



# Vetobond PB434

Polymeric bonding agent,  
waterproof mix enhancer & primer

## Uses

- Production of high strength waterproof renders, screeds, cement slurries and mortars.
- Enhancing cementitious mixes such as plasters, tile adhesives, screeds,...etc.
- As a primer and surface sealer for plasters and repair mortars.
- Enhancement of cementitious mixes to freeze and thaw cycles.

## Product Description

Vetobond PB434 is a modified styrene butadiene rubber emulsion which is supplied as a ready to use white liquid. It is designed to improve the quality of site-batched cementitious mortars and slurries. When used as a primer; it works to seal the substrate and enhance bond to mortars and plasters. Being resistant to hydrolysis, it is ideal for internal and external applications in conjunction with cement.

## Advantages

- Factory controlled single component easy to use and easily gaged.
- Water emulsified, environment friendly product.
- Odorless and non flammable.
- Resistant to hydrolysis, used externally and internally.
- Improves mortars to provide waterproof repairs, renders and toppings which are highly resistant to freeze/thaw cycling
- Improved tensile and flexural properties allowing thin applications.
- Excellent bond to concrete, masonry, stonework, plaster and block walls.
- Priming gypsum boards to allow installation of cementitious tile adhesives.
- Chloride free.

## Technical Data

| Vetobond PB434              | Typical Values        |                       |
|-----------------------------|-----------------------|-----------------------|
| Appearance                  | Milky liquid          |                       |
| Density @ 25°C              | 1 kg/Ltr approx.      |                       |
| Drying Time @ 25°C          | 2 - 3 hours           |                       |
| Chloride content            | Nil                   |                       |
| Mix Enhancement             | Result                | Control               |
| Compressive Strength BS6319 | 35 N/mm <sup>2</sup>  | 28 N/mm <sup>2</sup>  |
| Tensile Strength EN13286    | 3.5 N/mm <sup>2</sup> | 2.5 N/mm <sup>2</sup> |
| Flexural Strength BS6319    | 9 N/mm <sup>2</sup>   | 8 N/mm <sup>2</sup>   |
| Slant Shear Bond BS6319     | 20 N/mm <sup>2</sup>  | 2.5 N/mm <sup>2</sup> |

## Usage Instructions

### Surface Preparation

Saw cut the extremities of the repair locations to a depth of at least 10 mm to avoid feather edging and to provide a square edge. Break out the complete repair area to a minimum depth of 6 mm up to the sawn edge.

Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae. Where breaking out is not required, roughen the surface and remove any laitence 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. The effectiveness of decontamination should then be assessed by a pull-off test.

Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit blasting is recommended for this process.

Where corrosion has occurred due to the presence of chlorides, the steel should be high-pressure washed with clean water immediately after grit blasting to remove corrosion products from pits and imperfections within its surface.

### **Reinforcement Steel Priming**

Apply one full coat of Vetoprime CP437 to any exposed steel reinforcement and allow to dry before continuing. If any doubt exists about having achieved an unbroken coating, a second application should be made and, again, allowed to dry before continuing.

### **Substrate Priming**

The substrate should be thoroughly soaked with clean water and any excess removed prior to commencement. A slurry primer should be prepared consisting of 1 volume Vetobond PB434 to 1 volume clean water to 3 volume fresh cement. To obtain a smooth consistency, the cement should be blended slowly into the premixed liquids. The slurry primer should be stirred frequently during use to offset settlement.

The slurry primer should be scrubbed well into the surface of the concrete. Avoid applying too thickly and avoid 'puddling'.

The repair mortar, topping or render must be applied on to the wet slurry primer. If the slurry primer dries before application of the mortar, it must be removed and the area reprimed before continuing.

In exceptional circumstances, e.g. where a substrate/repair barrier is required or where the substrate is likely to remain permanently damp, Vetobond EB430 bonding aid should be used.

Contact the local Saveto office for further information.

### **Mixing**

Care should be taken to ensure that Vetobond PB434 mortars are thoroughly mixed. A forced-action mixer is essential.

Mixing in a suitably sized drum using an approved spiral paddle in a slow speed (400/500 rpm) heavy-duty drill is acceptable for occasional use.

A wide range of mix designs is achievable using Vetobond PB434. Typical designs are detailed below:

1. Patching and repair mortar (Recommended thickness 6 mm to 40 mm)

50 kgs Ordinary Portland Cement  
150 kgs grade C/M sharp sand  
10 liters Vetobond PB434  
8 liters (approximately) clean water

2. Heavy-duty floor screed (Recommended thickness 10 mm to 40 mm)

50 kgs Ordinary Portland Cement  
75 kgs 3 mm to 6 mm granite chips  
75 kgs grade C/M sharp sand  
10 liters Vetobond PB434  
6 liters (approximately) clean water

The screed should be of a semi-dry cohesive consistency.

3. Render (Recommended thickness 6 mm to 9 mm)

50 kgs Ordinary Portland Cement  
150 kgs grade C/M sharp sand  
10 liters Vetobond PB434  
6 liters (approximately) clean water

The render should be of a semi-dry cohesive consistency.

4. Bonding mortar for slip bricks, tiles, etc:

50 kgs Ordinary Portland Cement  
125 kgs grade C/M sharp sand  
10 liters Vetobond PB434  
7 liters (approximately) clean water

Water is adjusted to give a firm mortar. For fine joints, use grade M/F sand. Support where necessary until the mortar is set. Recommended thickness 6 mm to 40 mm.

