

MARTOXID<sup>®</sup> MRS-1**Einsatzbeispiele /  
Applications**

Oxidkeramik mit hohen  $\text{Al}_2\text{O}_3$ -Gehalten, insbesondere für mechanisch, thermisch, chemisch und elektrisch extrem belastbare keramische Komponenten; Hochleistungszündkerzen, Substrate und ballistische Anwendungen.

Oxide ceramics of high  $\text{Al}_2\text{O}_3$ -content, subjected to extremely high mechanical, thermal, chemical and electrical loads; high efficiency spark plugs, substrates and armor protection.

**Durchschnittsanalyse /  
Typical analysis**

$\text{Al}_2\text{O}_3$	[%]	≈ 99.8
$\text{Na}_2\text{O}$ total	[%]	≤ 0.04
CaO	[%]	≤ 0.04
$\text{Fe}_2\text{O}_3$	[%]	≤ 0.04
$\text{SiO}_2$	[%]	≤ 0.10
$\alpha\text{-Al}_2\text{O}_3$	[%]	≥ 95
Glühverlust / Loss on Ignition	[%]	≤ 0.1
Spezifische Oberfläche / Specific Surface Area (BET)	$[\text{m}^2/\text{g}]$	2.0 – 4.0
Schüttdichte / Bulk Density	$[\text{kg}/\text{m}^3]$	≈ 800
Primärkorn / Primary Crystal	$[\mu\text{m}]$	1.0 – 1.4
Pressdichte/Pressed Density [100 MPa]	$[\text{kg}/\text{m}^3]$	≥ 2.20
Sinterdichte/Sintered Density [1600°C/2h]	$[\text{kg}/\text{m}^3]$	≥ 3.15
Korngrößenverteilung / Particle Size Distribution (Laser granulometer Cilas 1064)		
	$d_{10} [\mu\text{m}]$	0.4 – 0.6
	$d_{50} [\mu\text{m}]$	1.1 – 1.6
	$d_{90} [\mu\text{m}]$	2.5 – 4.5

Die oben genannten Werte sind nur als Richtwerte zu verstehen und nicht etwa als zugesicherte Eigenschaften.  
The above mentioned values should be taken only as indications and not as guaranteed properties.

## Shipping Information

Transportation classification: not regulated for transportation  
Harmonized tariff number: 28182000

Packaging and minimum order quantity information is available from sales or customer service.

## Safety and Handling Information

For specific safety, toxicity and handling information, please refer to the material safety data sheet on this product.

## Chemical Registration Numbers

Chem. Bezeichnung / Chem. name: Aluminiumoxid  
Formel / formula:  $\text{Al}_2\text{O}_3$   
CAS No.: 1344-28-1  
EC/EINECS No.: 215-691-6  
UN-Nr.: ---

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