

FAST CURE ADHESIVE & PATCH

epigen FC1

epigen
Performance Resins &
Composite Systems

TECHNICAL BULLETIN

A fast curing epoxy paste for adhesive applications, suited for grouting and caulking when down time is critical. Bonds to a variety of surfaces including steel, concrete, timber and fibreglass.

Extremely tough, designed originally as a rapid cure ceramic tile adhesive. Uses extend to fairing pitting on steel surfaces prior to coating and bonding or repairing piping or other equipment. Can be sanded or machined to shape or tolerances.

Epigen FC1 possesses excellent water resistance and resists many harsh and aggressive chemicals including degreasers, cleaners, aviation fuels and lubricants, acid and alkali reagents.

TYPICAL APPLICATIONS

Ceramic Tile Adhesive
Fairing Pitting on Steel
Chemical Anchor & Rock Bolt Adhesive
Grouting Reinforcement Bars
Grout for Swages

FEATURES

Extremely resistant to a variety of chemicals
Food industry suitable
Non sag viscosity for easy installation
Free of all solvents - zero VOC
Tough and durable
Suitable on steel to void fill or fair surfaces
Strongly adhesive for optimum adhesion

Epigen FC1 is supplied as a two part kit comprising component "A" resin, and component "B" curative. The entire kit is supplied in a pre weighed convenient size to make on site activities easier.

Peerless Industrial Systems can provide information on specific applications based on industry acceptable practices or historical results.



PROFILE

Colour	Grey
Ratio by weight	1 kg Component "A" 0.5 kg Component "B"
Pot Life minutes @ 24°C	30
Mixed consistency @ 24°C	Paste
Specific gravity when mixed	1.4
Coverage /m ² @ 10mm	14.0 kg

TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	82
Tensile strength ASTM D638, Mpa	22
Flexural strength ASTM D790, Mpa	32
Hardness, Shore D	>85
Elongation ASTM D638, %	1.1
Tensile Adhesion ASTM 4541, MPa	>14
Thermal conductivity ASTM C177, Kcal/m.hr° C	0.6
Coeff of Therm Exp ASTM C531, 10 ⁻⁵ /° C	1.9
Maximum exposure temperature, ° C	120
Heat deflection temperature ASTM D648, ° C	80
Thin Film Gel @ 12mm, Minutes	15
Thin Film Set @ 12mm, Minutes	30
Ultimate cure time, Hours	18

This information is supplied as an indicative reference only. Caution should be used where direct comparisons with other products are to be made.

SURFACE PREPARATION

Methods for surface preparation prior to use include using chemical means such as washing & etching, high pressure water blasting, or mechanical techniques such as abrasive blasting, grinding or scarifying. Specialist advice is available from Peerless Industrial Systems to ensure the correct preparation procedure is employed for specific application.

APPLICATION

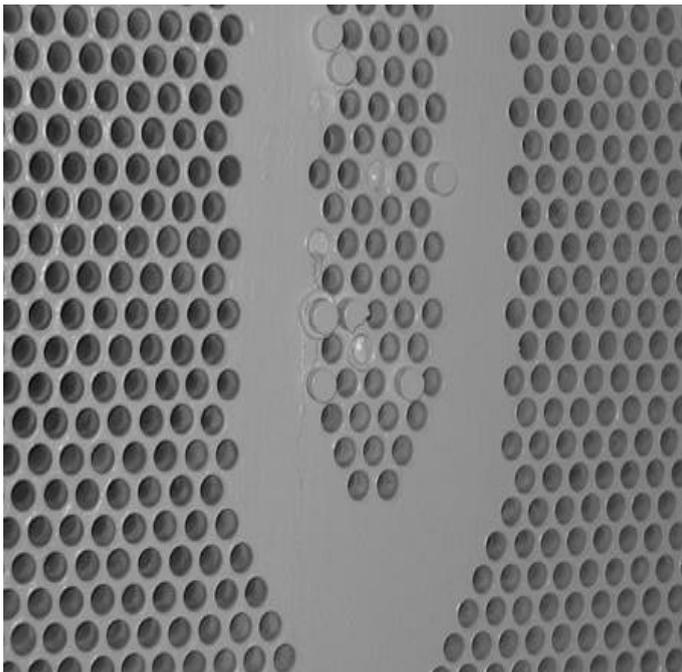
Mixing of product should be carried out using spatula or by slow speed blender, and completed by adding to the component "A", component "B". Ensure the mix is homogeneous and the final colour shall be even grey without streaks.

Bedding:

In all cases, the depth nominally 2mm minimum should be used to ensure sufficient adhesive is in place and afford reasonable compressive strength. There is no maximum thickness requirement. No primer is required to facilitate adhesion unless the surface is loose or friable.

Adhesive Applications:

Apply a thin coat of Epigen FC1 to both surfaces before bringing the two together. Do not use where a flexible or resilient glue line is required. Recommended where a tough and strong, or heavy shock resistant material is required (eg: Ceramic Tiles to Steel on chutes, steel onto steel, concrete onto steel).



CHEMICAL RESISTANCE

Tested at 21°C. Samples cured for 10 days at 25°C. Curing at elevated temperatures will improve chemical resistance.

- 1 = Continuous or long term immersion
- 2 = Short term immersion
- 3 = Splash and spills
- 4 = Avoid contact

Acetic Acid, 10 %	1	Acetone	2
Acetic Acid, Glacial	2	Ammonium Chloride	1
Hydrochloric Acid, 5 %	1	Beer	1
Hydrochloric Acid, 10 %	2	Dichloromethane	4
Hydrochloric Acid, conc	2	Diesel Fuel	1
Nitric Acid, 5 %	2	Isopropyl Alcohol	1
Nitric Acid, 10 %	2	Kerosene	1
Phosphoric Acid, 5 %	1	Petrol	1
Phosphoric Acid, 20 %	2	Salt Water	1
Sulfuric Acid, 5 %	3	Sewage	2
Sulfuric Acid, 20 %	3	Skydrol	2
Ammonium Hydroxide, 5 %	1	Sodium Cyanide	1
Ammonium Hydroxide, 20 %	1	Sodium Hypochlorite	2
Potassium Hydroxide, 5 %	1	Toluene	2
Potassium Hydroxide, 20 %	1	Trichloroethane	3
Sodium Hydroxide, 5 %	1	Wine	1
Sodium Hydroxide, 20 %	1	Xylene	2

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CURE

Variations in cure may arise due to the amount of material being applied, the thickness of material being applied, the surface temperature, and the product temperature. The cure may be increased by heating product or by leaving mixed material stand for 15 minutes before use. The cure may be decreased by cooling the product before mixing.

EPIGEN PRODUCTS

MANUFACTURED BY

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