AGE

Epoxy Plus

Mortar

High strength epoxy resin mortar for repairs, bedding and fixing

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About this product

Epoxy Plus Mortar is available as a three components bulk pack consisting of Epoxy resin, hardener and selected graded aggregates (filler) which when mixed produce a high strength, impermeable and chemically resistant mortar.

Uses

Epoxy Plus Mortar has minimal shrinkage characteristics plus high adhesion so making the product ideal for all types of concrete repair including repairs to precast units, spalled and cracked concrete structures, floors and other substrates where chemical resistance and/or impermeability to water, oil, petrol and many chemicals is required, it can be applied to vertical surfaces as well as horizontal but where higher build layers are required on vertical surfaces or for soffit application, our Epoxy Plus Low Slump Mortar is more suitable. Epoxy Plus Mortar can also be used for the bedding in of beams, runway lights and bearings including bridge bearings. The filler content can be reduced if necessary to produce a more flowable consistency.

Chemical resistance (All at 20°C)

Petrol and Oil		Excellent
Sugar Solution		Excellent
Sulphuric Acid	25%	Very Good
Nitric Acid	10%	Good
Hydrochloric Acid	10%	Good
Lactic Acid	10%	Very Good
Acetic Acid	5%	Good
Citric Acid	10%	Excellent
Tartaric Acid	10%	Excellent
Sodium Hydroxide	50%	Excellent

Benefits and features

- Speed of Epoxy repair - stronger than concrete in less than 24 hours.
- High strength - 2 to 3 times stronger than normal concrete
- Impermeable to water, oil, petrol, chemical spillage.
- Easy to mix and apply.

Properties

Tested at 20°C

Compressive Strength (BS6319: Part 2)	1 day	70 N/mm²
	3 days	75 N/mm²
	7 days	80 N/mm²
Tensile Strength (BS6319: Part 7)	7 days	15 N/mm²
Flexural Strength (BS6319: Part 3)	7 days	30 N/mm²
Modulus of Elasticity (BS6319: Part 6)		10 kN/mm²

Pot life and cure time

Pot Life:	1 hour at 20°C 35 minutes at 40°C Do not apply below 5°C and above 40°C
Initial Cure:	6 - 16 hours depending on temperature
Full Cure:	2 - 7 days depending on temperature

Application

Surface preparation

As with all concrete repairs it is essential to remove all grease, oil, dust and other loose materials.

a) Concrete

Concrete substrates must be adequately prepared either by use of a suitable mechanical method such as scabbling, grit blasting or needle gunning, or by such other means as appropriate. Concrete bases for toppings must be carefully prepared to give a clean freshly exposed surface.

Old concrete surfaces contaminated with oil or grease require suitable preparation such as steam cleaning in conjunction with a suitable detergent. Care must be taken to ensure that the oil or grease is removed from the surface and not simply spread over a larger area.

b) Steel substrates

Steel substrates should first be grit blasted to Swedish Standard Specification SA2½ followed by degreasing with a suitable solvent immediately prior to bonding. However, in many instances where corrosion is absent wire brushing to a clean bright surface may be adequate but care must be taken not to just polish the rust on the surface.

c) Priming

The bond of Epoxy Plus Mortar will be improved by the application of a bond coat of Epoxy Plus Tack Coat, moisture tolerant primers.

The mixed resin and hardener without filler can also be used in place of Epoxy Plus Primer. In all cases the Epoxy Mortar must be applied whilst the bond coat is still tacky.

When applying Epoxy Plus Mortar to vertical surfaces, Epoxy Plus Tack coat should be used as the bond coat.

d) Mixing

The resin and hardener should first be thoroughly mixed to an even colour and consistency before adding the filler. The quantity of the filler may be adjusted to achieve the consistency required but should never be less than the amount detailed on the label of the pack.

e) Application

The Mortar should be applied using a steel trowel in layers of up to 20mm thick. Allow initial set (6 hours approximately) between layers. On vertical surfaces the maximum thickness should be 12mm. The Mortar should be well tamped to ensure proper consolidation and then trowelled to bring to the surface enough resin binder to thoroughly seal the surface. Feather edging must be avoided. The edges of all repairs should be 'toed in' i.e. cut back so the minimum thickness is not less than 5mm.

f) Cleaning

Uncured material may be removed with suitable solvent. Clean all tools etc. immediately after use.

Packaging and yield

Epoxy Plus Mortar is supplied in 25kg pack, yield approximately 12.5 litres.

Shelf life and storage

The shelf life of Epoxy Plus Mortar is in excess of 12 months if stored in cool, dry, frost free conditions.

Health and safety

All skin contact with epoxy resin products should be avoided. Barrier creams should be used and operatives should wear protective clothing including gloves. Working areas should be well ventilated. For further information please refer to the Product Save Handling Guide, which also contains all data and information relating to the Control of Substances Hazardous to Health (COSHH) regulations.

The hardener content is alkaline and labelled as Corrosive. The resin content is labelled as an irritant. The flash point of all components is in excess of 100°C. In the event of fire use foam, dry chemical, carbon dioxide or water fog extinguishers.

For critical structural applications and applications in exposed situations where very high surface temperatures may be recorded please contact our Technical Sales

Quality assurance

A policy of strict quality control has always been followed and the requirements of all relevant test standards are strictly adhered.

Technical service and representation

We can provide technical service at the specification stage and/or during application through our Technical Department or Laboratory. Detail specification or further information can be provided for specific projects or more general works. Site visits and on-site demostrations can be arranged on request.

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AGE INDUSTRIES & TRADING SDN BHD
(320310-H)
No. 67, Jalan 30A/119, Taman Taynton View, 56000 Kuala Lumpur.
Tel: 603-9130 7563 Fax: 603-9130 8580
E-Mail: age@agesb.com Website: www.agesb.com