

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.

REPAIR MATERIAL

epidermix 510 epoxy mortar with epidermix 365 shall be used for vertical or overhead concrete surfaces to be repaired in one or more layers, each layer 10-50 mm thick, though up to 75 mm thick for small individual repairs, where early strength development, impermeability, chemical resistance, or 40 MPa compressive strength is required. The minimum application thickness shall be 10 mm.

WORK AREA

Avoid inhalation of vapours and ensure adequate ventilation. In confined areas suitable breathing apparatus shall be worn.

REPAIR AREAS

The areas to be repaired are to be shown on the drawings or as indicated by the Client's Representative.

The areas are to be clearly marked out on site and agreed with the Client's Representative before proceeding.

The areas may be adjusted by the Client's Representative as work proceeds according to the conditions found.

The surfaces adjacent to and of areas for repair shall be cleaned to remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposits, organic growth, etc.

Within the repair area, the concrete cover to reinforcement links or main bars shall be determined by cover meter. A small area shall be chiseled out and the concrete cover and the depth of deteriorated concrete confirmed by measurement.

CONCRETE PREPARATION

Break out unsound concrete as defined within the repair zone. Using a saw, disc cutter, or other suitable tool, the perimeter of the area to be repaired shall be incised to a depth of at least 10 mm causing good arises to be formed at the outer edges all to preclude feather edging of the repair mortar. Where the depth of breaking out corresponds to the depth of concrete cover and thereby exposes reinforcement, breaking out shall continue to expose the full circumference of the steel and to a further depth of 25 mm or as directed by the Client's Representative. Breaking out shall continue along the reinforcement until non-corroded steel is reached and shall continue 50 mm beyond this point or as directed by the Client's Representative. Special care shall be exercised to ensure that any reinforcement exposed is not cut or damaged.

After breaking out as specified the exposed surface of concrete shall be tested for carbonation by the use of a semi-aqueous solution of phenolphthalein. The test shall be carried out on the freshly exposed concrete or at least within 30 minutes of being exposed. The test shall be carried out on sound, dry and clean air-blown dust free surfaces. If the concrete substrate still exhibits carbonation in the vicinity of the steel reinforcement, breaking out to remove a further 20 mm shall be carried out and the test repeated. If carbonation is still present the Client's Representative shall be notified before proceeding further.

Single repair/render areas larger than 0.5 m² shall be part primed to commence and there after in bays to suit checker board application of the **epidermix 510**.

epidermix 510 shall be applied when the primer has started to gel, but the surface is tacky - 1/2 to 4 hours, depending upon temperature.

If the primer dries before the mortar is applied, the area shall be re-primed.

MIXING EPOXY MORTAR

Before mixing the epoxy mortar the contractor shall ensure that sufficient and correct areas for reinstatement are prepared and ready to receive epoxy mortar.

Only mixes using complete packs of **epidermix 510** shall be allowed and part pack mixes not permitted.

The mixing shall be carried out strictly in accordance with current product instructions for use and only with appropriate mixing equipment. **epidermix 510** shall be mixed by hand if "Standard Pack" or mechanically mixed if "Industrial Pack".

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The complete contents of the Base and Hardener shall be emptied into the mixing container and mixed thoroughly. The aggregate shall then be added and the three components blended together, ensuring that the aggregate is thoroughly wetted out with resin.

APPLICATION OF EPOXY MORTAR

Only fully integrated mixes of **epidermix 510** shall be used and within the mixed-state life of approximately 45 minutes.

Apply **epidermix 510** to the primed surface with a wood float, or by gloved hand, pressing firmly into place to ensure positive adhesion and paying particular attention to packing behind and between any reinforcement and even compaction overall.

Any areas for treatment which are more akin to rendering, such as large shallow indentations, or surfaces being treated for chemical resistance, shall be treated checker board fashion, approximately 0.5m² at a time.

These areas shall be treated so that 8-24 hours is allowed between abutting epoxy mortar edges and all edges shall be primed together with the concrete.

epidermix 510 shall be applied in accordance with current instructions for use. It may be applied in one operation by building up to the required profile in wet-on-wet layers between 5-50 mm. For small repairs the maximum thickness may be increased to 75 mm. Thicker sections may be achieved by building up in wet-on-dry layers, where each layer shall be wavy-line scratch keyed with a comb, primed at the time of application of subsequent layers and be completed between 8-24 hours of the previous layer.

Sagging of the repair mortar is not acceptable and if occurring all the material of the affected repair shall be completely removed prior to re-priming and refilling in two or more applications of mortar supported by formwork if required. If formwork is used it shall be pretreated with a varnish, wax polished and coated with a silicone based release agent. Special care shall be taken to ensure that the positioning of the formwork allows for even placing and does not result in voids within the repair mortar. The surface of the formwork shall not be coated with primer. The formwork shall be removed by knocking sideways when the **epidermix 510** has hardened, e.g. the next day.

After applying sufficient mortar to achieve a level flush with the surrounding surface the **epidermix 510** shall be finished by closing with a steel trowel.

TEMPERATURE

At 20°C the initial hardness of **epidermix 510** occurs approaching 24 hours and the full cure is at 7 days. Below 20°C the curing time increases and the minimum application temperature is 5°C.

In cold weather the **epidermix 510** should be stored in warm conditions. Dependent upon conditions it can be helpful to tent the work area, also to warm the work piece immediately prior to priming and application of the mortar.

New work shall be protected against frost until hard and resistant.

CLEANING

epidermix products 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

- abe[®] super brush cleaner
- epidermix 510



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EQUIPMENT NEEDED

- Heavy duty Festo mixer with helical mixing head
- Spatula
- Steel float
- Steel trowel
- Suitable 25 litre containers

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.



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