



TECHNICAL CERAMICS

# RAPOX

Dense Alumina  
products



Innovation meets tradition.

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## Dense Alumina products

### TECHNICAL CERAMICS

#### PRODUCT PROPERTIES

##### OUR ALL-ROUNDER RAPOX

Alumina is a very hard material with **good heat conduction and electrical insulation ability**, which can be used stably at high temperatures and in aggressive chemical environments. Depending on the purity of the material and the inner grain structure, it is suitable for a wide range of technical applications. We offer our alumina at purity levels of 80-99.9%.

#### APPLICATIONS

Rapox is an alumina ceramic that can be used up to 1600 °C. It is characterized by **high mechanical strength, electrical breakdown strength**, and at the same time the **highest temperature resistance**.

#### AREAS OF APPLICATION INCLUDE:

- Sensor tips
- High Voltage Insulators
- Thermocouple tubes
- Thermocouple protection tubes
- Thermal sensor housing (also closed on one side)
- Fuses
- Crucibles and laboratory crucibles
- Wear-resistant ceramics
- Isolation ceramic for ignition components

TYPICAL VALUES	RAPOX 80	RAPOX 95	RAPOX 96	RAPOX 100
Material base	Alumina 78%	Alumina 95%	Alumina 96%	Alumina >99,9
Density [g/cm <sup>3</sup> ]	3,2	3,5	3,7	3,9
Flexural Strength [MPa]	200	220	250	>300
Coefficient of linear expansion 20-600 °C 10 <sup>-6</sup> /K	6-8	6-8	6-8	7-8
thermal conductivity [W/mK]	15	18	24	30
Thermo shock resistance	good	good	good	good
Max.operation temperature	1350	1400	1500	1900
Open porosity %	0	0	0	0

#### YOUR BENEFITS

High-volume manufacturing processes possible  
**very good availability and delivery times**

Prototyping via 3D printing possible  
**fast verification of the application in your company**

An all-round material with many areas of application  
**No extensive raw material research necessary**

A feature-related long service life  
**safety and reliability for you and your customer**

Hybrid components in ceramic-plastic are possible - cost-cutting  
**a better market performance for you**



#### Your Inquiry – Fast & Precise Quotation

For a fast and precise quotation, please send us a drawing of the component along with details on quantities and tolerances. We will be pleased to advise you personally.

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