



SAINT-GOBAIN

epidermix® 345

**STRUCTURAL WET-TO-DRY
EPOXY CONCRETE ADHESIVE
WITH EXTENDED OPEN TIME
CAPABILITY**

DESCRIPTION

epidermix® 345 is a solvent-free two-component modified wet-to-dry epoxy resin system which has an extended open time formulation.

USES

- Structural bonding fresh wet concrete to existing concrete
- Extended open time feature is useful where re-bar and shuttering have to be installed prior to the new concrete being poured
- For bridges, pavements, loading bays and factories
- As a bonding agent to a cementitious substrate for cementitious, epoxy or polyurethane screeds and coatings
- As a bonding agent for a repair system where the repair is likely to remain wet or under water for an extended period

epidermix® 345 exhibits good damp tolerance, provided that appropriate mechanical surface preparation has been carried out to ensure adequate mechanical bonding.

ADVANTAGES

- Solvent free, can be used in any location
- Long open time formulation
- May be used in structural applications
- Excellent bond to damp or dry surfaces
- High ultimate tensile strength, exceeds that of concrete
- High ultimate lap shear strength
- Can be used internally or externally

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 and loose stone.

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

When 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 required by the engineer. If exposed reinforcing has rusted it should be cleaned by abrasive blasting and then coated with **durarep ZR primer**.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination and soundness of the substrate should then be assessed by a pulloff test.

TYPICAL PHYSICAL PROPERTIES

Compressive strength (EN 12190)	51.1 MPa
Modulus of Elasticity in Compression (EN 13412)	2085 N/mm ² . Meet ≥ 2000 N/mm ²
Linear Shrinkage (EN 12617-1)	At 7 days - 0.04%. Meet ≤ 0,1%
Slant Shear Strength (Structural Bonding) (EN 12615)	Hardened-Hardened: 11.3 MPa Hardened-Fresh: 9.8 MPa (Meet > 6 MPa) Compliance with EN 1504-4 Structural Bonding - Methods 4.3 & 4.4
Steel-Steel Shear Strength (EN 12188)	51.9 MPa - 50° 61.4 MPa - 60° 73.1 MPa - 70° 4.8 N/mm ² . Meet requirement
Pot life (EN ISO 9514 / EN 1542)	(20°C): 180 minutes (35°C): 90 minutes
Open time @ 20 °C	Up to 18 hours. Leave coated substrate 1 hour before placing concrete or screed
Full cure	7 days
Spread rate	5.5 m ² /kg depending on surface profile
Volume solids	100 %
Application temperature range	5 °C to 35 °C
Durability of Structural Bonding (EN 13733) - Steel to steel	After 50 thermal cycles & 6 months heat-humidity: No failure
- Hardened concrete	After 50 thermal cycles & 6 months heat-humidity: Not less than 3.4 N/mm ²
- Fresh concrete	
Flexural modulus (EN ISO 178)	831 N/mm ² Meet ≥ 2000 N/mm ²
Flexural strength	42.4 N/mm ²

MIXING

epidermix® 345 components should be mixed separately to disperse any settlement. The activator should then be added to the base component and thoroughly mixed for about 3 minutes with a mixing paddle attached to a slow-speed drill (200 r/min).

COVERAGE

5.5 m²/kg depending on surface profile.

APPLICATION

Brush or spray applied. Refer to notes on open time and application temperatures.

CLEANING

Remove excess material from tools and then clean with **abe® super brush cleaner** immediately after use. Hardened material can only be mechanically removed.

TEMPERATURE

Do not apply at temperatures below +5 °C or above 35 °C.

MODEL SPECIFICATION

Two-component, epoxy wet-to-dry adhesive for bonding new concrete to old where long open time is required.

The bonding agent will be **epidermix® 345**, a twocomponent, solvent-free, epoxy resin applied in accordance with the recommendations of **a.b.e.®**

PACKAGING

epidermix® 345 is supplied in 2 kg and 5 kg yield kits (a base component and activator component per kit) .

HANDLING & STORAGE

This product has a shelf life of 12 months if kept in a dry cool place in the original packaging. In more extreme conditions this period might be shortened.

HEALTH & SAFETY

epidermix® 345 should not come into contact with skin or eyes, or be swallowed. Suitable protective clothing should be worn such as gloves and eye protection. If working in confined areas, suitable respiratory protective equipment must be used.

In case of contact with skin, remove immediately followed by washing with soap and water. Do not use solvent. In case of splashing into the eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately – do not induce vomiting. **epidermix® 345** is non flammable.

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e.®** endeavours to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot accept any liability for application – because **a.b.e.®** has no direct or continuous control over where and how **a.b.e.®** products are applied.

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.®** has a wealth of technical and practical experience built up over the years in the company's pursuit of excellence in building and construction technology.
- Please consult our website for our latest datasheets.

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