

TECHNICAL DATA SHEET

UNDERWATER MORTAR

Quick Strength Cementitious Mortars

DESCRIPTION

Rockbond Underwater Mortar (RB 4.01) powder is a blend of special cement powders, high quality graded sands, and a unique combination of polymers and admixtures. The powder, when mixed with water, produces a mortar which is wash-out resistant with very low permeability. The material develops an early strength and can be used above or below the waterline. Underwater Mortar is supplied ready to use, packaged in 25kg plastic lined bags, and has a shelf life of five years.



SPECIAL PROPERTIES

- Portland cement based, polymer modified and microsilica enhanced.
- The mortars develop an excellent putty consistency for ease of application.
- Can be used above and below the water-line.
- Will not disperse, wash-out or break up underwater.
- Strong impermeable bond to brick, masonry, steel and concrete.
- Mortars can be built up to a level of existing profiles in one operation.
- The mortar can be finished to produce a smooth and attractive surface.
- The material will not contaminate canals, rivers, reservoirs or lakes.
- The powder contains no iron, high alumina cement, chlorides or deleterious substances.
- High yielding, economical, non-flammable, non-toxic, odour free, user friendly and safe to use in underwater environments.

USES

- Offshore locations and applications.
- The repair of precast concrete, tunnels, culverts, sewers and pipes.
- To point and repair bricks, blocks and masonry above or below the waterline.
- The repair of concrete in tidal zones where time is limited.
- The protection of marine structures above and below the waterline.
- The consolidation of sea defences, harbours, jetties, docks, locks.
- To stop and seal the flow of water or grout in brickwork or concrete.
- Caulking material for seals and joints, and for sealing shutters.
- In situations where a quick early strength gain is required.

MIXING INSTRUCTIONS

Underwater Mortar powders are mixed with water using a suitable container, a pneumatic or electric power tool and a stirrer. Only mix amounts of mortar that can be successfully applied in 10-20 minutes. Mixing by hand is NOT recommended.

- Add 4.5 litres of water to the container or mixer.
- Pour 25kg of powder into the water while mixing.
- After all the powder has been added, continue mixing for 1 minute.
- The mortar is then ready to use.

Alternatively, small amounts of the material can be prepared slowly, adding the powder to quantity of water and mixing to required consistency.

APPLICATION PROCEDURE

All necessary preparatory work must be completed before the mortars are mixed. Ensure that all surfaces with which the mortars come into contact are clean, free of contamination and marine growth. For use above the waterline, soak concrete and brick substrates for a few minutes prior to the application of the mortars and remove any standing water.

Mix the mortar powders with water to a good consistency and wait a few minutes for the mortar to gel. With the use of gloved hand and fingers, form a contact coat: rub the mortar onto and well into any cracks or cavities, and completely cover the substrate. Rub it in!

A contact coat applied properly will reduce voids at the bond line and promote intimate contact between the repair material and the concrete. It will also prevent peeling and slumping on vertical and soffit substrates. On the top of the contact coat, use a trowel or steel float to apply the material and bring up the profile of the surrounding concrete. For ease of application of the mortars above the waterline, and to remove stickiness, keep gloves and all implements wet. Use hand held water spray to wet mortar surfaces, and to produce smooth and attractive finishes.

In above water locations as soon as the material is in place and the application is complete, cure immediately with Membrane Cure (RB 7.11) at the rate of 8m²/litre.

During winter weather work, or low temperature applications, use Underwater Accelerated Mortar (RB 4.02).

HEALTH AND SAFETY

Rockbond Special Concrete Products are non-toxic and safe to use. However, use the same precautions as with any cementitious product: wear goggles, protective clothing and a dust mask while mixing and applying the material.

TECHNICAL DATA

Typical Data for Underwater Mortar at 18% water/ powder ratio at 20°C:

Consistency:	Good Mortar Consistency
Consistency Life:	20 minutes
Density:	2020kg/ m ³
Minimum Compression Strength:	
Days:	1 7 28
N/mm²:	15 35 50

Yield: 25kg powder yields 14 litres of underwater mortar. 1m³ of underwater mortar requires 1.800 tonnes of powder.

TECHNICAL INFORMATION

Should you have any queries, or require further information, please contact our **Technical Sales Team: +64 4 568 5401**