

CHEMPROOF REPAIR MORTAR

epigen 4030

epigen
Performance Resins &
Composite Systems

TECHNICAL BULLETIN

One of the Chemproof range of products, renowned for extremely high chemical resistance, 4030 is a thixotropic multipurpose epoxy mortar designed for general concrete repair and fairing of damaged bases and structures. Also suitable in adhesive, grouting and caulking applications, the use is primarily where binder/sand combinations of other products cannot achieve the build necessary on inverted, overhead or vertical surfaces.

Very tough and durable, designed for overhead use without the requirement to mix in complex amounts of sand, 20mm builds easily achieved without sag.

TYPICAL APPLICATIONS

Rebuilding Spalled Concrete Surfaces

Acid Tile Adhesive

Applying Fillets and Aris to Concrete Corners and Edges

Fairing Pitting or Holes on Steel and Concrete

Chemical Anchor & Rock Bolt Adhesive

Concrete Crack and Void Repair



PROFILE

Colour	Off White
Ratio by weight	10 parts Component "A" 1 part Component "B"
Pot Life minutes @ 24°C	60
Mixed consistency @ 24°C	Smooth Thixotropic Mortar
Specific gravity when mixed	1.5
Coverage /m ² @ 10mm	15.0 kg

TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	80
Tensile strength ASTM D638, Mpa	18
Flexural strength ASTM D790, Mpa	32
Hardness, Shore D	>82
Elongation ASTM D638, %	1.2
Tensile Adhesion ASTM 4541, MPa	>12
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	110
Heat deflection temperature ASTM D648, ° C	70
Thin Film Gel @ 12mm, Minutes	90
Thin Film Set @ 12mm, Minutes	120
Ultimate cure time, Hours	96

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

FEATURES

Resistant to a variety of acids and alkali chemicals

Easy to trowel in any orientation

Non sag viscosity for easy installation

Free of all solvents - zero VOC

Tough and durable

Versatility in application allows concrete patching

Strongly adhesive for optimum adhesion

Epigen 4030 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.

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 mixed 4030 is homogenous and the final colour shall be an even without streaks.

Concrete Rebuilding:

In all cases, the depth of minimum 4mm should be used to ensure sufficient mortar coverage 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. In cool environments, pre warm the product before use.

Adhesive Applications:

Apply a thin coat of Epigen 4030 to both surfaces before bringing the two together. Do not use where a flexible or resilient glue line is required. Preheat the material before use to achieve best cure rate and strength when cold.

Crack & Cervice Repairs:

Open up cracks using a grinder to allow proper access and application directly into crevice or crack.



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 %	2	Acetone	2
Acetic Acid, Glacial	2	Ammonium Chloride	1
Hydrochloric Acid, 5 %	1	Beer	1
Hydrochloric Acid, 10 %	1	Dichloromethane	3
Hydrochloric Acid, conc	1	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 %	1	Salt Water	1
Sulfuric Acid, 20 %	1	Sewage	1
Sulfuric Acid, 75 %	1	Skydrol	1
Sulfuric Acid, 98 %	2	Sodium Cyanide	1
Ammonium Hydroxide, 20 %	1	Sodium Hypochlorite	1
Ammonium Hydroxide, 50 %	1	Toluene	2
Potassium Hydroxide, 5 %	1	Trichloroethane	2
Potassium Hydroxide, 20 %	1	Vinegar	1
Sodium Hydroxide, 20 %	1	Wine	1
Sodium Hydroxide, 50 %	1	Xylene	2

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Note : Under acidic conditions, 4030 has been designed to change colour allowing OH&S steps to be taken in cleaning up spills or as a warning to beware.

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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