



BETONAC[®] BOND-H

ALL-PURPOSE BONDING ADHESIVE

DESCRIPTION

BETONAC[®] BOND-H is a dispersion of internally plasticized, high polymer resin in water. It is a ready-to-use, non-settling, milky white liquid with a viscosity only slightly greater than that of water. BETONAC[®] BOND-H is a bonding agent for concrete. When used as directed, BETONAC[®] BOND-H will form a bond between new to old, new to new, or old to old concrete which is stronger than the concrete being bonded.

USES

- BETONAC[®] BOND-H is primarily intended for bonding new to old or old to old Portland cement concrete in exterior or interior applications.
- BETONAC[®] BOND-H is used for patching, re-surfacing concrete floors, walls, beams, columns, or other structural members with bond strengths exceeding the strength of the concrete being repaired or resurfaced. It could be used for repairing many concrete problems.
- Because BETONAC[®] BOND-H grout and mortar adhere to most substrates, it is used in a wide variety of applications. This includes bonding construction joints, prevention of cold joints in multiple pours, levelling of floors prior to BETONAC[®] BOND-H secondary surfacing, skid-proofing, and finishing concrete block walls. BETONAC[®] BOND-H grout is used to replace grinding of the concrete surface with a resulting waterproof, weatherproof, uniform, and attractive finish at substantially lower cost.

ADVANTAGES

- Simply mix with cement, sand and water
- For interior & exterior use
- Adheres to most surfaces
- Forms strong and durable bond
- Withstands water exposure
- Ready to use as received

APPLICATION

Surface Preparation

The surface to which BETONAC[®] BOND-H grout or topping is applied must be clean and free of oil, grease, loose particles and similar substances. Remove loose and foreign material by scarifying or other mechanical means. All



traces of acids must be removed completely. A properly prepared surface will be clean and free of other materials or stains, readily and uniformly dampened with water.

Mixing and Placing

A) Bonding Grout

For all applications as a bonding agent, BETONAC® BOND-H is mixed to the following proportions (by weight): 1-part BETONAC® BOND-H, 1 part water, 5 parts Portland cement, 2.5 parts fine sand. Please note that depending on the application, water could be mixed with up to 2-3 portions (by weight) to increase the liquidity of the grout.

In normal mixing the Portland cement and sand are dry blended together, water and BETONAC® BOND-H are mixed together, added to the cement-sand blend and the whole thoroughly mixed by mechanical means. Up to 1 part of water may be required depending upon the water requirement of the cement and the amount of water in the sand. The quantity of water to be used is preferably determined by a trial mix. For this purpose, 1/2 part of water is added to the BETONAC® BOND-H prior to the addition to the cement sand blend.

After preliminary but thorough mixing, additional water is added in increments until the desired consistency is obtained. Subsequently, for successive batches 80 % of the total water so determined is mixed with the BETONAC® BOND-H prior to addition to the batch with the remaining 20 % of water held for final adjustment. The BETONAC® BOND-H bonding grout should be mixed to a thick creamy consistency. The BETONAC® BOND-H bonding grout acts as glue to bond new concrete to existing concrete. In order to obtain maximum bond strength, grout must be intimately scrubbed onto the prepared existing concrete surface. Immediately before applying the bonding grout, the surface of the old concrete should be thoroughly moistened with water. Any puddles, or water standing in small pits and crevices, should be removed by mopping or by blowing with compressed air. Use a stiff bristle brush to apply the BETONAC® BOND-H bonding grout in a layer not more than 3 mm thickness.

B) Topping

The topping must be applied while the bonding grout is still soft and plastic. Any conventional Portland cement topping suitable for the anticipated service requirements, may be used. If the thickness of the overlay is not over 12 mm, BETONAC® BOND-H should be used in the suitable topping mix at a ratio of one-part BETONAC® BOND-H to five parts of Portland cement by weight or volume. A typical mix for vertical surfaces would be: 1-part BETONAC® BOND-H, 5 parts Portland cement, 15 parts Sand.

