



MINCO
FortaFix

**Data
Sheet**

Fortafix High Temperature Adhesives

AUTOSTIC FC & FS SERIES - HIGH TEMPERATURE ADHESIVES

Autostic is a single pack high temperature resisting adhesive/cement/sealant, suitable for a wide range of jointing, coating and sealing applications. Autostic is ideal for bonding, assembling, sealing, jointing or repairing glass, ceramics, metals, asbestos, quartz, steatite etc. It can be applied by spray, cartridge or trowel and has a maximum continuous working temperature of $>+1000^{\circ}\text{C}$.

Typical Applications

- Elements
- Fire Doors
- Glazing Bars
- Heaters
- Hot Plates
- Resistors
- Ovens
- Thermocouples

Principal Characteristics

- Suitable for Thin Films/Coating and bonding applications.
- High Temperature Resistance to $>1000^{\circ}\text{C}$.
- Available as a white/off white paste.
- Ready mixed (viscosity of Autostic FC Series may be altered using "Autostic Base Liquid").
- Water-based product containing alkali silicate glass and inorganic oxides.
- BS476 Part 4, Non-combustible material (Warrington Fire & Research).
- DIN4101 Class A1 (Building Industry) Non-destructibility.
- FC Series are available in a variety of grades which relate to viscosities:-
 - FC4* for use with spray or dipping application (1000 MPa).
 - FC6* for use with brush or spreader (1400 MPa).
 - FC8* for use with trowel or cartridge gun application (3000 MPa).
 - FC9* for cartridge gun application (3500 MPa).

(Other grades may be available upon request or alternatively the viscosity of the FC Series may be altered using Fortafix Autostic Base Liquid as a thinning agent).

- FS is a faster curing product than the FC Series and is therefore more appropriate for bonding applications where less absorbent substrates are present. (Only available in cartridge form 2000 MPa).

Health and Safety / Environmental Information

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

Guidelines for Use

Application

- Stir/shake contents of the container prior to use, to ensure product is thoroughly mixed.
- 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

- 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, volume of adhesive 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).
- The cured product may be removed using steam/ boiling water (high pH will also aid removal).

Storage

- Once opened this product is moisture sensitive avoid continuous exposure to air.
- Product should be stored in original packaging between 5 - 30°C.
- Cartridges should be stored in an upright position at all times.
- Shelf life – 12 months.

Softening Temperature	1000°C	Melting Temperature	1100°C	Packaging	FC4, 6 and 8: 500g 3Kg. FC9 FS: 300ml Cartridge.
Colour (FC/FS)	Off-White/White	Wet Density	2.08 gcm ⁻³	pH	13
Compressive Strength	28.4 MPa	Tensile Strength (between steel plates)	1.7MPa	Max. Tensile Stress (bending test)	7.1MPa
Shear Strength	3.2 MPa	Hardness	VPN 6 (1kg load)	Shrinkage (150-500°C)	1.5%
Thermal Conductivity	0.5-1.0 Wm ⁻¹ K ⁻¹	Thermal Expansion	18-20 x 10 ⁻⁶ C ⁻¹	Volume Resistivity	>10 ⁹ Ωcm
Dielectric Strength	400 KV mm ⁻¹	Max. Tensile strength(bending test)	7.1 MPa	Dielectric Constant	41.2
Oxidation Resistance	Excellent	Alkali Resistance	Can be re-dissolved at high pH	Acid Resistance	Excellent except for hydrofluoric

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