

Shieldfibre 3D

Steel Fibers



MICSHIELD®

Description

Shieldfibre 3D is steel fiber with hooked ends, used for reinforcing standard concrete structures subjected to static, fatigue, and dynamic loads.

Uses

- Industrial floors.
- Slabs-on-grade.
- Pavements.
- Precast concrete.
- Shotcrete.
- Tunnels.
- Underground structures.

Characteristics / Advantages

- Helps control crack propagation and crack width.
- Enhances the mechanical properties of concrete.
- Helps reduce shrinkage cracking.
- Enhances fatigue, impact, and abrasion resistance.
- Improves load-bearing capacity.
- Provides economic benefits through reduced reinforcement and labor requirements.

Standard Compliance

- ASTM A820-type1.
- EN 14889-1.
- ISO 13270 class A

Storage

Shieldfibre 3D should be protected against rain, snow and heat sources.

Typical Properties

Nominal tensile strength	1.115 N/mm ²
Young's modulus	210.000 N/mm ²
Strain at ultimate strength	0.80%
Fiber Network	2,858 fibers/kg

Geometry

Fiber Type	Hooked End Steel Fiber Type 1
Length (l)	50 mm
Diameter (d)	1.05 mm
Aspect Ratio	45 (l/d)

Packaging

Shieldfibre 3D is supplied in 20 kg bags.

Dosage

Shieldfibre 3D is normally used at a dosage of 20 kg/m³ of concrete. The actual dosage may be adjusted based on trial mixes to achieve the required performance

Safety Instructions

Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage, and disposal of the product.



Application Instructions

1. Mixing

Shieldfibre 3D should be added to the concrete during or after batching of the ingredients and mixed for 5 minutes or 70 revolutions to ensure uniform fiber dispersion.

2. Application

Adding **Shieldfibre 3D** at the recommended dosage does not require changes to the mix design or application method. The fiber-reinforced concrete can be mixed, sprayed, and placed using standard equipment.

Limitations

- Do not add additional water to the concrete mix. If improved workability is required, use only a suitable water-reducing or high-range water-reducing admixture.
- Do not add fibers beyond the recommended dosage.
- Ensure uniform fiber distribution throughout the concrete mix.
- Use appropriate handling procedures, as steel fibers may have sharp edges.

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

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