

TECHNICAL DATA SHEET

ESD Ceramic type (ZJ)

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
- » **ESD Safe static dissipative material**
- » typically applications includes **handling of EOS/ESD** sensitive components, handling of components during thermal, chemical and soldering processes. Generally used when very rigid tips are required.

Mechanical properties

Flexural modulus	200 GPa
Flexural strength (25°)	500 MPa
Hardness Vickers	1700 HV

Thermal properties

Thermal conductivity	5 W/m K	<i>25°C-1.000°C</i>
Coef. of lin. therm expansion	$9.5 \cdot 10^{-6} / ^\circ\text{K}$	
Max Temperature	1200°C	
Shock resistance, ΔT	325°C	

Electrical properties

Surface resistivity	$10^7 - 10^9 \text{ Ohm/sq.}$	<i>100 V</i>
Decay time	<0.5 sec	<i>1.000-10V</i>

Other properties

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