a.b.e.® Construction Chemicals

METHODOLOGY

Re-profiling with epidermix 500

All the relevant product data sheets are to be read for additional information like pot life, mixing instructions, surface preparation, ventilation, temperature application limitations, etc.

RESURFACING LAYER

epidermix 500 is based on a high quality solvent-free epoxy resin system. The special silica aggregates provide high strength and excellent abrasion resistant.

USES

For the fast and permanent reinstatement of concrete where early high strength and abrasive-resistance are required. The product is designed for horizontal applications, but can be applied vertically in thinner sections. It is ideally suited for patch repairs to spalled and honey-combed concrete and closing up of ferrule holes.

SURFACE PREPARATION

All concrete surfaces shall be sound, clean and free from dust, from oil, paint, grease, corrosion deposits, laitance, organic growth and all other deleterious materials.

Concrete surfaces shall be cleaned by approved, mechanical means, steam pressure washing with cleaning water, grit blasting, or a combination to satisfy. Any remaining dust or loose material should be removed by blowing with oil-free clean compressed air.

All traces of grout leakage through joints in formwork shall be ground down to profile.

Prior to application of **epidermix 500**, all active hydrostatic leaks must be stopped by the use of **dura.®rep 60** or **180**. Such leaks shall be brought to the Clients attention and recorded on a suitable evaluation diary.

REINFORCEMENT PREPARATION

All exposed reinforcement shall be cleaned of corrosion products by wet grit blasting or other approved means to achieve a surface finish to comply with a standard of steel cleanliness such as SA2½ (BS7079:Part A1/ISO8501) or as directed by the Client's Representative. Special care shall be taken to clean out properly any pitting which may have occurred in the steel bar.

When the corrosion products have been removed and if directed by the Client's Representative, the diameter of the reinforcing bar(s) shall be measured. If considered necessary by the Client's Representative the existing reinforcement shall be cut out and replaced and/or additional bars added in accordance with instructions. Any deep pitting of the reinforcing bars shall be brought to the attention of the Client's Representative.

Reinforcement damaged during the removal of concrete or the preparation process shall be brought to the attention of the Client's Representative and if required, shall be repaired or replaced.

Where the presence of chloride is determined, it is essential that the cleaning process is completed by pressure washing with clean water the total exposed areas of reinforcing steel to ensure the removal of all residual contamination from the pitted surface of steel.

REINFORCEMENT PRIMING

Immediately following preparation and cleaning, the reinforcing steel shall be primed with d**ura.®rep ZR primer** single component epoxy primer complying with the relevant parts of BS4652, 1971 (1979) Specification For Metallic Zinc Rich Priming Paint Type 2.

The **dura.®rep ZR primer** shall be brush applied to the cleaned reinforcement ensuring that all exposed steel is fully coated. Special attention shall be paid to the backs of the steel bars and where steel bars are tied together. It is essential that this coat is continuous with that of any adjacent repaired area where zinc-rich primer has been used. Avoid excessive overpainting onto the concrete and allow to dry.

MIXING

Care should be taken to ensure that **epidermix 500** is thoroughly mixed to produce a fully homogeneous, trowellable mortar. **epidermix 500** should be mixed mechanically. The 'hardener; and 'base' components should be stirred thoroughly in order to disperse any settlement before mixing them together.

The entire contents of the 'hardener' container should then be emptied into the 'base' container and thoroughly mixed

for 3 minutes, then emptied into a forced action mixer of adequate capacity (e.g. Cretangle or Pennine). Add the aggregate slowly with the mixer running and continue for 2 to 3 minutes until all the components are thoroughly blended. Under no circumstances should part packs be used.

APPLICATION

Apply the mixed **epidermix 500** to the prepared substrate by trowel, spatula or wood float, pressing firmly into place to ensure positive adhesion and full compaction. Thoroughly compact the mortar around any exposed reinforcement. In restricted locations, or where reinforcing steel is present, application by gloved hands is an acceptable alternative but, in all cases, the product must be finished to a tight surface with a steel trowel. **epidermix 500** can be applied in sections up to 50 mm thickness in horizontal locations or up to 12 mm thickness in vertical locations in a single application and without the use of formwork. Thicker vertical sections may sometimes be possible dependent on the profile of the substrate and the volume of exposed reinforcing steel but should generally be built up in layers.

When larger areas are being rendered, a checkerboard application technique is recommended.

Note: The minimum applied thickness of **epidermix 500** is 5 mm.

BUILD-UP

Additional build-up can be achieved by application of multiple layers, Exposed reinforcing bars should be firmly secured to avoid movement during the application process as this will affect mortar compaction, build and bond.

Where thicker sections are required, the surface of the intermediate applications should be scratch keyed to provide a suitable surface of subsequent layers. The application of additional layers should follow between 8 and 24 hours (@ 20°C) after the first application. This time should be reduced at higher temperatures.

If sagging occurs during application, the **epidermix 500** should be completely removed and re-applied at a reduced thickness on to the substrate.

FINISHING

epidermix 500 is finished by the use of a trowel, spatula or wood float and closed with a steel trowel.

The completed surface should not be overworked.

LOW TEMPERATURE WORKING

epidermix 500 can be applied in cold conditions at 5°C. The materials should not be applied with the substrate and/or air temperature is 5°C and falling. At 5°C static temperature or at 5°C and rising, the application may proceed. Maximum relative humidity shall not exceed 75 %.

HIGH TEMPERATURE WORKING

At ambient temperatures above 35°C, **epidermix 500** will have a shorter pot life and working life. The materials should be stored in the shade or in an air-conditioned environment and should not be applied to direct sunlight.

CLEANING

epidermix 500 should be removed from tools, equipment and mixers with **abe® super brush cleaner** immediately after use. Hardened material can only be removed mechanically.

PRODUCTS REQUIRED

- **epidermix 500**
- **dura.®rep 60 & 180**
- **dura.®rep ZR primer**
- **abe® super brush cleaner**

EQUIPMENT NEEDED

- 100 mm paint brush
- Heavy duty Festo mixer with helical mixing head
- Round nose steel trowel
- Spatula
- Steel Float
- Suitable 25 litre container

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals Limited** endeavours 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 Limited** has a wealth of technical and practical experience built up over years in the company's pursuit of excellence in building and construction technology.