



## Vetobond PB434

Polymeric bonding agent, waterproof mix enhancer, and 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 a surface sealer for plasters and repair mortars.
- It enhances cementitious mixes to withstand freeze / thaw cycles.
- Connecting existing concrete with new one.

### Product Description

Vetobond PB434 is a modified styrene-butadiene rubber (SBR) latex that 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 the 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 and environmentally friendly product.
- Odorless and non flammable.
- Resistant to hydrolysis (can be used both externally and internally).
- Improves mortars to provide waterproof repairs, renders, and toppings which are highly resistant to freeze/thaw cycles.
- Improved tensile and flexural properties (allows thin applications).
- Excellent bond to concrete, masonry, stonework, plaster, and block walls.
- Chloride free.

### Technical Data

Vetobond PB434	Typical Values @ 25°C	
Appearance	White liquid	
Density (kg/liter)	1	
Drying Time (Hours)	1 - 2	
Solids Content (By weight%)	15 ± 3	
Chloride Content	Nil	
Mix Enhancement	Result	Control
Compressive Strength (BS 6319) (N/mm <sup>2</sup> )	35	28
Tensile Strength (EN 13286) (N/mm <sup>2</sup> )	3.5	2.5
Flexural Strength (BS 6319) (N/mm <sup>2</sup> )	9	8
Slant Shear Bond (BS 6319) (N/mm <sup>2</sup> )	20	2.5

### Standards Compliance

- ASTM C1059

## 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 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.

Breaking out is not required. Roughen the surface and remove any laitance by light scabbling or grit blasting. Remove oil and grease deposits by steam cleaning, detergent scrubbing, or by the use of a proprietary degreaser. A pull-off test should then assess the effectiveness of decontamination.

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

If corrosion has occurred due to chlorides' presence, 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.

### Substrate Priming

Soak the substrate thoroughly with clean water and remove any excess before commencement. Prepare a slurry primer with 1 volume of Vetobond PB434 to 1 volume of clean water to 3 volumes of fresh cement.

To obtain a smooth consistency, blend the cement slowly into the premixed liquids. Stir the slurry primer frequently during use to offset settlement. Scrub the slurry primer well into the surface of the concrete. Avoid applying too thickly and avoid 'Puddling.'

The repair mortar, topping, or render must be applied to the wet slurry primer. If the slurry primer dries before applying 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, contact Saveto Technical Support.

### Mixing

Mix Vetobond PB434 mortars thoroughly. A forced-action mixer is essential.

Mixing in a suitably sized drum using an approved spiral paddle at 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 (Approx.) clean water
  
2. Heavy-duty floor screed (Recommended thickness 10mm to 40mm)
  - 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 (Approx.) clean water

**Note:** The screed should be of a semi-dry cohesive consistency.
  
3. Render (Recommended thickness 6mm to 9mm)
  - 50 kgs Ordinary Portland Cement
  - 150 kgs grade C/M sharp sand
  - 10 liters Vetobond PB434
  - 6 liters (Approx.) clean water

**Note:** 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

Adjust water to give a firm mortar. For fine joints, use grade M/F sand. Support where necessary until the mortar is set.

The recommended thickness 6mm to 40mm.

**Note:** The mix designs are based on the use of dry sand and aggregate. Adjust 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 minute. 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. Keep adding water to a minimum. Continue mixing up to a maximum of 5 minutes until achieving a smooth and fully homogeneous consistency with the required workability and application properties. Allowance must be made for the moisture content of the sand and aggregate, particularly where they are stored on site.

## BONDING AGENTS AND PRIMERS

### Application

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

Vetobond PB434 mortars can be applied at a minimum thickness of 6 mm and up to 40 mm thickness, depending 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 following 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 been set.

For more information on mixing & application, refer to Vetobond PB434's Data Sheet.

### Finishing

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

### Working in Low Temperatures

In cold conditions down to 5°C, use warm water (up to 30°C) to accelerate strength development. Adopt normal precautions for winter working with cementitious materials.

### Working in High Temperatures

At ambient temperatures above 35°C, store the material 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, it is a must to cure immediately after finishing by good concrete practice. Use Vetocure XT426 sprayed onto the surface of the finished mortar in a continuous film. In harsh drying conditions, use supplementary curing with polythene sheeting.

### 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 applying 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 recommends the use of the Vetotouch range of protective, anti-carbonation coatings. These products provide a decorative and uniform appearance and protect areas of the structure that might otherwise be at risk from the environment. Apply Vetotouch products 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 & 200 Liter	As per usage

### Shelf Life & Storage

The original sealed container of Vetobond PB434 has a shelf life of 12 months, provided it is stored clear off the ground in a dry & shaded place, & at a temperature 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 during application. Exposure to heavy rainfall before 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 that release alkalies (which can be harmful to the skin when mixed or become damp).

During use, don't inhale dust or let it touch your skin and eyes. Wear suitable protective clothing, gloves, eye protection, and respiratory protective equipment. The use of barrier creams provides additional skin protection.

In case of skin contact, rinse with plenty of clean water, then cleanse with soap and water. In case of contact with your eyes, rinse immediately with plenty of clean water and seek medical attention. If swallowed, seek medical attention immediately – do not induce vomiting.

Refer to Material Safety Data Sheet for more Information.

## Additional Information

Saveto manufactures a wide range of construction chemicals and specialty products for various applications.

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

## Legal Disclaimer

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