

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*10⁻⁶/°K | |
| Max Temperature | 1200°C | |
| Shock resistance, ΔT | 325°C | |

Electrical properties

| | | |
|---------------------|--|------------------|
| Surface resistivity | 10⁷-10⁹ 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 |