T-E-Klebetechnik

Anwendungs-, Verfahrens- und Dosiertechnik

Ceramabond 503

Rev.: 04/15

Beschreibung

Ceramabond 503 is a ceramic, aluminum oxide based high temperature resistant 1-K adhesive. This adhesive is ideal for bonding ceramic tiles, plates, crucible ceilings and refractory materials.

It is often used as a repair material, for gluing resistance wires or as a coating. Ceramabond 503 has excellent adhesion to thick ceramics, graphite, quartz, glass, boron nitride, silicon carbide, titanium boride and other refractory materials.

Technical Data

Characteristics	Ceramabond 503
Main Components	Aluminium Oxide
Max. Temperature	1650 °C
Spec. Weight	2.35 – 2.55 g/cm^3
Viscosity	500 – 900 g/cm-s
Thermal Conductivity	< 1.0 W/m-K
Dielectric Strength	6.73 KV/mm at RT
CTE	7.2 (cm/cm/°C x 10^6)
Specific Resistance	10^9 Ohm/cm at RT 10^5 Ohm/cm at 540°C
Hardness	8 Moh's Scale
Oxidation Resistance	Excellent
Moisture Resistance	Good
Alkali Resistance	Acceptable
Acid Resistance	Excellent
Colour	White

Handling

Ceramabond 503 can be processed with an automatic dispenser, injection syringes, brushes or spatulas. Dilution with a little water is possible.
When used as an adhesive:
Tolerances from 0.025 mm to 0.13 mm with max. adhesive strength, sealability and minimal shrinkage. Smooth surfaces should be roughened or etched.

Hardening

- Less than 1 hour air cure
- 2 Hours heat cure at 90 °C
- 2 Hours heat cure at 260 °C
- 2 Hours final cure at 370 °C

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