

DATA SHEET / KWIKBOND LIQUID General Purpose

GENERAL DESCRIPTION:

Bonding Liquid is an acrylic latex additive that can be used with all cementitious based products in order to improve adhesion, flexibility and waterproofing properties. It is used when extra bond strength is required. Bonding Liquid can be used to bond and prime new plaster and to penetrate and bond old, dusty and flaky plaster before skimming or painting.

The liquid can be painted over. It can also be used as a waterproofing agent in ponds, parapet walls, screeds on patios and slabs underneath pool paving and more. It is advised to use Bonding Liquid as a substitute for water when building any designated wet areas, such as showers, bathrooms, basements and patios.

It is especially useful as an additive when tiling with low density tiles, such as granite, marble, travertine and porcelain. Bonding Liquid can also be used as an additive when fixing mosaics. Available in 5L & 20L.

GENERAL DESCRIPTION: KWIKBOND Liquid

Kwikrete Bonding Liquid is a milky white liquid, produced from styrene and butadiene by high pressure emulsion polymerization. The latex contains microscopic particles of synthetic rubber, dispersed in an aqueous solution. The use of Kwikrete Bonding Liquid synthetic latex in cement-based slurries and mortars compensates for many deficiencies in these mixes without detracting from their inherent strength and normal properties. Kwikrete Bonding Liquid has been developed specifically for use with Portland cement and when combined, produces an excellent adhesive, each component complementing the properties of the other.

ADVANTAGES:

- Earlier hardening
- Greatly improved flexibility
- Reduced shrinkage.
- Good abrasion resistance
- Increased durability and toughness
- High resistance to water penetration
- Good resistance to frost attack.
- Good resistance to salt permeation
- Excellent adhesion to concrete.
- Adheres well to brick and most building materials.
- Prolonging corrosion protection
- Similar thermal expansion and modulus properties to concrete.
- Non-toxic. Can be used with potable water.

APPLICATIONS:

- CONCRETE REPAIR: Spalled concrete, repairing floors, beams and precast slabs.
- FLOOR SCREEDS AND TOPPING: Abrasion resistant and non-dusting floors, underlying special finishes, mild chemicals and effluent-resistant floors.
- EXTERNAL RENDERING: Waterproof, weatherproof and frost resistant render.
- WATERPROOFING AND TANKING: Basements lift pits, inspection pits, water towers, liquid tanks, effluent tanks, swimming pools.
- OTHER TYPICAL APPLICATIONS: Bedding tiles, fixing or re-fixing brick slips, bonding new concrete to old.

DIRECTIONS:

SURFACE PREPARATION: Surfaces to which Kwikrete Bonding Liquid mixes are to be applied should be clean, sound and free of deleterious substances. Remove all the laitance, oil, grease, mold oil or curing compound from concrete surfaces using a wire brush, bush hammer, scabblor or other plant as appropriate. Ensure that reinforcing steel is clean and free from grease or oil, remove scale and rust. When repairing spalled or damaged concrete, ensure that the concrete has been cut back to thoroughly sound material.

BONDING SLURRY: Wet down absorbent surfaces such as concrete, brick, stone, etc. ensuring that they are saturated but free of surface water. Prepare bonding slurry of 3 parts cement to 1 part water and 1 part Kwikrete Bonding Liquid mixed to a lump-free creamy consistency. Using a stiff brush, bond the bonding slurry well into the damp surface ensuring that no pinholes are visible. Do not apply bonding slurry at a thickness in excess of 2mm. Sand should be sharp, washed, well-graded and free from excessive fines (refer to SABS 083 specification for sands). Kwikrete Bonding Liquid is compatible with all types of Normal Portland, Sulphate Resistant and High Alumina Cements. However, High Alumina Cements hardening will be delayed. The strong plasticizing action of Kwikrete Bonding Liquid greatly reduces the water / cement ratio for a given workability.

STANDARD DOSE: 5 to 10 liters per 50kg cement. For more demanding situations, such as greater exposure to chemicals or wear, 10 liters per 50kg cement is recommended.

MIXING: Should preferably be carried out in an efficient concrete mixer. A pan mixer is recommended. Hand batching is permissible when the total weight of the mix is less than 25kg. Charge the mixer with the required quantity of sand and cement and premix for approximately 1 minute. Pour in the desired quantity of Kwikrete Bonding Liquid and mix for 2 minutes only to avoid excessive air entrainment. Finally, add the water until the required consistency is achieved. Owing to the strong plasticizing properties of Kwikrete Bonding Liquid rapid thinning can occur - avoid adding excessive water.

GUIDE TO APPLICATION: Rendering to Vertical Surfaces: Apply the bonding slurry to the prepared surface and then render immediately with Kwikrete Bonding Liquid modified mortar in coats to a maximum thickness of 6mm per coat as greater thickness can lead to slumping. However, several coats can be applied in fairly rapid succession usually within 15 to 30 minutes. Thicker coatings can be applied providing suitable formwork is used. Close the surface using a wooden float or steel trowel. Alternatively, scratch the first render coat after application and allow you to dry overnight before applying the second coat. This technique is preferred for rendering where the drying rate is slow but is not recommended when waterproofing. Screeds and Topping, applied to horizontal surfaces: Screeds, patches, etc. based on Kwikrete Bonding Liquid modified cements can be laid to any thickness from 60mm to 6 mm minimum. The Kwikrete Bonding Liquid modified mix should be placed over the still wet bonding slurry, well compacted, struck off to level and troweled to the required finish.

NOTE: Whenever screeds are laid over existing concrete surfaces expansion joints in the sub-floor must be carried through the Kwikrete Bonding Liquid modified mix.

CURING: Correct curing of Kwikrete Bonding Liquid modified mixes is important. Moisture cures for at least 1 day and then allows drying out slowly.

DOSAGE RATE: For all normal use the standard dose of 5 to 10 liters of Kwikrete Bonding Liquid per 50kg Portland cement is adequate. For extreme conditions and / or when adhesion, waterproofing, water vapor resistance or chemical resistance are critical, the dosage should be increased to 10 to 15 liters of Kwikrete Bonding Liquid per 50kg Portland Cement.

NOTE: The above dosage rates are a guide only. It is the contractor's / user's responsibility to ensure that all the materials to be used are compatible and further that they meet the concrete design criteria and specification requirements of the structure.

Concrete mix design tests should be carried out prior to commencement of the work.

EFFECT OF OVER-DOSAGE: The recommended levels should not be exceeded. Gross over dosage at an acceptable workability is not likely, but will result in an increase of the polymer properties to the detriment of the concrete compressive strength.

WATCH POINTS:

- Always use fresh cement and a well-graded aggregate free of excessive fines.
- Keep mixing time to a minimum - see above recommendations.
- A Kwikrete Bonding Liquid modified mix is deceptive in its workability. However, when at the correct consistency it can be compacted and troweled satisfactorily. Avoid using excess water.
- Never apply Kwikrete Bonding Liquid modified mixes or concrete to a bonding slurry that has been allowed to dry out.
- Do not over trowel and avoid re-troweling.
- Protect from too rapid drying out prior to troweling.
- Rapid Hardening Cement should be used in cold weather conditions. Application can continue down to 12°C provided the mortar temperature is not allowed to drop below 10°C until thoroughly hard.
- Protect new work from frost until a compressive strength of at least 5MPa has been reached.
- Lime (not more than 10% by weight of cement used); air entraining agents and masonry cement must not be used in conjunction with Kwikrete Bonding Liquid.