

DEGUSSIT DD57

2023.04.03

Material Type: Aluminium oxide (Al₂O₃, Cr₂O₃)

MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

| | | | |
|--|-------------|-----------------------|-------|
| Purity | | [wt.-%] | >99.5 |
| Density | | [g/cm ³] | ≥3.90 |
| Open porosity | | [vol.-%] | 0 |
| Average size of crystallites | | [µm] | 10 |
| Bending strength σ_m DIN EN 843-1 | | [MPa] | 300 |
| Compressive strength | | [MPa] | 3000 |
| Young's modulus (static) | | [GPa] | 380 |
| Poisson's ratio | | [-] | 0.22 |
| Hardness HV1 | | [-] | 1660 |
| Maximum service temperature in air | | [°C] | 1950 |
| Linear coefficient of expansion | 20 - 100 °C | [10 ⁻⁶ /K] | 7.5 |
| | 21 - 1000°C | | 8.5 |
| Specific heat 20 °C | | [J/(kg*K)] | 900 |
| Thermal conductivity | 20 °C | [W/(m*K)] | 34.9 |
| Typical colour | | [-] | red |

The data indicated on this table are in line with the introductory German Industrial Standard DIN 60672-2 are relate to test specimens from which they were obtained. They are not unconditionally applicable to other forms if the same material. The data must be regarded as indicative only. All data refer to a temperature of 20 °C, unless otherwise specified.