SUPREME FLOOR TOP
epigen 0489

epigen
Performance Resins & Composite Systems

TECHNICAL BULLETIN

0489 is a binder designed to be economically effective in general filling when used with graded aggregate, providing a hard wearing topping for concrete floors against a wide range of conditions, particularly as a base for top coating systems that provide high protection to acids or simply finished for hygenic or in food processing services. 0489 is based on high performance polymers to make laying and finishing very easy using a variety of installation techniques.

Primarily designed as a low cost bulk filling binder to be used with aggregate, it can be used with glass fibre in laminates over steel, concrete and brick.

Once laid, 0489 may be finished using Epigen Chemproof for superior resistance to chemicals or any one of a number of other Epigen products specific to the function and finish.

TYPICAL APPLICATIONS

Dairy & Processing	Chemical Bunds
Slab Rebuilding	Seafood Facilities
Abattoirs & Butchers	Laminating

The surface finish may be laid as a thin film however it is recommended 6mm be a minimum in unison with a low porosity aggregate like silica sand. It is acceptable to apply high builds in most situations to increase strength. Application to inverted surfaces can be easily carried out without sag or fall when using fine grade aggregate. Large areas may be quickly treated preparing the product in self levelling mode.

FEATURES

- Easy to Lay and Finish
- Polymer system designed for economic bulk filling
- Free of all solvents - zero VOC
- Versatility in application - can be used with GF
- Ideal for patching or repair of mortar
- Can be mixed with a variety of aggregates
- Application DFT from 1mm to over 40mm
- Engineered for high strength

PROFILE

Ratio by weight	2 parts “A” to 1 part “B”
Pot Life minutes @ 24°C	40
Mixed consistency @ 24°C	Flowable Liquid
Specific gravity when mixed	1.1
Tack free time @ 24°C	180 minutes

TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	>90
Tensile strength ASTM D638, Mpa	>18
Flexural strength ASTM D790, Mpa	>38
Hardness, Shore D	85
Dielectric constant ASTM D150 (150KHz)	2.8
Maximum exposure temperature, ° C	110
Heat deflection temperature ASTM D648, ° C	70
Thin Film Gel , (min recoat time) Minutes	180
Maximum recoat time, Hours	48
Ultimate cure time to Service , Hours	96

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

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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. Specialist advice is available from Peerless Industrial Systems to ensure the correct preparation procedure is employed for specific applications.

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.
Retain some of the resin mix for priming of the substrate as required.

MORTAR PREPARATION

0489 is designed to be used as a binder which should have aggregate added. Extensive work has resulted in the recommendation of 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 over adding aggregate or in using too fine a grade.

TROWEL

In using Silica Sand 16/30 mesh, a mix ratio of 1 part 0489 to 8 parts sand provides an ideal trowel on mortar. As required, sand can be broadcast over top, swept off when cured and overcoated to a raised nonslip.

SELF LEVELLING

Mix 1 part 0489 to 1.5 parts 30/50 sand and after applying and using a spiked roller to address air entrainment, blind out by broadcasting 16/30 sand over top. Sweep off excess and top coat as required.

VERTICAL SURFACES

Prime the surface with a very thin coat of 0489 binder and then proceed to apply a mortar based on 1 part 0489 with up to 8 parts 100 mesh silica sand.

COVERAGE GUIDE

Trowel (final DFT 6mm)

1.2 kg of ***Epigen 0489*** / m².
9.6 kg of 16/30 Silica Sand / m².
For Overlay: 1 kg of 16/30 Silica Sand / m² followed by ***Epigen Chemproof 4028*** or ***Epigen 2816*** @ 0.7 kg/ m².
For vertical applications, replace 16/30 sand with 100 mesh.

Self Levelling (nominally 3mm)

1.4 kg of ***Epigen 0489*** / 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 using:
Epigen Chemproof 4028 or ***Epigen 2816*** @ 0.7 kg/ m².

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

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EPIGEN **PRODUCTS**
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