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.

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Softening Temperature</td>
<td>1000°C</td>
</tr>
<tr>
<td>Melting Temperature</td>
<td>1100°C</td>
</tr>
<tr>
<td>pH</td>
<td>13</td>
</tr>
<tr>
<td>Oxidation Resistance</td>
<td>Excellent</td>
</tr>
<tr>
<td>Acid Resistance</td>
<td>Excellent, except Hydrofluoric</td>
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<tr>
<td>Alkali Resistance</td>
<td>Good</td>
</tr>
<tr>
<td>Expansion</td>
<td>0</td>
</tr>
<tr>
<td>Binder solids by weight</td>
<td>38.54%</td>
</tr>
<tr>
<td>Wet Density</td>
<td>2.06g/cm³</td>
</tr>
<tr>
<td>Thermal expansion</td>
<td>3-5 x10⁶ C⁻¹</td>
</tr>
<tr>
<td>Volume Resistivity</td>
<td>&gt;10⁻⁷ Ω cm</td>
</tr>
<tr>
<td>Packaging</td>
<td>1 kg - filler</td>
</tr>
<tr>
<td></td>
<td>1 litre - binder</td>
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</table>
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 - 30ºC.
- Shelf life - 12 months.