METHODOLOGY

Repairs using epidermix 314 epoxy mortar

how to with a.b.e.®

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

RESURFACING LAYER

epidermix 314 is based on a high quality solvent-free, polyamide cured, 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 edges must be cut to a minimum depth of 5 mm, feather edges are not recommended.

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 **dura.®rep ZR primer** single component epoxy primer complying with the relevant parts of BS4652, 1971 (1979) Specification.

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 over-painting onto the concrete and allow to dry.

MIXING

Care should be taken to ensure that **epidermix 314** is thoroughly mixed to produce a fully homogeneous, trowellable mortar. Set up equal volumes of Base and Activator side by side on a clean board. Do not take more than about 250 mls of each compound at one time.

Knead the two components together (like mixing bread dough) FOR AT LEAST FIVE MINUTES. The mixing ratio is 1:1 by volume and should be mixed in proportions required. Mix until there are no coloured streaks in the product, mixed homogeneously. When mixed using gloved hands, keep the gloves moist with water to prevent the material sticking to the gloves. Be sure not to introduce excess water to the product. Ensure mixing only takes place when the surface preparation is complete and ready for application.

APPLICATION

Apply the mixed **epidermix 314** to the prepared substrate by trowel, gloved hand, 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 314** can be applied in sections up to 25 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, > 0.30 m², a checker-board application technique is recommended.

Note: the minimum applied thickness of **epidermix 314** 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
(@ 25 °C) after the first application. This time should be reduced at higher temperatures.

If sagging occurs during application, the **epidermix 314** should be completely removed and re-applied at a reduced thickness on to the substrate.

FINISHING

epidermix 314 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. The trowel may moistened with water to assist in finishing.

Low Temperature Working

epidermix 314 can be applied in cold conditions at 10 °C. The materials should not be applied with the substrate and/or air temperature is 10 °C and falling. At 10 °C static temperature or at 10 °C and rising, the application may proceed.

High Temperature Working

At ambient temperatures above 40 °C, **epidermix 314** 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 or above 40 °C.

EQUIPMENT CLEAN UP

While the material is still wet tools may be cleaned with water or **abe® super brush cleaner**, cured material can only be mechanically removed.

SAFETY PRECAUTIONS

Uncured **epidermix 314** must be regarded as toxic. Gloves should be worn at all times and care must be taken not to ingest any of the material. Eating or smoking while working with the compound must be banned.

If working in a confined space, provide adequate ventilation.

PRODUCTS REQUIRED

- **abe® super brush cleaner**.
- **dura.®rep ZR primer**.
- **epidermix 314**.

EQUIPMENT NEEDED

- 100 mm paint brush.
- Round nose steel trowel.
- Steel float.

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.® Construction Chemicals** 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.