



DATA SHEET

Fortafix High Temperature Adhesives

FORTAFIX HIGH TEMPERATURE ADHESIVE – LIGHT/MEDIUM/HEAVY

- A dense water based Ceramic Adhesive paste.
- Designed for bonding, jointing or repairing glass, ceramics, metals, quartz and steatite.
- Excellent adhesive, thermal, electrical and mechanical properties.
- Cold setting.
- Available in three viscosities – Heavy, Medium and Light Grades.
- Operating temperatures of 850 > +1000°C.

Typically Used For

- **Elements**
 - **Resistors**
 - **Heaters**
 - **Ovens**
 - **Hot Plates**
 - **Thermocouples**
- Heavy Grade - For use for sealing and gap filling applications where little or no porosity is evident in substrates.
 - Medium Grade - General purpose high temperature adhesive.
 - Light Grade - For use when porous materials are bonded or when a consistency more fluid than Medium Grade is required.

Principal Characteristics

- Suitable for Thin films/ Coating and Bonding.
- Maximum Continuous Service Temperature: > +1000°C (depending on Grade).
- Available as a white paste.
- Ready to use.
- Sets to form hard and rigid ceramic mass which is resistant to thermal shock and age.

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 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, 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.
- Shelf life – 12 months.

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Principal Characteristics:

Property	Heavy Grade	Medium Grade	Light Grade
Softening Temperature	1250°C	1200°C	850°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	0	0	0
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