a.b.e.® Construction Chemicals

epidermix 500

SOLVENT-FREE, ABRASION-RESISTANT, HIGH-STRENGTH EPOXY LINING

DESCRIPTION

epidermix 500 is a solvent-free, three-component epoxy mortar, formulated to exhibit good abrasion resistance and high strength characteristics.

USES

epidermix 500 is used for rapid reinstatement or coatings of concrete structures such as manholes, sewer outfalls, chemical spillage areas or where any of these criteria can be of benefit:

- High strength
- Fast cure
- Impermeability
- Abrasion resistance
- Chemical resistance.

The mortar can be applied on horizontal and vertical surfaces although practically in thinner coatings for vertical applications

ADVANTAGES

- High early strength ensures limited impact on construction programs or maintenance shutdowns.
- The high ultimate strength makes it suitable for structural repair use.
- High resistance to abrasion.
- Will cure under damp conditions.
- Good chemical resistance to a wide range of corrosive materials.
- Does not require a primer.
- Constant quality/performance (pre-blended).
- Good adhesive qualities.

SURFACE PREPARATION

Cleaning of the surface to be repaired is best achieved with a light sand, grit blasting, and/or scabbling to remove all loose material, contaminants such as oil, grease, corrosion products or any other deleterious materials. Any corroded, exposed steel must be cleaned to a metallic finish and concrete cut back behind the steel to fully expose the back of the bars.

All repairs to be cut back to a minimum of 5mm to a sawn edge. Minimum application thickness of the **epidermix 500** is 5mm.

Ensure that all negative water pressure has been stopped by use of **durarep 60** or **180**.

TYPICAL PHYSICAL PROPERTIES	
Compressive strength ASTM C109	68 MPa at 7 days
Flexural strength ASTM C109	27 MPa at 7 days
Tensile strengths ASTM C307	11 MPa at 7 days
Water absorption	< 0,2% 5,0% concrete
Pot life (at 20°C)	40 minutes
Pot life (at 35°C)	20 minutes
Initial cure	24 hours
Full cure	7 days
Compacted wet density (fully compacted)	Approx. 1 747 kg/m³

a.b.e.® is an ISO 9001:2008 registered company
PO Box 5100, Boksburg North, 1461, South Africa
Website: www.abe.co.za | Tel: +27(0) 11 306 9000
Durban | Johannesburg | Cape Town | Port Elizabeth | East London | Bloemfontein | George

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CHRYSO
CHEMICAL SOLUTIONS FOR THE CONSTRUCTION MATERIALS INDUSTRY

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CHEMICAL RESISTANCE		
(The low permeability of **epidermix 500** retards chemical attack in aggressive environments)		
Citric acid	10%	Very High
Tartaric acid	10%	Very High
Hydrochloric acid	25%	Very High
Sodium hydroxide	50%	Very High
Diesel fuel/petrol	100%	Very High
Sulphuric acid	50%	High
Sugar solutions	30%	High
Lactic acid	10%	High
Hydrocarbons	100%	High
Phosphoric acid	50%	High
Nitric acid	25%	Medium
Acetic acid	5 %	Medium

BONDING/PRIMING

All steel to be cleaned and coated with **dura.®rep ZR** primer to give an unbroken finish and allowed to dry.

COVERAGE

1 litre/m²/1mm thickness.

MIXING

Add the entire contents of the activator tin to the base component and, without splashing, stir with a flat paddle until an even streak free mixture results. This takes at least five minutes. Once liquid components have been thoroughly mixed, the aggregate may be added. When using a mechanical mixer, place mixed liquid in the pan and slowly add premixed aggregate, mixing until an evenly coated, wetted mortar results. Use this method also if manual mixing is carried out in a drum. If manually mixing on a board, make a heap of the mixed aggregate, form a saucer in the centre of the heap; add the mixed liquid to the saucer. Fold the aggregate into the liquid taking care that no binder is lost. Mix as in mixing cement dagha. All lumps must be broken down and an evenly wetted mortar obtained.

APPLICATION

Tightly pack the mixed **epidermix 500** behind any exposed steel with a gloved hand. All other areas have to be applied with a wood float. Smooth finish can be achieved using a wetted steel float. **epidermix 500** can be applied in a single layer up to 50mm thick horizontally and up to 12mm thick vertically.

Thicker sections can be built up in layers by scratching the surface of the first layer and applying a second layer some 8 to 24 hours later at an operating temperature of 20°C.

Should the **epidermix 500** begin sagging, it should be immediately removed and a thinner layer applied. Minimum thickness of any repair should not be less than 5mm. Do not trowel the finished surface excessively.

CLEANING

Tools may be cleaned with **abe® super brush cleaner** immediately after use before the material has had time to cure. Hardened material can only be cleaned by mechanical means.

TEMPERATURE

As with all epoxies, the mixture may not be applied to substrates at a temperature lower than 5°C. At ambient temperatures above 35°C, working time and pot life will be drastically shortened.

PACKAGING

epidermix 500 is supplied in 15 kg packs.

HANDLING & STORAGE

This product has a shelf life of 24 months if kept in a dry, cool place in the original packaging. In more shortened, extreme conditions, this period may shortened.

Epoxy compounds in their uncured state are toxic and prolonged skin contact can give rise to dermatitis. When handling epoxy compounds, use should always be made of disposable gloves and barrier creams. Involuntary habits such as face scratching and spectacle adjustment must be avoided. Similarly eating and smoking whilst or after working with epoxy must be avoided until the individual has washed up.

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HEALTH & SAFETY

epidermix 500 is toxic and non-flammable. Always ventilate the working rea well during application and drying. Avoid flames in vicinity.

Always wear gloves when working with the material and avoid excessive inhalation and skin contact.

If material is splashed in the eye, wash with copious quantities of clean water and seek medical attention. Cured **epidermix 500** is inert and harmless.

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals** endeavors to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot – because **a.b.e.®** has no direct or continuous control over where and how **a.b.e.®** products are applied – accept any liability either directly or indirectly arising from the use of **a.b.e.®** products, whether or not in accordance with any advice, specification, recommendation, or information given by the company.

FURTHER INFORMATION

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements. **a.b.e.® Construction Chemicals** has a wealth of technical and practical experience built up over years in the company's pursuit of excellence in building and construction technology.