



DATA SHEET

Fortafix High Temperature Adhesives

2-PART CHEMICAL SETTING CEMENT/ ADHESIVE - QS/B4 (FILLER/BINDER)

- 2 part Filler/Binder system, which forms a ceramic based adhesive/cement.
- Water based.
- Chemical setting action.
- Designed for bonding, assembling, sealing, jointing or repairing glass, ceramics, metals, quartz etc.
- Possesses excellent thermal, electrical and mechanical properties.
- A maximum continuous operating temperature of >1000°C.

Typically Used For

- Elements
- Encapsulating elements and resistors
- Ovens
- Potting/Embedding
- Hot plates
- Heaters

Principal Characteristics

- Suitable for Bonding, Thin Films/Coatings, Thick Sections and Potting/ Encapsulation.
- Maximum Continuous Service Temperature: >1000°C.
- Available as a Filler and Binder Pack, which when mixed forms a viscous off -white paste.

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|------------------------------|---------------------------------------|--------------------------------|--------------------------------|----------------------------|--------------------------|
| Softening Temperature | 1100°C | Melting Temperature | 1200°C | pH | 13 |
| Oxidation Resistance | Excellent | Acid Resistance | Excellent, except Hydrofluoric | Alkali Resistance | Good |
| Expansion | 0 | Binder solids by weight | 38.54% | Wet Density | 2.18g/cm ⁻³ |
| Thermal expansion | 10.5 x10 ⁶ C ⁻¹ | Volume Resistivity | >10 ⁷ Ω cm | Dielectric Strength | 7-10 KV.mm ⁻¹ |
| Packaging | 1 kg - filler | 1 litre - binder | | | |

Health and Safety / Environmental Information

- See separate MSDS sheets. (MSDS: 2 Part Chemical Set - QS/B4).
- RoHS Compliant.

Guidelines for Use

Mixing Instructions

- Mix binder and filler in a ratio of 3 part (by weight filler): 2 part (by weight) binder.
 - Weigh quantities precisely.
 - Add powder filler to liquid binder and mix for a *minimum. 3-5 minutes*, until a smooth homogeneous paste is formed.
 - Mixing apparatus, tools and brushes should be washed out immediately after use with water before adhesive hardens.

Note – The above consistency should provide a mix satisfactory for most applications. If required the binder content may be increased by up to 20% to meet special requirements, however, additional binder will increase setting time and may slightly reduce maximum service temperature.

Application

- Thoroughly clean and degrease surfaces to be bonded or sealed.
- A light surface abrasion of the material to be bonded will increase the surface area available for adhesion and improve mechanical key.
- Apply the sealant as supplied to all surfaces to be bonded and complete tooling within 5-10 minutes.
- Apply moderate pressure to ensure even anchorage and solid contact of the surfaces to be bonded, so that all surfaces are fully wetted.
- Secure components and allow the adhesive to set.
- All application equipment should be cleaned with warm water immediately after application.

Curing Schedule

- As this product is water based, it is necessary to fully dry and dehydrate the adhesive.
- The curing of this product may vary depending on temperature, humidity, porosity of substrates, glue line thickness and area etc. A rough guide for typical applications at room temperature and average humidity would be approximately 36-48 hours.
- Curing may be accelerated by the application of gentle and progressive heat (do not exceed 100°C during curing as this may lead to product failure).

Storage

- Product should be stored in original packaging between 5 - 30°C.
- Shelf life - 12 months.