|-------------------|
| Thermal conductivity | 2.0 W/m·K |
| Coef. of lin. therm expansion: | 10.0 E-6/K |
| Max working temperature | 1200°C |
| Shock resistance, behaviour | Good |

Electrical properties

| | |
|--------------------|-----------------------------------|
| Volume resistivity | >10¹² Ohm·cm |
|--------------------|-----------------------------------|

Other properties

| | |
|------------------|-------------------|
| Density | 6.00 g/ccm |
| Open porosity | 0.0% |
| Water absorption | 0.0% |
| Color | white |

This document contains information based on average values as obtained from the results of laboratory tests and observations made on the material. Ideal-Tek SA declines all responsibility from an improper use of the product described in this document.