



A brand of MINKON

DATA SHEET

Fortafix High Temperature Adhesives

Product: FORTAFIX HIGH TEMPERATURE ADHESIVE – LIGHT/MEDIUM/HEAVY

Principal Characteristics

Ready to use. Non-combustible. Pre-mixed water based Ceramic Adhesive paste to +1250°C.

Available in a range of viscosities.

Heavy Grade – viscous paste - for use for sealing and gap filling applications where little or no porosity is evident in substrates.

Medium Grade – medium viscosity paste - general purpose high temperature adhesive.

Light Grade – low viscosity liquid - for use on porous materials or when a more fluid consistency is required.

Can be applied by spray, cartridge or trowel

Suitable for Thin films, Coating and Bonding.

Designed for bonding, jointing or repairing most glass, metal & ceramic materials.

Sets to form hard and rigid ceramic mass which is resistant to thermal shock.

Excellent adhesive, thermal, electrical and mechanical properties.

Maximum Continuous Service Temperature: up to 800-1250°C (depending on Grade).

Fire Protection: Non-combustible adhesive.

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

Typical Applications

- Elements
- Hot Plates
- Heaters
- Resistors
- Ovens
- Thermocouples

Health and Safety / Environmental Information

- See separate MSDS sheet. (MSDS – Fortafix High Temperature Adhesive - All Grades).
- 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

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 steam/ boiling water (very high pH will also aid removal).

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:

Property	Heavy Grade	Medium Grade	Light Grade
Softening Temperature	1250°C	1200°C	800°C
Melting Temperature	1350°C	1300°C	1000°C
Wet Density g cm ⁻³	2.75	2.4	1.71
Thermal Conductivity W.m ⁻¹ .k ⁻¹	1-2	1-2	1-2
Thermal Expansion x10 ⁻⁶ C ⁻¹	-	10	10.5
Dielectric Strength KV.mm ⁻¹	-	7-10	7-10
Volume Resistivity Ωcm	-	>10 ⁷	>10 ⁷
pH	13	13	13
Expansion	n/a	n/a	n/a
Oxidation Resistance	Excellent	Excellent	Excellent
Acid Resistance	Excellent – Except hydrofluoric	Excellent – Except hydrofluoric	Excellent – Except hydrofluoric
Coverage	2 m ² l ⁻¹	2 m ² l ⁻¹	2 m ² l ⁻¹
Packaging	250ml, 1, 5 and 25 L tins	250ml, 1, 5 and 25 L tins	250ml, 1, 5 and 25 L tins