



Vetobond EB431

Water dispersible epoxy bonding agent to bond old to new concrete

Uses

- Bonding old to new concrete.
- Elimination of cold joints resulting from casting stops.
- As a primer for bonding cementitious repair materials (Vetorep range of products).
- Bonding of cementitious screeds and granolithic toppings to concrete substrates.

Product Description

Vetobond EB431 is based on water-dispersible epoxy resins containing pigments and fine fillers. It is supplied as a three-component material in pre-weighed quantities, ready for on-site mixing and use. The product is used in external and internal applications on horizontal surfaces or on vertical surfaces where mortar or concrete can be supported by formwork. The long 'open' pot life makes it suitable for formwork or where it requires to fit additional steel reinforcement. The product is ideal for roads, bridges, pavements, loading bays, and factories, and bonded or granolithic floor toppings.

Advantages

- Adhesive bond to concrete will always exceed the tensile strength of the host concrete.
- Suitable for use on damp and wet concrete.
- Environmentally friendly water-based odorless and non-flammable.
- Resistant to hydrolysis, used externally and internally.
- Outstanding mechanical and bond properties.
- Excellent bond to concrete, masonry, stonework, plaster, and cement boards.

Design Criteria

Vetobond EB431 has an overlay time of 24 hours at 22°C, 12 hours at 30°C or 8 to 10 hours at 35°C, making it more suitable for use where additional steel reinforcement and formwork has to be fitted or where temperatures are high.

Standards Compliance

- ASTM C 881/881M-13 (Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete) as Type I, II, III, IV & V - Grade 2 class B & C

Technical Data

Vetobond EB431	Typical Values @ 22°C
Pot Life	3 - 4 Hours
Initial Hardness	48 Hours
Full Cure	7 Days
Maximum Overlay Time	24 Hours
Compressive Strength ASTM D 695	> 70 N/mm ²
Tensile Strength EN13286	20 N/mm ²
Flexural Strength BS6319	35 N/mm ²
Shear Strength BS6319	25 N/mm ²
Bond Strength ASTM C882	10 N/mm ² @14 days moist cure

Note: At temperatures below 22°C, the cure rate will be slower. Conversely, at temperatures above 20°C, the cure rate will be faster.

Usage Instructions

Surface Preparation

Clean all surfaces and remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposits, or algae. Roughen the surfaces, remove any laitance and expose aggregate by light scabbling or grit-blasting.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing, or the use of a proprietary degreaser. A pull-off test should then assess the effectiveness of decontamination and the soundness of the substrate. Any steel reinforcement and formwork should be prepared, cut to size and shape, and made ready for assembly before mixing commences.

Mixing

are should be taken to ensure that Vetobond EB431 is thoroughly mixed. Stire the 'hardener' and 'base' components separately before mixing to disperse any settlement. Pour the entire content of the 'hardener' tin into the 'base' tin. Mix the two materials thoroughly using a suitable slow-speed drill and mixing paddle for 2 minutes until achieving a fully uniform color. Scrap the sides of the tin, and continue mixing for a further 1 minute. Slowly add the Reducer part and mix for 3 minutes.

To facilitate mixing and application at temperatures below 22°C, the separate components should be warmed in hot water up to a maximum temperature of 25°C before mixing. If heated to 25°C, the subsequently mixed material will need to be used more speedily as the pot-life will be reduced to 4 hours.

Alternatively, store the material in an environment heated to 20°C and directly remove it before use.

Application

Apply Vetobond EB431 as soon as the mixing process completes. Brush Vetobond EB43 or spray it on the prepared surfaces.

Apply the new concrete or screed to the coated substrate up to 24 hours after application at 22°C or up to 12 hours at 30°C, or between 8 to 10 hours at 35°C. However, leave the coated substrate for one hour before placing the new concrete or screed.

Where Vetobond EB431 is to be used as part of a repair system to form a substrate/repair barrier, care should be taken to achieve an unbroken coating. Apply one

coat and allow to gel. Apply a second coat and use it as the bonding coat. In some situations (e.g., sprayed concrete repairs), it may be advantageous to scatter dust-free sharp sand over this coat and leave it to harden.

As soon as the Vetobond EB431 has been applied, any required steel reinforcement and/or formwork should be elected and fixed securely in place.

Cleaning

Remove Vetobond EB431 from tools, equipment, and mixers with water if the 3 components were mixed. The use of Vetonit Solvent XX400 may be needed.

Hardened material can only be removed mechanically.

Packaging & Coverage

Product	Pack Size	Yield
Vetobond EB431	5 Liters Kit	0.25 L/m ²

Stated consumption data are for general guidance. Actual consumption depends on the nature of the substrate, method of application, and wastages extra.

Shelf Life & Storage

The original sealed container of Vetobond EB430 has a shelf life of 12 months, provided it is stored clear of ground in a dry, shaded place below 35°C.

Health & Safety

Vetobond EB431 should not come in contact with skin or eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapors. Some people are sensitive to resins, gardeners, and solvents. Wear suitable protective clothing, gloves, and eye protection. If working in confined areas, use suitable respiratory protective equipment. The use of barrier creams provides additional skin protection. In case of contact with skin, remove immediately with resin-removing cream followed by washing with soap and water.

Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately – do not induce vomiting.

Vetobond EB431 is non-flammable.

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