

Macro Fiber 54

Macro polypropylene synthetic fiber with twisted bundle



DESCRIPTION

Macro Fiber 54 is a macro synthetic reinforcement fiber with twisted bundle manufactured of 100% virgin copolymer/polypropylene fibers with excellent alkali resistant, impermeable, non-corrosive and non-magnetic properties.

Macro Fiber 54 is an excellent alternative to the traditional reinforcement steel mesh in order to significantly reduce the plastic shrinkage cracking and enhance the durability and the mechanical properties of the cementitious mixes.

APPLICATIONS

Macro Fiber 54 is ideally designed to decrease the plastic shrinkage cracking in the following applications

- » Tunnel segments.
- » Pre-cast concrete.
- » Industrial floors.
- » Composite decks.
- » Pavements.
- » Slabs on piles.
- » Foundation slabs.
- » Shear reinforcement in prestressed elements.

ADVANTAGES

- » Controls and inhibits crack formulation caused by plastic shrinkage, settlement or other internal stresses in concrete.
- » Can be used as a replacement to traditional steel mesh or steel fiber reinforcement.
- » Cost effective, replaces secondary reinforcements steel mesh.
- » High tensile strength.
- » Easily distributed throughout the cementitious mix.
- » Compatible with all types of cement and concrete admixtures.
- » Rust free.

STANDARDS

Macro Fiber 54 complies with the specifications of EN 14889-2, Type II and ASTM C1116, Type III.

TECHNICAL PROPERTIES:

Composition:	100% virgin copolymer/polypropylene
Shape:	Synthetic macro fiber with twisted bundle
Colour:	Grey
Length:	54 mm \pm 2%
Developed length:	60 mm \pm 2%
Equivalent diameter:	0.49 mm \pm 5%
Aspect ratio:	122
Specific gravity:	0.91 g/cm ³
Elastic modulus:	> 5.2 GPa
Tensile strength:	520 - 570 MPa
Number of fibers	100000+ / kg
Corrosion	Non-corrosive
Melting point:	165°C
Ignition point:	> 360°C
Water absorption:	Nil
Chemical resistance	Alkali and acid resistance

METHOD OF USE

MIXING

Macro Fiber 54 can be added to the concrete mixer at any point during the batching or mixing process. However, before discharging the mixture, set the mixer at the maximum speed for 3 - 5 minutes in order to ensure a uniform distribution of fiber in the concrete matrix.

Don Construction Products

Str. Dârzei II, no. 235D, Village Mănăstirea
Crevedia, County Dâmbovița
Romania

info.romania@dcp-int.com; officeromania@dcp-int.com
www.dcp-int.com



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DOSAGE

Dosage of Macro Fiber 54 will vary depending on the area of application and the required properties of concrete mixes.

Typical dosage is between 2.0 - 5.0 kg/m³ of concrete.

PACKAGING

Macro Fiber 54 is available in 0.5 kg bags.

STORAGE

Store in original unopened packaging in dry and shaded areas.

If these conditions are exceeded, contact DCP Technical Department for advice.

CAUTIONS

HEALTH AND SAFETY

There are no health hazards associated with Macro Fiber 54 in normal use.

For further information, refer to the Material Safety Data Sheet.

FIRE

Macro Fiber 54 is combustible and will burn if exposed to flame or other sources of ignition.

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- » Concrete admixtures.
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- » Protective coatings.
- » Sealants.
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- » Tile adhesives and grouts.
- » Building products.
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Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

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