

## High-performance Ceramics Alumina, Silicon Carbide and Zirconia

Our materials alumina, silicon carbide and zirconia offer high wear resistance, as well as temperature, and corrosion stability. Alumina and zirconia also have excellent electrical insulation values.

All of our materials are proven to be valuable design materials in the fields of machine construction, process technology, plant design, chemistry, and electronics.

At OXIDKERAMIK J.Cardenas GmbH we develop highly specialised ceramic components in a wide range of different designs. To do this we rely on modern production facilities with highly efficient machines to produce components that meet the most exacting tolerance and surface quality requirements.



### Ceramic Components for Maximum Function and Precision

With their fine, high-purity microstructure our ceramic materials feature excellent properties:

- > very high temperature stability
- > high surface quality
- > extreme hardness and dimensional stability
- > excellent corrosion resistance
- > exceptional wear resistance
- > high compressive strength



Ceramic components in machine and plant design guarantee long lasting function and offer you a very long service life. They also optimise set-up and machine downtimes. Choosing a ceramic component gives you a distinct competitive advantage.

OK 997 · CARSIC 310 · CR 105 · CR 101

**Technical Ceramics**

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# Technical Ceramics

## OK 997

- High-purity 99.7 % alumina
- High hardness
- Extreme corrosion and wear resistance
- Electrically insulating

## CARSIC 310

- Directly sintered silicon carbide (SSiC)
- High hardness
- Chemical resistance up to pH 0 to pH 14
- Thermal conductivity = 100 W/m K
- Circumferential speeds up to  $v = 50$  m/s

## CR 101

- Magnesium stabilised zirconia
- High wear resistance
- Flexural strength 560 MPa
- Compressive strength 2700 MPa
- Fracture toughness  $KIC = 8,0$  MPa  $m^{1/2}$
- Thermally insulating

## CR 105

- Yttrium stabilised zirconia
- High wear resistance
- Flexural strength 1000 MPa
- Compressive strength 3800 MPa
- Fracture toughness  $KIC = 10,0$  MPa  $m^{1/2}$
- Thermally insulating

### Tradition

As an independent family-owned company, we have been a leading developer and manufacturer of technical ceramic components for 40 years.

### Personality

The proximity and personal relationship to the customer is as important to us as is the highest quality of our products. You have chosen a reliable partner in us.

### Development

We produce customised ceramic components in cooperation with the customer. Take advantage of our know-how to find an appropriate ceramics solution for your application.



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