

Chemically bound ceramics on the basis of Bauxite

Physical Properties

| | | |
|----------------------------------|------------------------|-----------------------|
| Bulk density: | 2.8 | g/cm ³ |
| Hardness to Mohs: | ~ 7-8 | |
| Maximum particle size: | 4 | mm |
| Compressive strength: | after 1 day: | 130 N/mm ² |
| | after 7 days: | 185 N/mm ² |
| | after 28 days: | 225 N/mm ² |
| Flexural strength: | after 1 day: | 18 N/mm ² |
| | after 7 days: | 28 N/mm ² |
| | after 28 days: | 30 N/mm ² |
| Coefficient of expansion: | 1,0 x 10 ⁻⁵ | 1/K |
| Thermal conductivity: | 1,5 | W/mK |
| Maximum operating temperature: | 400 | °C |
| Shrinkage during drying process: | < 0,1 | % |

Chemical Composition

| Components | Mean Values (Weight-%) |
|---|------------------------|
| Al ₂ O ₃ + TiO ₂ | 50 |
| CaO | 20 |
| SiO ₂ | 25 |
| Others | 5 |

Additives

| | |
|--------------|-----------|
| Steel fibres | 4,5 |
| Water | 5,5 – 6,0 |

Wear Resistance

| | | |
|--|-----|-------------------------------------|
| DIN 52 108 Böhme-disc ¹⁾ | 4 | cm ³ /50 cm ² |
| ASTM C-704 - 94 ²⁾ (However, blast angle 30°) | 4,7 | cm ³ |

1) neutrally determined by the State Material Test Authority of the University of Kaiserslautern

2) neutrally determined by the publicly appointed and sworn expert, Engineering Office O. Thelen, Melsbach

All values were determined on test bodies and are mean values from standard test methods and therefore do not constitute guaranteed properties for construction items of all kinds, linings etc. in the sense of assured product values; in cases of doubt, pilot trials and/or item tests are recommendable.