

UniBond 865

SBR bonding agent and mortar admixture

Description

UniBond 865 is a styrene butadiene rubber latex (SBR). It is specially formulated to be used as a bonding agent and admixture for cement-based mixes.

Features and benefits

- Non-toxic. Ideal for use in contact with potable water.
- Improves waterproofing, durability, flexibility, cohesion & workability and reduces shrinkage.
- Excellent bonding properties to steel reinforcement, concrete, masonry and most construction materials.
- Suitable for internal, external and submerged applications.
- Improves all physical characteristics of cement-based mixes.
- Good resistance to many chemicals.
- Modified mortars with **UniBond 865** have similar thermal expansion and modulus properties to concrete (unlike resin mortars and primers).

Recommended for

Cement-based renders/mortars can be used in the following applications:

- Bonding new concrete to old when used as a slurry coat.
- Concrete repair mortars. Suitable to repair spalled concrete and damaged concrete floors.
- Thrown coat and base coat weather proof renders.
- Tile adhesives mortar.
- Waterproof renders. Ideal for basements, swimming pools and water tanks.
- Floor screeds. Produces abrasion resistant and non-dusting floors, underlay for special finishes are required.

Modified mixes may be slightly darker than the corresponding unmodified mixes.

Composition

UniBond 865 is composed of styrene butadiene rubber latex dispersed in aqueous solution.

Packaging

UniBond 865 is available in 5, 20 and 125 kg packs.

Coverage

Standard dosage is 5 kg of **UniBond 865** per 50 kg cement. For extreme conditions and when adhesion and waterproofing are critical, the dosage should be increased to 10 kg of **UniBond 865** per 50 kg cement.

Detailed mixing ratios and coverage rate are listed below.

Note:

Coverage rate takes no account of wastage and may vary according to surface condition and application method.

Technical data

Appearance	White liquid
pH value	7.25±0.25
Density	1.03 kg/liter
Solid content %	49±1%
*Compressive strength	>35 N/mm ²
*Tensile strength	>6 N/mm ²
*Bond strength ASTM C1095	>4 N/mm ² @ 7 days
	>5 N/mm ² @ 14 days

*Dependent on cement content and workability.

Materials for UniBond 865 modified mortars

Cement

UniBond 865 is compatible with all types of OPC, SRC Type II and V.

Sand

Use sharp, washed, well graded sand free from excessive fines.

Water

Clean potable water.

Surface preparation

Surface preparation is very important on the final result of the bonding properties.

All surfaces must be sound, clean, dry and free of any material which may impair adhesion. Surface laitance should be removed using suitable mechanical method, including high pressure water jetting, grit blasting or grinding. Surface should be roughened and open-pored.

For patch repair, cut back the edges of the repair areas to a minimum of 10 mm depth to avoid thin repair thicknesses. Loose and damaged concrete should be chased out.

Exposed steel reinforcements should be grit blasted or wired brushed to a bright finish to ensure it is clean of all surface contaminants. Then it should be protected by applying **UniGuard 606**.

High suction substrates should be evenly dampened with clean water. Remove any excess water at the time of application.

Application

Bonding slurry

- The recommended mix to produce slurry consistency bond coat is as follows:
- 1 part **UniBond 865** + 1 part water + 3 parts cement by volume.
- Approximately 1 liter of **UniBond 865** will give a creamy bonding slurry which will cover 2 m².
- Apply a thick bonding slurry coat using a stiff brush to the prepared. Application of the subsequent render, mortar or screed should take place while the bond coat is still tacky.
- DO NOT apply on dry slurry coat.
- If bonding slurry coat dries before subsequent application, roughen it before applying a further coat of **UniBond 865** bonding slurry coat.

Thrown coat render (key coat)

- **UniBond 865** can be diluted between 1:1 and 1:5 with water. The proposed mix design is 400 – 450 kg cement + 1 m³ of sand. Add enough diluted **UniBond 865** with water till a thick slurry consistency is obtained.
- Apply it by hand ensuring that the final surface should be rough enough to bond the following cement-based plaster.

Tile adhesive mortars

If exceptional performance of **UniFix 300 / 313** is required (i.e., submerged, external walls application...etc.), mix **UniFix 300 / 313** with **UniBond 865** and enough quantity of water till you reach the right mortar consistency. Please refer to TDS of **UniFix 300 / 313**.

Base coat renders, mortars & screeds

The following table shows the proposed mix designs to produce polymer modified mortars:

	Thin sections 6 - 12 mm	Thick sections 12 - 40 mm
Cement	50 kg	50 kg
Sand	150 kg	75 kg
3 – 6 mm aggregate	-	75 kg
UniBond 865	5 kg	5 kg
Water	12 – 15 liters	12 – 15 liters

The previous mixes will yield approximately 0.1 – 0.11 m³.

- Apply the modified mortar / render manually onto the tacky bonding slurry coat. Compact it well to ensure maximum contact with the substrate.
- Finish it with trowel till you get a smooth finish. Do not over trowel.
- If greater thickness is required, apply it in several layers within 20 to 30 minutes of the application of the previous layer.

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- In case of delaying of the application of the following layer, leave the first layer to dry overnight and apply another bonding slurry coat before applying the following layer of mortar.

Curing

Moisture cure for 24 hours and allowed to dry out gradually to allow the SBR particles to join together to form continuous films and strands.

Important notes

- In general, **UniBond 865** should be added and mixed with the clean water prior to dry materials for better dispersion.
- Mix mechanically in a suitable batch mixer. A slow speed drill fitted with suitable mixing paddle can also be used.
- Hand mixing is only allowed if the total weight of the mix is not more than 25 kg.
- Always use fresh & cool cement. Keep mixing time to the minimum.
- The correct consistency may appear to be too dry. However, it can be compacted and troweled easily. Do not use excessive water.

Cleaning

Clean tools with water immediately after use. Hardened materials should be cleaned mechanically.

Storage and shelf life

To maintain its quality and suitability for use, the product should be stored in its unopened packaging, off the ground on pallets or similar structures, in a cool and dry environment. When stored under these recommended conditions, the product remains suitable for use for 12 months from the manufacturing date stated on the packaging.

Health and Safety

This product should not be ingested as it is based on acrylic polymers. Wear protective gloves, eye goggles and clothing. In case of

skin contact, wash with plenty of water. In case of eye contact, rinse continuously with water for several minutes and seek medical attention. Dispose excess material to special waste collection point in accordance with local & national regulation. Keep out of reach of children.

For further information, please ask for Safety Data Sheet for this product.

The most up-to-date TDS can be obtained from ACC Customer Service Department, or downloaded from our website: www.acc.com.eg.

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A wide range of construction chemicals, specialty mortars and specialized building materials are manufactured by ACC which include:

- Waterproofing.
- Flooring.
- Tile Adhesives & Grouts.
- Concrete Repair.
- Non-Shrink Grouts.
- Bonding Agents.
- Exterior Façade Coatings.
- Premixed Fairing Coats, Renders & Mortars.
- Putties (stucco).
- Sealers & Emulsion Paints.