

TECHNICAL DATA SHEET

Advanced Ceramic type MZ

General notes:» **Zirconia Toughened Alumina (ZTA)**

- » a superior combination of high strength (from zirconia) and high hardness (from alumina)
- » relatively low density
- » no open porosity
- » very hard surface, good abrasion and wear resistance
- » good flexural strength and fracture toughness
- » excellent thermal properties and high temperature stability
- » extreme corrosion resistance, nearly chemically inert
- » electrically insulating
- » typically applications includes soldering processes, handling of components during thermal and chemical processes. Generally used when very rigid tips are required

Mechanical properties

Flexural modulus	260 GPa
Flexural strength (25°)	700 MPa
Hardness Vickers	1700 HV

Thermal properties

Thermal conductivity	13 W/m K	25-1000°C
Coef. of lin. therm expansion	$9 \cdot 10^{-6} / ^\circ K$	
Max Temperature	1400°C	
Shock resistance, ΔT	325°C	

Electrical properties

Volume resistivity	$>10^{12}$ Ohm cm	100 V
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Other properties

Density	4.70 g/cm³
Open porosity	0.0%
Water absorption	0.0%
Color	white