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**CREATING QUALITY STANDARDS FOR THE INDUSTRY**

## Ceramic Injection Molding

### Precision Injection Molding

#### **WM-TZP-A 94.4% Stabilized White Zirconia Ceramic**

WM-TZP-A is a 94.4% pure Stabilized Zirconia Ceramic. It has adequate strength coupled with good wear resistance. This material produces parts with excellent surface quality; reproduction of finest details. Areas where this material is typically used are: Biomedical Applications, Micro engineering, Fiber Optics, and Nozzles for Extrusion and Spraying. Maximum temperature of use is 100°C; in dry environments is up to 400°C. Not Suitable for multiple steam sterilizations.

#### Physical Properties

Color	-	White
Sintered Density	-	6.02 g/cc
Bending Strength	-	600-800 MPa
Compressive Strength	-	2500 MPa
Fracture Toughness (NB)	-	6.0-9.0 MPa·√m
Hardness	-	1350 (HV)
Thermal Conductivity	-	2.0 (W/m*K)

#### Chemical Properties

ZrO <sub>2</sub>	-	> 94.4 wt%
Y <sub>2</sub> O <sub>3</sub>	-	5.0-5.3 wt%
Al <sub>2</sub> O <sub>3</sub>	-	0.2-0.3 wt%

These numbers are typical values for the properties listed. Depending on the end shape and environment, these values may be slightly different. Any questions and or for recommendations on how to design your Ceramic Injection Molded Parts, please contact our Design Engineers at Wunder Mold.

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