epidermix 344

DO-IT-YOURSELF

STRUCTURAL WET-TO-DRY CONCRETE EPOXY ADHESIVE

Bonding fresh concrete to existing concrete

DESCRIPTION

epidermix 344 is a two component, solvent free, polysulphide modified epoxy adhesive.

USES

Bonding fresh (plastic) concrete to existing concrete, plaster or brickwork. Can be used to provide a damp-proof barrier within the concrete matrix. If applied onto reinforcing steel **epidermix 344** will cause no loss of concrete/steel bond strength.

ADVANTAGES

- May be used in structural situations
- Excellent bond to damp or dry surfaces
- High ultimate tensile strengths
- High ultimate lap sheer strengths
- Bonds to rock

PROPERTIES	
Density (mixed)	1.66 g/cm³
Consistency	Semi-fluid paste
Toxicity	Uncured material toxic Cured material is non-toxic
Maximum service temperature	90 °C
Compressive strength	100 MPa
Tensile strength	18 MPa
%VOC	Nil

COLOUR

BLUE-GREY

SURFACE PREPARATION

The existing concrete surfaces must be clean and mechanically sound. They must be free of dust, laitance and any foreign matter as well as cracked or loose stone.

Maximum bond strength is only achieved if main aggregate of existing concrete is exposed. This may be done by scabbling, grinding, abrasive blasting or manual chipping. All cracked or loose aggregate must be removed.

In repairing spalls all loose and friable material must be broken away. If damage has exposed reinforcing, this should be undercut and hammered back into position, if so directed by the engineer. If exposed reinforcing has rusted badly it should be cleaned by abrasive blasting. The existing concrete surface should ideally be dry. **epidermix 344** will bond to green concrete. It will not, however, penetrate free water on the surface of any concrete.

BONDING/PRIMING

Self-bonding.

MIXING

Stir the contents of both containers individually and ideally use a can opener to remove the lip from both cans. Add the entire contents of the activator tin to the base material and stir with a flat paddle until an even, streak free, grey mixture results. This takes at least five minutes.

If only a small quantity of material is required, pre-stir contents of each can using separate clean paddles. Remove two volumes of base and one volume of activator into a clean, separate container and mix together, to obtain an even grey colour.

If the ambient temperature is between 10 – 15 °C, pre-condition the unopened cans by standing them in the sun or in warm water until the temperature of the contents is approximately 20 °C. This makes mixing and spreading much easier.

COVERAGE

1.7 – 2 m²/L (recommended wet film thickness 500 – 600 µm).

APPLICATION

epidermix 344 should be spread onto the surface as soon as possible after complete mixing. Apply the compound in a thin rough layer and only once the can is emptied should an attempt be made to spread to working thickness.

epidermix 344 is best spread by means of a stiff bristle brush such as a kitchen scrubbing brush. A paint brush with bristles shortened by 50% may also be used.

On large areas use of a stiff-bristled yard broom is feasible. Compound should be spread at a rate of about 1.7 – 2 m²/L to give a film thickness of some 500 – 600 µm. Coverage is very much controlled by texture of the surface. The plastic concrete mix should be of as low a slump as feasible and may be cast into the adhesive layer up to 4 hours after mixing. If the original film has over-cured it must be roughened before application of the new layer of epoxy. Where a feather edge is needed, the aggregate size of the concrete must be adjusted accordingly.

Full cure: 14 days.

VIBRATION OF NEW CONCRETE

Once the plastic concrete has been placed it should be punned with a steel or wooden rod to force main aggregate into the adhesive layer. When this has been done, vibration may be commenced. The vibrator head must be kept away from the adhesive layer. Poker vibrators have been found to give better results than vibrators clamped onto the shuttering.

CURING OF NEW CONCRETE

Care must be taken to see that the new concrete is adequately cured as is required in good concreting practice. This curing is particularly vital where thin concrete layers are involved and should be continued for at least 5 – 7 days. See **abe®**'s range of curing agents.

POT LIFE (MINUTES)					
	15 °C	**20 °C**	**25 °C**	**30 °C**	**35 °C**
500 ml kit	60	45	30	18	15
1 L kit	50	37	25	18	12
2 L kit	40	30	20	15	10

CLEANING

Tools, brushes and mixing equipment should be cleaned immediately after use and before material has set with **abe® super brush cleaner** followed by washing with soap and water.

PROTECTION/MAINTENANCE ON COMPLETION

None.

PACKAGING

epidermix 344 is supplied in 500 ml, 1 L and 2 L kits.

HANDLING AND STORAGE

Shelf-life of 24 months, but shorter if in extreme conditions. Keep tightly sealed in a dry cool place in the original packaging.

CAUTION

When handling epoxy compounds, always make use of disposable gloves and barrier creams.

HEALTH AND SAFETY

Product safety information required for safe use is not included. Before handling, read product and safety data sheets and container labels for safe use, physical and health hazard information. The safety data sheet is available from your local **a.b.e.® Construction Chemicals** branch.

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