

| DATASHEET: ZIRCONIA MATERIALS | | | | | | | |
|-------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|------------------|---------|------------------------|--------------------------------------|
| PROPERTIES | Units | EZY 94 | EZY 88 | EZM 96 | EZC 96P | EZZ 66P | EAZ 20 |
| | | Y ₂ O ₃ TZP | Y ₂ O ₃ FSZ | MgO PSZ | CaO FSZ | Zircon | ZTA |
| Physical Properties | | | | | | | |
| % Zirconia | % wt | 94 | 88 | 96.5 | 96 | 68 | 23 |
| % Stabiliser (by wt) | % wt | 6 | 12 | 3.5 | 4 | 30 (SiO ₂) | 77 (Al ₂ O ₃) |
| Density | g/cm ³ | 6.05 | 5.85 | 5.85 | 4.3 | 3.87 | 4.3 |
| Open Porosity | % | 0 | 0 | 0 | 25 | 16 | 0 |
| Thermal Properties | | | | | | | |
| Max Operating Temp | °C | 1200 | 1800 | 1200 | 2400 | 1650 | 1200 |
| Max Operating Temp | °F | 2192 | 3270 | 2190 | 4350 | 3000 | 2190 |
| Thermal Conductivity (2 | W/m ² K | 2.2 | 2.5 | 2.2 | 2 | 3.5 | 27 |
| Coefficient Thermal Exp | x10 ⁻⁶ K ⁻¹ | 10.3 | 10.5 | 10.1 | 9.6 | 5 | 8.3 |
| Mechanical Properties | | | | | | | |
| Flexural Strength | psi | 150000 | 30000 | 105000 | - | - | 65000 |
| Hardness- Mohs | Mohs | 8 | 8 | 8 | - | - | 16 |
| Tensile Strength | psi | - | - | 60,000 | - | - | 42000 |
| Electrical Properties | | | | | | | |
| Volume Resistivity at 2C | ohm - cm | 10 ¹³ | 10 ¹³ | 10 ¹³ | - | - | 10 ¹⁴ |
| Volume Resistivity at 6C | ohm - cm | 10 ⁴ | 10 ⁴ | 10 ⁵ | - | - | 10 ⁹ |
| Dielectric Constant | 25°C & 1 mhz | 29 | - | 28 | - | - | 10.6 |

** - Full Chemical Analysis Available On Request

Additional material properties are available - please ask at machine.ceramic@made-parts.com

The values given on this data sheet were established on test pieces and identify the characteristic data of our products. These values should be used for guidance only as actual values will depend on individual geometry and application of each part.

For Further Information contact us at: machine.ceramic@made-parts.com