



A brand of MINKON

DATA SHEET

Fortafix High Temperature Adhesives

Product: FORTAFIX LQ/S6: 2-PART CHEMICAL SETTING ADHESIVE (Filler + Binder)

Principal Characteristics

Two Part Chemical Setting Adhesive Cement. (Filler + Binder system)

Water based. Ceramic Adhesive paste to +1200°C.

2-part Filler/Binder – Quartz based filler system

High dielectric strength

Lower thermal conductivity

Lower thermal expansion – good thermal shock resistance

Chemical setting action - Sets to form hard and rigid ceramic mass.

Improved water resistance when compared to pre-mixed products.

Designed for bonding, assembling, sealing, jointing or repairing glass, ceramics, metals, quartz etc.

Suitable for Bonding, Thin Films/Coatings, Thick Sections and Potting/Encapsulation.

Excellent electrical, thermal, and mechanical properties.

Mixing ratio	2 part by weight Filler 1 part by weight Binder	Pot Life @ 20°C	15-20 minutes
Softening Temperature	Up to 1100°C	Melting Temperature	Up to 1200°C
Oxidation Resistance	Excellent	Resistance to alkali, acid, organic solvents	Good
Dielectric Strength	$>10^{17} \Omega \text{ cm}$	Thermal Expansion	$3-5 \times 10^{-6} \text{C}^{-1}$
Binder solids by weight	38.54%	Packaging	1 litre - Binder 1 kg - Filler

Typical Applications

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

Health and Safety / Environmental Information

- See separate MSDS sheets. (MSDS – Fortafix LQ/S6 Filler – Fortafix LQ/S6 Binder).
- RoHS Compliant.

Guidelines for Use

Mixing Instructions

Mix binder and filler in a **ratio of 1 parts (by weight) filler: 1 parts (by weight) binder.**

Weigh quantities precisely.

Add powder filler to liquid binder and **mix for 3-5 minutes** until a smooth homogeneous paste is formed.

Mixing equipment 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 varied by up to 20% to meet special requirements, however, additional binder will increase setting time & drying shrinkage and may slightly reduce maximum service temperature.

Application

Thoroughly clean and degrease all 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 adhesive to 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

This product is water based, it is necessary to fully dry and dehydrate the adhesive for use at high temperatures.

Initial curing of this product may vary depending on temperature, humidity, porosity of substrates, volume of adhesive and area etc. A rough guide for typical applications at room temperature and average humidity would be approximately 36-48 hours.

Full curing is achieved by the application of gentle and progressive heat.

Care must be taken when raising the temperature through 100°C during first curing as this may lead to boiling of residual water in the glue line and product failure.

Partially cured product may be removed using warm water.



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Storage

Once opened, seal containers, to avoid continuous exposure to air.

Product should be stored in original packaging between 5 - 30°C.

Protect 'Binder' solution from freezing – may cause separation of components.

Shelf life – 12 months.