

**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, acrylic polymer powders, chloride free accelerators and admixtures. The powder, when sprayed with water, produces a non-slump, non-shrink, waterproof mortar which quickly hardens to provide a material that is strong, dense and impermeable. ROCKBOND SPRAYED CONCRETE (RB SC) contains a crushed rock aggregate and is applied to sections greater than 60mm. The powders are packaged in 25kg moisture proof, durable bags and have a shelf life of 5 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 resin modified, and microsilica enhanced.
- * Contains shrinkage compensated and low alkali cements, equivalent Na₂O below 5kg/m³.
- * Contains sand safe from Alkali Silica Reaction (ASR).
- * High build material and will not slump or settle: 60mm sections can applied in one pass.
- * Quickly and easily worked to produce a smooth and attractive finish.
- * Weatherproof, waterproof, non porous and impermeable.
- * Contains no chlorides, ferrous metal or other deleterious substances.
- * High yielding, economical, non flammable, non toxic, odour free, user friendly and safe to use.
- * Long lasting shelf life of 5 years or more when bags are stored in a cool, dry and dark place

USES:

- + Large scale repairs and coatings to concrete, render, mortar, masonry, brick and stone.
- + Quick and rapid repairs to concrete structures, mass concrete and sea defences.
- + To consolidate, seal and strengthen rock faces, cliffs, railway 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 reinforced concrete from chemical attack, chloride attack on highway structures, in marine locations, and chemically aggressive environments.
- + As a coating to extend the cover on existing concrete structures.

MIXING INSTRUCTIONS:

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

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 substrates, use ROCKBOND PRIMER LATEX (RB PL) to penetrate, consolidate, strengthen 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 repair area. Brush out any puddles, and let the latex dry out, usually 15 to 30 minutes depending on conditions.

To prime the substrate and to enhance the bond, apply a second coat of the latex to the first coat. Normally, 1 litre of the ROCKBOND PRIMER LATEX will treat 5m² of concrete surface with a two coat application. Substrate surfaces without the use of the Primer Latex should be wet.

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 AND CONCRETE. 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, SAFETY AND STORAGE:

ROCKBOND SPRAYED MORTAR AND CONCRETE 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. Consult the relevant MSDS for further details. Store in a cool, dry, dark place.

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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https://rockbond.co.uk/wp-content/uploads/2020/10/PL1_3_1_1_Sprayed_Mortar_SM_and_Sprayed_Concrete_SC_July_2020.pdf

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.

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