**Note:** The mix designs are based on the use of dry sand and aggregate. Adjustments must be made to the water demand relative to the moisture content of the sand and aggregate used. It should also be noted that, due to the frequent inconsistencies of site stored materials and variable conditions, actual results may differ from those published above.

Weigh the cement, sand and, where required, aggregate into the mixer and dry blend together for one minutes. With the machine in operation, add the pre-mixed Vetobond PB434 and clean water. Continue mixing for 3 minutes to ensure complete dispersal into the sand and cement. Make any small adjustment to the quantity of clean water but do not significantly exceed the amount shown above. Additional water should be kept to a minimum. Continue mixing up to a maximum of 5 minutes until a smooth and fully homogeneous consistency is achieved with the required workability

and application properties. It is critical that allowance is made for the moisture content of the sand and aggregate, particularly where they are stored on site.

### Application

For application to all surfaces, Vetobond PB434 mortars, toppings and renders must be well compacted on to the primed substrate by trowel. It is frequently beneficial to work a thin layer of the mortar into the slurry primer and then build the mortar on to this layer. Exposed steel reinforcement should be completely encapsulated by the mortar.

Vetobond PB434 mortars can be applied at a minimum thickness of 6 mm and up to 40 mm thickness, dependent on the location and configuration of the repair zone. The thickness achievable in overhead locations without the use of formwork is largely dependent on the profile of the substrate.

Refer to the recommended thicknesses shown in the 'Mix design' section above. If the recommended thickness is exceeded and sagging occurs, the affected section must be completely removed and reapplied in accordance with the procedure described above. The use of formwork may facilitate achieving the required build. If formwork is used, it should have properly sealed faces to ensure that no water is absorbed from the repair material.

Where thicker sections up to a total thickness of 40 mm are to be built up by hand or trowel application, the surface of the intermediate layers should be scratch-keyed and cured with Vetobond AB432. Application of the slurry primer and a further application of Vetobond PB434 mortar may proceed as soon as this layer has set.

### Finishing

Vetobond PB434 mortars can be finished with a steel, plastic or wood float, or by a damp sponge technique, to achieve the desired surface texture. The completed surface should not be overworked.

### Low temperature working

In cold conditions down to 5°C, the use of warm water (up to 30°C) is advisable to accelerate strength development.

Normal precautions for winter working with cementitious materials should then be adopted.

### High temperature working

At ambient temperatures above 35°C, the material should be stored in the shade and cool water used for mixing.

### Curing

Vetobond PB434 mortar, toppings and renders are cement based. In common with all cementitious materials, they must be cured immediately after finishing in accordance with good concrete practice. The

use of Vetocure XT426, sprayed on to the surface of the finished mortar in a continuous film, is recommended. In harsh drying conditions, supplementary curing with polythene sheeting must be used.

### Over-coating with protective decorative finishes

Vetobond PB434 mortar repairs are extremely durable and will provide excellent protection to the embedded steel reinforcement within the repaired locations. The surrounding parts of the structure will generally benefit from the application of a barrier/decorative coating to limit the advance of chlorides and carbon dioxide, thus bringing them up to the same protective standard as the repair itself.

Saveto recommend the use of the Vetotouch range of protective, anti-carbonation coatings. These products provide a decorative and uniform appearance as well as protecting areas of the structure which might otherwise be at risk from the environment. Vetotouch products may be applied over the repair area without prior removal of the Vetobond AB432 curing membrane. This is best achieved by light grit or sandblasting.

### Cleaning

Clean tools with water promptly before material hardens. Hardened material can be mechanically removed.

### Packaging & Coverage

| Product        | Pack Size    | Coverage    |
|----------------|--------------|-------------|
| Vetobond PB434 | 20 & 210 Ltr | As required |

### Shelf Life & Storage

Original sealed container of Vetobond PB434 has a shelf life of 12 months provided it is stored clear of ground in a dry shaded place below 35°C.

### Limitations

Vetobond PB434 mortars, toppings and renders should not be applied when the temperature is below 5°C and falling. Neither should they be exposed to moving water curing application. Exposure to heavy rainfall prior to the final set may result in surface scour. If any doubts arise concerning temperature or substrate conditions, consult the local Saveto office.

### Health & Safety

Cementitious mortars and slurries modified with Vetobond PB434 contain cement powders which, when mixed or become damp, release alkalis which can be harmful to skin.

During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment.

The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. In case of contact with eye, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately – do not induce vomiting.

Refer to Material Safety Data Sheet for further information.

## Additional Information

Saveto manufactures a wide range of construction chemicals and specialty products for various applications divided into the following product groups:

- Concrete Repair, Grouts and Enhancement.
- Wall & Facade Systems.
- Flooring and Coating Systems.
- Sealants and Joints.
- Plasters & Renders.
- Putties & Finishes.
- Tiling Systems
- Waterproofing.
- Primers & Ancillary Products.
- Specialty Products.

Saveto also provides various technical information such as CAD details, detailed method statements, specification clauses, application manuals, product selectors and technical support both in contractors and consultants offices as well as construction sites.

For further information on these products and systems kindly check our website or contact your local Saveto representative.

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