A typical mix for floor surfaces topping acceptable for foot or light wheel traffic would be: 1-part BETONAC® BOND-H, 5 parts Portland cement, 10 parts Sand.

The amount of water ranges up to, but generally does not exceed 2 full parts depending on the water requirement of the cement and the amount of water in the sand. Suitable sand generally conforms to ASTM C 404, Size No. 2. Follow the procedure given for the bonding grout in determining the water requirement and mixing. For deeper resurfacing, thick patches and overlays, the topping may be proportioned with larger size aggregate consistent with the depth of the overlay. When BETONAC® BOND-H is used with the bonding grout; it is not normally required in the topping for resurfacing in depths exceeding 12 mm. Care should be exercised in finishing very thin overlays. It is impossible to produce a highly polished finished surface on thin patches or overlays without impairing the quality of the topping and jeopardizing the strength of the bond. Excessive steel



trowelling will cause excessive bleeding with possible self-desecration and shrinkage of the topping. Excessive working, particularly several hours after wood floating may break the bond between the BETONAC® BOND-H grout and the old surface before bond strength has fully developed. Steel trowelling should be resorted only when absolutely necessary. Any steel trowelling should be very light, employing a minimum number of passes. Under no circumstances should steel trowelling be performed later than one hour after placing.

Curing

BETONAC® BOND-H patches or overlays should not be moist cured for the first 24 hours. To achieve ultimate bond strength, the emulsion must be allowed to set. Membrane curing, or covering with non-staining building paper is therefore recommended for curing BETONAC® BOND-H patches, overlays and toppings.

Coverage

One kilogram of BETONAC® BOND-H used in a bonding grout (1:5:2.5:1) yields approximately 5 kg. This is sufficient to cover an area of 2.5 m² at 2 mm thickness or 5 m² at 1 mm thickness. One kilogram of BETONAC® BOND-H used in repairing concrete surfaces with mixing ratio of (1:5:10) yields 16 kg mortar. This is sufficient to cover an area of approximately 1 m² at 1-1.5 cm thickness depending on the depth of damages.

IMPORTANT PRECAUTIONS

1. BETONAC® BOND-H, as received, must be protected from freezing. Do not use below 4° C.
2. BETONAC® BOND-H should be used as grout with Portland cement and sand. Do not use it without mixing with cement and sand.
3. BETONAC® BOND-H bonding grout or topping mix must be thoroughly mixed for optimum performance. This mixing should be made by mechanical means and in such a manner as to avoid the entrapment of air and to remove all lumps.
4. BETONAC® BOND-H bonding grout stiffens in 30-40 minutes after mixing. Mix only in small batches which may be used within this period.
5. Pre-wet surface before applying bonding grout, but remove all puddles.
6. BETONAC® BOND-H bonding grout and topping must be intimately scrubbed onto the prepared existing concrete surface.
7. BETONAC® BOND-H bonding grout must be soft and plastic when topping is applied.
8. All topping, whether containing BETONAC® BOND-H or not, should be cured with a membrane curing compound.
9. All equipment used in handling BETONAC® BOND-H and bonding grout should be cleaned with water immediately after use.
10. Air entraining admixtures should not be used in BETONAC® BOND-H mixes.



SAFETY INSTRUCTIONS

Gloves, barrier cream or protective clothing should be used. Prolonged skin contact may cause irritation. If accidentally splashed into eyes, flush with plenty of water and seek medical attention immediately.

TECHNICAL DATA

Appearance: Milky white liquid

Density: 1.15 ± 0.02 gm/ml

Packaging: BETONAC® BOND-H is packed in 20 liter Jerrycans or 1000 liter IBCs

Storage & Shelf life: BETONAC® BOND-H has a minimum shelf life of 1 year if stored in originally sealed packaging. It should not be exposed to direct sunbeam and protected against frost.

LEGAL NOTES

Whilst information and/or specification contained herein is to the best of our knowledge true and accurate, and is based on many years of experience, we cannot accept any liability either directly or indirectly arising from the use of our products, whether or not in accordance with any advice, specification or recommendation given by us, as we have no direct or continuous control over how or where our products are applied.