

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*10⁻⁶/°K | |
| Max Temperature | 1400°C | |
| Shock resistance, ΔT | 325°C | |

Electrical properties

| | | |
|--------------------|-----------------------------------|-------|
| Volume resistivity | >10¹² Ohm cm | 100 V |
|--------------------|-----------------------------------|-------|

Other properties

| | |
|------------------|------------------------------|
| Density | 4.70 g/cm³ |
| 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.