

Material type: Aluminium Oxide (Al₂O₃)DEGUSSIT[®] AL23

| Properties | | Unit | Specific value |
|------------------------------------|--------------|----------------------|------------------------------------|
| Main component | | - | α - Al ₂ O ₃ |
| Purity | | wt-% | > 99,5 |
| Density | | g / cm ³ | 3,70 - 3,95 ¹⁾ |
| Open Porosity | | vol.-% | 0 |
| Average Size of Crystallites | | µm | 10 |
| Bending Strength σ_m | DIN EN 843-1 | MPa | 300 - 350 ¹⁾ |
| Compressive Strength | | MPa | 3500 |
| Young's Modulus | static | GPa | 380 |
| Poission's Ratio | | - | 0,22 |
| Hardness | Knoop, 100 g | GPa | 23 |
| Maximum Service Temperature in Air | | °C | 1950 |
| Linear Coefficient of Expansion | 20 - 1000°C | 10 ⁻⁶ / K | 8,2 |
| Specific Heat | 20 °C | J / (kg * K) | 900 |
| Thermal Conductivity | 20 °C | W / (m * K) | 34,9 |
| | 1000 °C | W / (m * K) | 6,8 |
| | 1500 °C | W / (m * K) | 5,3 |
| Dielectric Strength | | kV / mm | 20 - 30 ¹⁾ |
| Typical Colour | | - | ivory |

¹⁾ Dependent on manufacturing method

The data indicated on this table are in line with the introductory German Industrial Standard DIN 40680 and relate to test specimens from which they were obtained. They are not unconditionally applicable to other forms of the same material. The data must be regarded as indicative only. All data refer to a temperature of 20 °C, unless otherwise specified.

The material is extremely resistant to corrosion.

We should be pleased to send you brochures about the corrosion resistance of oxide ceramics.