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.

<table>
<thead>
<tr>
<th>Softening Temperature</th>
<th>Melting Temperature</th>
<th>pH</th>
<th>Oxidation Resistance</th>
<th>Acid Resistance</th>
<th>Alkali Resistance</th>
<th>Expansion</th>
<th>Binder solids by weight</th>
<th>Wet Density</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100°C</td>
<td>1200°C</td>
<td>13</td>
<td>Excellent</td>
<td>Excellent, except Hydrofluoric</td>
<td>Good</td>
<td>0</td>
<td>38.54%</td>
<td>2.18g/cm³</td>
<td>1 kg - filler</td>
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<tr>
<td>Oxidation</td>
<td>Oxidation</td>
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<tr>
<td>Resistance</td>
<td>Resistance</td>
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<tr>
<td>Expansion</td>
<td>10.5 x10⁶°C⁻¹</td>
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<td>0</td>
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<tr>
<td>Thermal expansion</td>
<td>Volume Resistivity</td>
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<td>10⁻⁷ Ω cm</td>
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<tr>
<td>Packaging</td>
<td>1 litre - binder</td>
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<td></td>
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<td>7-10 KV.mm⁻¹</td>
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</table>
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.