

# Zirconium dioxide -ZrO<sub>2</sub>



## 1. Material Introduction

Pure zirconium dioxide (ZrO<sub>2</sub>) is a white solid with high melting point, high hardness, high toughness and wear resistance. It is an insulator at normal temperature, and has excellent properties such as electrical conductivity at high temperatures. Due to its good physical and chemical properties, zirconium dioxide is widely used in ceramics, refractory materials, machinery, electronics, optics and aerospace.

## 2. Technical Parameters

|                    |  |
|--------------------|--|
| Symbol             | ZrO <sub>2</sub>                                       |
| Color/Appearance   | White solid  |
| Type               | Granules 、 Tablets                                     |
| Melting Point(°C)  | 2715°C   |
| Refractive Index   | 2.05 at 500nm  |
| Purity             | 99.9-99.99%  |
| Density            | 5.89g/cm <sup>3</sup>                                  |
| Evaporation Source | E-beam   |
| Application        | Antireflection(AR) 、 Multilayer films 、 Nano hardening |

## 3. Field Application

| Application Area                                     | Application Component                                |
|--|--|
| Optical glass multilayer film                        | Glasses lens   |
| Piezoelectric ceramics, precision ceramic refractory | Sintered gaskets, molds, artificial joints, dentures |
| Electrostatic paint and baking varnish               | Refractory brick                                     |