

HP MORTAR BOND

epigen 3422

TECHNICAL BULLETIN

3422 is a two component, multipurpose epoxy resin binder system originally designed for use as a bridge nosing compound where shock and load require some degree of resilience. It can be used as a concrete primer, a fiberglass laminating resin, or filled with a variety of aggregates to produce a fast curing, high strength epoxy mortar. Based on polyamide technology, displays broad spectrum features that lends it to many varied and diverse tasks. 3422 can be blended with a variety of aggregates to define strength and service capabilities.

TYPICAL APPLICATIONS

Bridge Nosing	Flooring Repairs
Aviation Runway Slot Infill	Electrical Potting
Concrete Primer	Brick Construction Mortar
Concrete Repair & Fairing	Laminating Resin

FEATURES

- Polyamide system - superior adhesion
- Fast Cure
- Free of all solvents - zero VOC
- Versatility in application - can be used with GF
- Suitable in patching or repair concrete
- Engineered for high strength.



Epigen 3422 Aggregate Supplementary Data:
This is available for reference detailing how the mechanical properties can alter with changes in aggregate mixtures.



PROFILE

Ratio by weight	2 parts "A" to 1 part "B"
Pot Life minutes @ 24°C	20
Mixed consistency @ 24°C	Flowable Liquid
Specific gravity when mixed	1.15
Mortar Tack free time @ 24°C	2 hours
Primer Tack free time @ 24°C	3 hours

TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	>70
Tensile strength ASTM D638, Mpa	>16
Flexural strength ASTM D790, Mpa	16
Hardness, Shore D	84
Elongation in Tension (at Break)	22%
Dielectric constant ASTM D150 (150KHz)	2.9
Maximum exposure temperature, °C	105
Heat deflection temperature ASTM D648, °C	70
Thin Film Gel, (min recoat time) Minutes	60
Maximum recoat time, Hours	36
Ultimate cure time to Service, Hours	48

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

SURFACE PREPARATION

In line with all cases where good adhesion is expected, the substrate should be reasonably clean and free from loose particles. Methods for substrate preparation include abrasive blasting, etching, grinding or scarifying. The technique best suited depends on the substrate, the service conditions, and practical considerations.

APPLICATION

Mixing of product should be carried out using slow speed mixers or spatulas, and completed by adding to the component "A", the component "B". Ensure the mix is homogenous and free from lumps.

MORTAR PREPARATION

3422 can be used as a binder to which aggregate is to be added. Excellent results are achieved with dried silica sand in the range 0.6mm - 1.2mm. This is often referred to as 16/30 mesh size. Variations in porosity and strength may occur when changing grades of aggregate.

TROWEL

In using Silica Sand 16/30 mesh, a mix ratio of 1 part 3422 to 8 parts sand provides an ideal trowel on mortar.

SELF LEVELLING

Mix 1 part 3422 to 1.5 parts 30/50 sand and spread out with a squeegee or trowel, then over roll using a spiked roller to release air entrainment. Blind out by broadcasting 16/30 sand over top. Sweep off excess and top coat as required.

PRIMER PREPARATION

3422 can be used as a primer prior to application of other systems or to hold surface condition. 3422 should be applied directly to the prepared surface.

COVERAGE GUIDE

Trowel (final DFT 6mm)

1.2 kg of *Epigen 3422* / m².

9.6 kg of 16/30 Silica Sand / m².

Self Levelling (nominally 3mm)

1.4 kg of *Epigen 3422* / m².

2.1 kg of 30/50 Silica Sand / m².

Apply this mortar to nominally 2mm followed by broadcasting:

16/30 Silica Sand @ 1.4 kg/ m².

After set, a seal coat is recommended.

Primer Applications

1.1 kg of *Epigen 3422* yields 1000micron/ m².

Nominally 100 micron on steel or 300 micron on concrete.

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	3
Acetic Acid, Glacial	3	Ammonium Chloride	1
Hydrochloric Acid, 5 %	2	Beer	1
Hydrochloric Acid, 10 %	2	Dichloromethane	4
Hydrochloric Acid, conc	3	Diesel Fuel	2
Nitric Acid, 5 %	3	Isopropyl Alcohol	2
Nitric Acid, 10 %	3	Kerosene	2
Phosphoric Acid, 10 %	2	Petrol	2
Phosphoric Acid, 35 %	3	Salt Water	1
Sulfuric Acid, 30 %	3	Sewage	2
Sulfuric Acid, 70 %	3	Skydrol	3
Sulfuric Acid, 98 %	3	Sodium Cyanide	1
Ammonium Hydroxide, 5 %	2	Sodium Hypochlorite	3
Ammonium Hydroxide, 20 %	2	Toluene	4
Potassium Hydroxide, 5 %	2	Trichloroethane	3
Potassium Hydroxide, 20 %	2	Wine	2
Sodium Hydroxide, 20 %	2	Xylene	3
Sodium Hydroxide, 50 %	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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