

TECHNICAL DATA SHEET

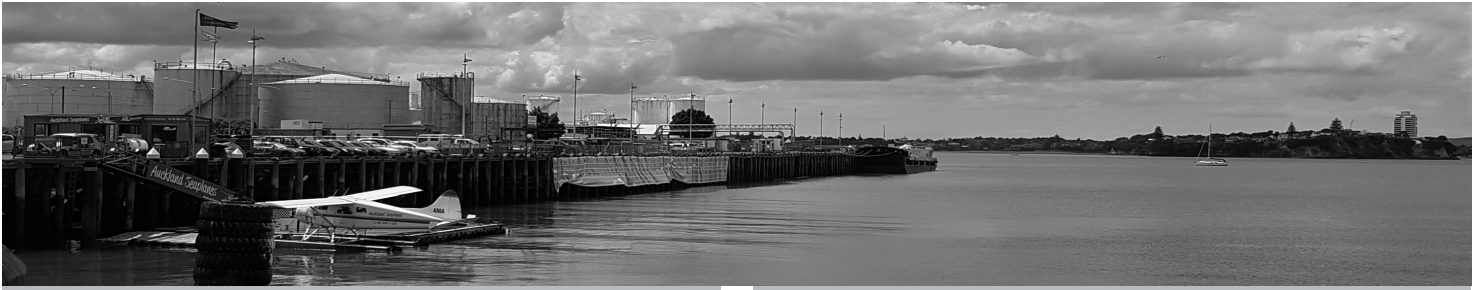
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# UNDERWATER GROUT

## Polymer modified grout for underwater applications

### DESCRIPTION

Rockbond Underwater Grout (RB 4.03) powder is a pre-mixed cementitious grout that has been specially formulated for underwater applications. This product contains a blend of fine and ultra-fine cements, a high quality graded sand, and a union of admixtures. The grout powder, when mixed with water, produces a material that is cohesive, mobile and displays an excellent resistance to washout when brought into contact with water. RB 4.03 Underwater Grout is packaged in 25kg moisture proof durable bags and has a shelf life of five years.



## SPECIAL PROPERTIES

- Incorporates several anti-wash-out agents.
- Extremely high wash-out resistance.
- No “fog” or dispersion when placed or poured underwater.
- Extremely stable and will not segregate or bleed.
- Readily pumpable and stable under pressure.
- Self-levelling and self-compacting.
- Excellent underwater bond to brick, steel, and concrete surfaces.
- High ultimate compressive and tensile and mechanical strengths.
- Can be used above and below the waterline.
- High yielding, economical, non-flammable, non toxic, user friendly and safe to use.

## USES

- General underwater void filling applications.
- Marine and fresh water underwater concrete repair and protection.
- For use in hostile locations such as tidal and splash zones.
- For the repair of seawalls, harbours, quays, jetties, ramps and slipways.
- Fortification and repair of river and sea defences.
- Repair and consolidation of water retaining structures, dams, pillars and bridge columns.
- Waterlogged foundations, anchorages, pilings, conduits, pipes and sewers.
- In situations where a quick, early strength gain is required.

## MIXING INSTRUCTIONS

Underwater Grout (RB 4.03) Powder is mixed with water using a suitable container, a pneumatic or electric drill, and a stirrer. Larger amounts of material may be mixed using a forced action paddle mixer.

Add 4.50 litres of water to the container or mixer.  
 Pour 25 kg of the grout powder onto the water while mixing.  
 For batches of 2 or more bags, repeat the procedure.  
 After all the powder has been added, mix for 30 seconds.  
 The grout is now ready for use.

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

## APPLICATION PROCEDURE

All necessary preparatory work must be completed before the grout or concrete is mixed.  
 Ensure that all surfaces with which the material comes into contact are clean and free of marine growth. The use of a water jet will produce a good and strong substrate on which to apply the material.

Use Underwater Accelerated Mortar (RB 4.02) to seal shutters. Make sure joints are watertight and shutters are strong enough to contain and support the material. The concrete can be pumped or tremied into place. Make sure the flow is continuous and that air is not introduced into the material.

This product can ordered for Winter type applications, the reference for this is Rockbond Underwater Accelerated Grout (RB 4.05).

For sections greater/thicker than 60mm, where there is a high degree of mechanical attack, impact and abrasion, Rockbond Underwater Concrete (RB4.04) should be used.

## HEALTH AND SAFETY

Rockbond Underwater Grout (RB 4.03) 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 GROUT at 18% water/powder ratio at 20°C.**

**CONSISTENCY:** Mobile grout  
**CONSISTENCY LIFE:** 30 minutes  
**DENSITY:** 2100kg/m<sup>3</sup>

### MINIMUM COMPRESSIVE STRENGTH:

Days:	1	7	28
MPa	12	30	60

**YIELD:** 25 kg of grout powder yields 12.75 litres of Underwater Grout.  
 1 m<sup>3</sup> of mobile grout requires 1.950 tonnes of powder.

## TECHNICAL INFORMATION

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

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