



A brand of MINKON

DATA SHEET

## Fortafix High Temperature Adhesives

### Product: AUTOSTIC FLAMESEAL FS – Fire Resistant Adhesive

#### Principal Characteristics

**Fire Protection: Non-combustible adhesive/sealant**

Water based. Ready to use. Cartridge applied. Pre-mixed Ceramic Adhesive paste to +1000°C.

**Will comply with BS 476: Part 4: Non combustibility test for materials & EN13501-1: Fire Test to Building Material - Class A1**

Can be used safely as an adhesive where resistance to the spread of flame is required.

Designed for bonding and jointing most types of fire-resistant boards and materials.

Will bond to inorganic wall boards, concrete, stone, silicate fibre materials, thermal insulation panels and many other non-combustible construction materials.

Limitations - Autostic FlameSeal will not bond to plastics and polymer materials, particularly where flexing may occur.

Water based Thixotropic Inorganic Adhesive.

Possesses good wetting and penetration.

Air setting (time related) - to form hard and rigid ceramic mass which is resistant to fire & thermal shock.

#### Typical Applications

- Fire Protection Industries
- Fire Door Manufacture
- Fire Curtains
- Building & Construction
- Thermal Insulation Industries

#### Health and Safety / Environmental Information

- See separate MSDS sheet. (MSDS – Autostic FC FS Series).
- RoHS Compliant.

## Guidelines for Use

### Application

Ensure product is thoroughly mixed, prior to use.

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 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

**This product is water based and can be air set** - depending on temperature, humidity, porosity of substrates, glue line thickness, 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 can be accelerated by the application of gentle and progressive heat.

Under these circumstances - care must be taken when initially raising the temperature through 100°C, as this may lead boiling of residual water in the glue line and product failure.

### Storage

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

Cartridges should be stored in an upright position at all times.

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

Protect from freezing – may cause separation of components.

Shelf life – 12 months.



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#### Characteristics:

Softening Temperature	<b>1000°C</b>	Compressive Strength	<b>28.4 MPa</b>
Melting Temperature	<b>1100°C</b>	Tensile Strength (between steel plates)	<b>1.7MPa</b>
Wet Density	<b>2.08 gcm<sup>-3</sup></b>	Max. Tensile Stress (bending test)	<b>7.1MPa</b>
Thermal Conductivity	<b>0.5-1.0 Wm<sup>-1</sup>K<sup>-1</sup></b>	Shear Strength	<b>3.2 MPa</b>
Thermal Expansion	<b>18-20 x 10<sup>-6</sup>C<sup>-1</sup></b>	Max. Tensile strength (bending test)	<b>7.1 MPa</b>
Dielectric Strength	<b>400 KV mm<sup>-1</sup></b>	Hardness	<b>VPN 6 (1kg load)</b>
Dielectric Constant	<b>41.2</b>	Shrinkage (150-500°C)	<b>1.5%</b>
Volume Resistivity	<b>&gt;10<sup>9</sup>Ωcm</b>	pH	<b>13</b>
Oxidation Resistance	<b>Excellent</b>	Alkali Resistance	<b>Can be re-dissolved at high pH</b>
Colour (FS)	<b>Off-White/White</b>	Acid Resistance	<b>Excellent except for hydrofluoric</b>
Packaging	<b>300ml Cartridge.</b>		

## Cartridge Applied Adhesive Sealant Bead Length (300 ml cartridge) Calculation

Bead Diameter mm	Bead Length m. from 300 ml Cartridge
1.00	394.70
2.00	98.68
3.00	43.86
4.00	24.67
5.00	15.79
10.00	3.95

Bead Diameter mm vs Bead Length m.

