

FORMULATORS, MANUFACTURERS AND CONSULTANTS OF
SPECIAL CONCRETE PRODUCTS

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ROCKBOND SPRAYED MORTAR AND CONCRETE

DESCRIPTION:

ROCKBOND SPRAYED MORTAR (RB SM) powder is a pre-mixed, ready to use, cementitious mortar powder. The compound contains an unique blend of fine cement powders, graded sands, alkali resistant fibres, an acrylic co polymer powder, chloride free accelerators and admixtures. The powder, when sprayed with water, produces a gunite mortar which is non slumping, non shrink, quick strength, strong bonding, dense and impermeable. ROCKBOND SPRAYED CONCRETE (RB SC) contains a durable aggregate, and is applied to sections greater than 60mm. The ROCKBOND SPRAYED MORTAR and CONCRETE powders are packaged in 25kg durable bags and have a shelf life of 2 years.

SPECIAL PROPERTIES:

- * Formulated to the Dept of Transport Specification BD 27/86 and the Specification for Highway Works.
- * Specially designed to produce an exceptionally dense, impermeable and durable material.
- * Portland cement based, fibre reinforced acrylic modified, and microsilica enhanced.
- * Contains shrinkage compensated and low alkali cements, equivalent Na_2 below 5kg/m^3 .
- * Contains sand certified safe from A.S.R. attack.
- * High build material and will not slump or settle: 75mm sections can applied in one pass.
- * Quick and easily worked to produce a smooth and attractive finish.
- * Contains no chlorides, ferrous metal or other deleterious substances.
- * Economical, non flammable, non toxic, user friendly and safe to use.

USES:

- + Large scale repairs to concrete, render, mortar, masonry and brick.
- + Quick and rapid repairs to concrete structures, mass concrete and sea defences.
- + To consolidate, seal and strengthen rock faces, cliffs, cuttings and embankments.
- + To waterproof concrete structures, basements, walls, tanks, dams and reservoirs.
- + To repair concrete in mechanically aggressive environments such as marine defences, tunnels, culverts and moving water situations.
- + To protect reinforcing steel from corrosion in concrete from chlorides and chemicals in marine locations, highway structures and chemically aggressive environments.
- + As a coating to extend the concrete cover on existing structures.

MIXING INSTRUCTIONS:

ROCKBOND SPRAYED MORTAR and SPRAYED CONCRETE powders are dry sprayed, or small quantities of the powder can mixed with water using a ROCKBOND 25 LITRE MIXING CONTAINER (RB 25LMC), an electric power tool (1kW), and a ROCKBOND STIRRER (RB S).

Pour a quantity of water into the container or mixer.
Add and mix the powder with water until the required consistency is obtained.
After all the powder has been added, mix for 30 seconds.
The mortar or concrete is now ready for use.

ROCKBOND SPRAYED MORTAR (RB SM) AND CONCRETE (RB SC) CONTINUED...

APPLICATION PROCEDURE:

For the repair of corroded reinforced concrete, correct and proper preparation of the concrete substrate and steel reinforcing is essential to execute an effective repair.

Break out all spalled, loose and contaminated concrete. Remove the concrete at least 20mm from behind the steel reinforcing, and extend the perimeter of the repair to at least 50mm beyond the point at which the corrosion is taking place.

Thoroughly and completely abrade the concrete to produce a sound substrate with a good mechanical key. Keep concrete surfaces free from contamination.

Remove all corrosion products from the surface of the steel. Severely corroded reinforcement should be cut back and replaced. In situations where there is a high degree of chemical attack, apply ROCKBOND STEEL PRIMER (RB SP).

On weak, friable or porous concrete substrates, use ROCKBOND PRIMER LATEX (RB PL) to penetrate, consolidate and seal the surface. With a brush or a soft broom, brush the latex completely and evenly over the surface. Work the latex well into the substrate. Pay particular attention to the edges of the repair, and brush the liquid at least 25mm beyond the perimeter of the repair area. Let the latex dry out, usually 15 to 20 minutes depending on conditions.

If the substrate requires a primer, or to enhance the bond, apply a second coat of latex to the first coat. Normally, 1 litre of ROCKBOND PRIMER LATEX (RB PL) will treat 5m² of concrete surface with 2 coats of latex.

Once the material is in place and has gained sufficient strength, apply ROCKBOND CURE (RB C) at the rate of 10m²/litre. During adverse curing conditions, repeat the procedure.

During winter weather work, or when ambient temperatures are below 5°C, or if a rapid early strength development is required at 20°C, use ROCKBOND SPRAYED MORTAR ACCELERATED (RB SMA), or ROCKBOND SPRAYED CONCRETE ACCELERATED (RB SCA).

TECHNICAL DATA:

ROCKBOND SPRAYED MORTAR (RB SM)

TYPICAL DATA at 12% water/powder ratio at 20°C

CONSISTENCY: Stiff Mortar Consistency
CONSISTENCY LIFE: 10 minutes

DENSITY: 2250kg/m³

MINIMUM COMPRESSIVE STRENGTH:

1 hour	2 hours	1	7	28	Days
5	10	20	45	55	MPa

YIELD: 25kg of mortar powder yields 12.00 litres of Sprayed Mortar
25kg of mortar powder treats 1m² of concrete at 12mm cover.
1m³ of Sprayed Mortar requires 2.100 tonnes of mortar powder.

ROCKBOND SPRAYED MORTAR (RB SM) AND CONCRETE (RB SC).

TECHNICAL DATA CONTINUED...

ROCKBOND SPRAYED CONCRETE (RB SC)

TYPICAL DATA at 8% water/powder ratio at 20°C

CONSISTENCY: Stiff Concrete Consistency
CONSISTENCY LIFE: 10 minutes

DENSITY: 2350kg/m³

MINIMUM COMPRESSIVE STRENGTH:

1 hour	2 hours	1	7	28	Days
5	20	30	45	60	MPa

YIELD: 25kg of powder yields 11.50 litres of Sprayed Concrete.
25kg of powder treats 1m² of concrete at 11.50mm cover.
1m³ of Sprayed Concrete requires 2.175 tonnes of powder.

HEALTH AND SAFETY:

ROCKBOND SPRAYED MORTAR (RB SM) AND CONCRETE (RB SC) 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.

ROCKBOND PRIMER LATEX (RB PL) is non toxic and safe to use. However, if splashes enter the eyes, the latex must be immediately washed out with plenty of clean running water. Wear goggles, a mask and protective clothing while handling, spraying and applying the material.

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:

ROCKBOND SCP LTD provides the above information in good faith and without warranty. The data represents typical values which can be updated at any time, and this information supersedes previous issues. No liability can be accepted for any damage or loss arising from the use of ROCKBOND SCP LTD literature or its products, because the company has no continuous control on how the products are mixed, placed or cured.

APRIL 2006