

**FORMULATORS, MANUFACTURERS AND CONSULTANTS OF  
SPECIAL CONCRETE PRODUCTS**

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**ROCKBOND STAINLESS STEEL FIBRE 12mm****DESCRIPTION:**

ROCKBOND STAINLESS STEEL FIBRES 12mm (RB SSF12) of 0.4mm diameter are strong, inert, monofilament stainless steel fibres specially designed to improve the hardened properties of cementitious materials. Concrete, mortars, renders and floor screeds harden to produce materials that are greater in tension and have a greater resistance to impact and abrasion. The fibres are also used to reduce or eliminate problems associated with the drying out of concrete, shrinkage and cracking. The fibres are ready to use, supplied to order and have an indefinite shelf life.

**SPECIAL PROPERTIES:**

- \* Available in lengths of 12mm, 25mm and 35mm.
- \* Fibres are made of stainless steel which is strong, tough and wear resistant.
- \* Quickly and easily dispersed without bundling to produce workable mixes.
- \* To produce steel reinforced concrete without the use of steel reinforcing or mesh.
- \* To minimise shrinkage, reduce or eliminate both plastic and long term shrinkage.
- \* Fibres prevent cracking to produce impermeable and durable cementitious products.
- \* Produces concrete which is stronger in compression. flexion and tension.
- \* The fibres are non absorbent, chemically resistant and will not degrade with time.
- \* To enhance the resistance of concrete against heat, impact, shock, abrasion, wear and tear.
- \* Economical, non flammable, non toxic, odour free, user friendly and safe to use.

**USES:**

- + For use in concrete placed in heavy engineering and railway workshops and shipyards.
- + For concrete placed in heavy and massive machine assembly plants and factories.
- + To produce wear resistant concrete where there is heavy and frequent vehicular traffic.
- + In areas where the traffic is steel wheeled or moves on caterpillars.
- + To repair and protect concrete against loading buckets, shovels and grabs.
- + To produce high flexural and high tensile strength concrete and flooring materials.
- + To eliminate shrinkage, cracking and crazing in cementitious screeds, thin toppings and coatings.
- + For corrosion free, marine concrete, sea defences, harbours, jetties, docks and locks.
- + A substitute for steel reinforcing cages, mesh and rods in the fabrication of reinforced concrete.
- + To produce high strength, fracture resistant, precast concrete products such as manhole rings and covers, frames, posts, kerbs, tiles and slabs.

**MIXING INSTRUCTIONS:**

ROCKBOND STAINLESS STEEL FIBRE 12mm reinforced mixes are mixed with water using a ROCKBOND CONCRETE STIRRER (RB CS), a pneumatic or electric power tool (1kW) and a ROCKBOND 25 LITRE MIXING CONTAINER (RB 25LMC). Use a ROCKBOND FORCED ACTION PAN MIXER (RB FAPM) to mix larger amounts of material.

Start the mixer, add the appropriate amount of water, add the ingredients of the mix, and mix until homogeneous. ROCKBOND STAINLESS STEEL FIBRES are added to cementitious mixes at the end of the mix. The dosage rate is normally 7.5% by weight of cement contained in the mix: 7.5kg of ROCKBOND STAINLESS STEEL FIBRE 12mm per 100kg of cement. Slowly add the fibres to the mix, and mix until homogeneous.

## ROCKBOND STAINLESS STEEL FIBRES 12mm (RB SSF12) CONTINUED...

### APPLICATION PROCEDURE:

For the application of renders, mortars or concrete to be placed on cementitious or brick surfaces, careful and proper preparation of the substrate is essential if a successful material is to remain in place. Abrade the surface where necessary to produce a sound substrate with a good mechanical key. All traces of contamination must be removed.

On weak, friable or porous substrates, use the 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 perimeter of the area to be covered. Let the latex dry out, usually 15 to 20 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 5m<sup>2</sup> of concrete surface with a two coat application.

### TECHNICAL DATA:

Tests have shown that ROCKBOND STAINLESS STEEL FIBRE 12mm added by weight to a 1:2:2, Portland cement: sand: 10mm aggregate mix, improves the flexural strength of the concrete:

Flexural strength at 0% fibre content by weight of cement:	3.5N/mm <sup>2</sup>	
Flexural strength at 10% fibre content by weight of cement:	3.9N/mm <sup>2</sup>	11% increase
Flexural strength at 20% fibre content by weight of cement:	5.3N/mm <sup>2</sup>	51% increase
Flexural strength at 30% fibre content by weight of cement:	6.7N/mm <sup>2</sup>	91% increase

### HEALTH, SAFETY AND STORAGE:

ROCKBOND STAINLESS STEEL FIBRES are safe to use. However, wear goggles, protective clothing and a dust mask while mixing and applying cementitious materials that are stainless steel fibre reinforced. Please note the ends of the fibres are SHARP and can puncture the skin and eyes. 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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### 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.

DECEMBER 2018