

FORMULATORS, MANUFACTURERS AND CONSULTANTS OF  
SPECIAL CONCRETE PRODUCTS

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## ROCKBOND UNDERWATER MORTARS

### DESCRIPTION:

ROCKBOND UNDERWATER MORTAR (RB UWM) powder is a blend of special cement powders, high quality graded sands, and an unique combination of polymers and admixtures. The powder, when mixed with water, produces a mortar which is wash-out resistant and waterproof. The material develops an early strength, and can be used above or below the waterline. ROCKBOND UNDERWATER ACCELERATED MORTAR (RB UWAM) is used at low temperatures, or when a rapid gain in early strength is required. The mortar powders are ready to use, packaged in 25kg durable bags, and have a shelf life of 2 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 waterline.
- \* 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.
- \* Safe to use, non toxic, and non hazardous in underwater environments.

### USES:

- + Offshore locations and applications.
- + To repair and waterproof 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 and locks.
- + Caulking material for seals and joints, and for sealing shutters.
- + In situations where an early strength gain is required.
- + To stop and plug the flow of running water or grout through brick or concrete instantly.

### MIXING INSTRUCTIONS:

ROCKBOND UNDERWATER MORTAR powders are mixed with water using a ROCKBOND 25 LITRE MIXING CONTAINER (RB 25LMC), a pneumatic or electric power tool (1KW), and a ROCKBOND STIRRER. Only mix amounts of mortar that can be successfully applied in 20 minutes.

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

ROCKBOND UNDERWATER MORTARS, MIXING INSTRUCTIONS CONTINUED...

Alternatively, small amounts of the material can be prepared slowly adding the powder to a quantity of water and mixing to required consistency. Mixing by hand is NOT recommended.

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. Soak concrete and brick substrates for a few minutes prior to application of the mortars and remove any standing water.

Mix the mortar powders with water to a good mortar consistency, and wait a few minutes for the mortar to gel. With the use of a gloved hand and fingers, form a CONTACT COAT: RUB the mortar onto and well into any cracks or cavities, and completely cover the substrate.

A contact coat applied properly will reduce voids at the bondline, and promote intimate contact between the repair material and the concrete. It will also prevent peeling and slumping on vertical and soffit substrates. On 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 ROCKBOND CURE (RB C) at the rate of 10m<sup>2</sup>/litre.

Use ROCKBOND UNDERWATER ACCELERATED MORTAR (RB UWAM) during winter weather work, or when ambient temperatures are low.

HEALTH AND SAFETY:

ROCKBOND UNDERWATER MORTAR (RB UWM) powders 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 materials.

TECHNICAL DATA:

ROCKBOND UNDERWATER MORTAR (RB UWM)

TYPICAL DATA at 18% water/powder ratio at 20°C

CONSISTENCY:	Good mortar consistency
CONSISTENCY LIFE:	20 minutes
DENSITY:	2080kg/m <sup>3</sup>

MINIMUM COMPRESSIVE STRENGTH:

1	7	28	Days
15	30	50	MPa

YIELD: 25kg of powder yields 14.00 litres of Underwater Mortar  
1m<sup>3</sup> of Underwater Mortar requires 1.800 tonnes of powder.

ROCKBOND UNDERWATER MORTARS, TECHNICAL DATA CONTINUED...

ROCKBOND UNDERWATER ACCELERATED MORTAR (RB UWAM)

TYPICAL DATA at 18% water/powder ratio at 20°C

CONSISTENCY: Good mortar consistency  
CONSISTENCY LIFE: 10 minutes

DENSITY: 2120kg/m<sup>3</sup>

MINIMUM COMPRESSIVE STRENGTH:

1hour	2 hours	1	7	28	Days
4	10	20	40	60	MPa

YIELD: 25kg of powder yields 13.25 litres of Underwater Accelerated Mortar  
1m<sup>3</sup> of Underwater Accelerated Mortar requires 1.900 tonnes of powder

FURTHER INFORMATION:

Should you require further information on this product, or details of other ROCKBOND SPECIAL CONCRETE PRODUCTS, then please do contact our Technical Department:

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IMPORTANT NOTE:

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