

Dosing And Placing Instructions For - Scanfibre Reinforced Concrete

INTRODUCTION

Scanfibres have high aspect ratio and are collated (i.e. glued together like staples). This makes them simpler to use than loose fibres but the method of addition is different. Failure to follow the correct mixing procedure can lead to problems.

FIBRE ADDITION

Handling:

Steel fibres are packed in degradable bags.

Scanfibre Collated Fibres:

Scanfibres are glued into bundles, making the dosing and mixing process easy and reliable. Scanfibres should never ball, despite high dosages and their high (65-80) aspect ratios, provided the mixing procedure is correct.

The glue is softened by the mixing water. Hence, it is important that the fibres are added at the correct time in the mixing sequence. The most important thing to remember is not to add Scancem steel fibre before aggregates.

Mixing:

There are three ways of mixing Scanfibre reinforced concrete, as shown overleaf.

PLACING

Workability:

The addition of 80 aspect ratio Scanfibres at the rate of 15kg/m³ will typically mean increasing the slump prior to fibre addition by around 15mm to maintain the same workability. To achieve this slump increase, add more water and hence cement to maintain the w/c ratio or alternatively add a small mid range water reducer or superplasticiser.

Scanfibre concrete places in exactly the same way as conventional concrete with attention to bull floating minimising surface fibres.

Curing:

An aliphatic alcohol, such as Scancure AA, can prevent plastic shrinkage cracking in hot and windy weather, particularly if silica fume is used. Apply Scancure AA alcohol immediately after screeding and reapply as needed prior to final finishing. Immediately after final finishing apply a suitable curing compound, such as Scancure WAX, or pond with water. Long-term curing requirements for Scanfibre floors are the same as for conventional floors.

Scanfibre Reinforced Concrete Floor – Higher performance than mesh at a lower cost

Mixing of Scanfibre Steel Fibres In Readymix Trucks

There are three ways of mixing Scanfibre: Method 1.

Scanfibre can be added like an extra aggregate, directly to the weighing hopper by front-end loader, preferably as the middle layer between the aggregates (Figure 1). This method is only suitable for the front-end loader plants. No extra mixing time is required.

Method 2.

If a conveyor belt is accessible, Scanfibre can be added to the moving conveyor belt during or after adding the aggregates (Figure 2). No extra mixing time is required.

Method 3.

Scanfibre can be added from the slump stand or on site after all other mix components have been batched already (Figure 3):

- While the truck is rotating at mixing speed (ie. ≥ 12 rpm), add the unopened degradable bags of Scanfibre (if the initial slump is at least 90mm) at the rate of 1 bag per 20 seconds.
- Rotate the truck at mixing speed for 3-5 minutes after all bags have been added.

Figure 1. Front End Loader



Figure 2. Conveying Belt



Figure 3. Adding to Truck



Scanfibre steel fibres are glued into bundles, making the dosing and mixing process easy and reliable. The glue will be softened by the mixing water. Scanfibre fibres correctly dosed should never ball, even at very high dosages.

- **Do not introduce Scanfibre steel fibres into the mix as the first ingredient to contact water.**
- **Do not add Scanfibre Steel Fibre Before Aggregates. (Methods 2 and 3 only)**

The information given is based on knowledge and performance of the material. Every precaution is taken in the manufacture of the product and the responsibility is limited to the quality of supplies, with no guaranty of results in the field as Scancem Materials has no control over site conditions or execution of works.

SCANCEM MATERIALS

Products For Engineered Concrete

S'pore : 2 Kallang Pudding Rd, #06-10, Mactech Ind. Bldg, S349307 Tel: +(65) 6255 8737 Fax: +(65) 6255 8713 email info@scancemmaterials.com
M'sia : A-4-9, Plaza Dwi Tasik, Jln Sri Permaisuri, Bandar Sri Permaisuri 56000 Kuala Lumpur, Tel: +(60) 3 9171 2110 Fax: +(60) 3 9171 5110