



Alumina Toughened Zirconia Powder

As the professional manufacture, we would like to provide you high quality Nextgen Alumina Toughened Zirconia Powder. Zirconia toughened alumina (ZTA) powder has mechanical strength and wear resistance and can be used as an ideal material between zirconia particles and alumina. Nextgen Advanced Materials supplies ZTA powders with high quality and fast delivery, and

customized products are also available.

Product Description

As a professional high quality Nextgen Alumina Toughened Zirconia Powder manufacture, you can rest assured to buy Alumina Toughened Zirconia Powder from our factory and we will offer you the best after-sale service and timely delivery. Zirconia toughened alumina (ZTA) has mechanical strength and wear resistance and can be used as an ideal material between zirconia particles and alumina. It was established that ZTA ceramic material is stronger and tougher than regular alumina ceramics. Typically, ZTA contains 10-20% volume of ZrO_2 in alumina. Depending on the percentage of content, the properties of the ceramic can be tailored to suit the application in question. Because of the high price of pure zirconia, ZTA with good toughness is a good choice.



ZTA Ceramics Properties

Chemical Formula	Zr-Al ₂ O ₃
Density	4.1-4.38 g/cm ³
Hardness	1750-2100 Knoop
Elasticity	45-49 x 10 ⁶ psi
Flexure Strength	100-145 ksi

Poisson's Ratio	0.26
Fracture Toughness	5-7 MPa m ^{1/2}
Coefficient of Thermal Expansion	8.0-8.1 x 10 ⁻⁶ 1/C
Thermal Conductivity	20.0-21.0 W/mK
Shock Resistance	325 °C
Maximum Working Temperature	1650 °C