



## DATA SHEET

### Fortafix High Temperature Adhesives

#### **2-PART CHEMICAL SETTING CEMENT/ ADHESIVE - LQ/S6 (FILLER/BINDER)**

- 2 part Filler/Binder system, which forms an Quartz based ceramic 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/Binder Pack, which when mixed forms a viscous off -white paste.

<b>Softening Temperature</b>	1000°C	<b>Melting Temperature</b>	1100°C	<b>pH</b>	13
<b>Oxidation Resistance</b>	Excellent	<b>Acid Resistance</b>	Excellent, except Hydrofluoric	<b>Alkali Resistance</b>	Good
<b>Expansion</b>	0	<b>Binder solids by weight</b>	38.54%	<b>Wet Density</b>	2.06g/cm <sup>-3</sup>
<b>Thermal expansion</b>	3-5 x10 <sup>6</sup> C <sup>-1</sup>	<b>Volume Resistivity</b>	>10 <sup>17</sup> Ω cm	<b>Packaging</b>	1 kg - filler 1 litre - binder

## Health and Safety / Environmental Information

- See separate MSDS sheets. (MSDS: 2 Part Chemical Set – LQ/S6).
- RoHS Compliant.

### Guidelines for Use

#### *Mixing Instructions*

- Mix binder and filler in a ratio of 2 part (by weight filler): 1 part (by weight) binder.
  - Weigh quantities precisely.
  - Add powder filler to liquid binder and mix for a *minimum of 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.