

DonFiber PP Macro

High-performance macro polypropylene fibres for shotcrete



DESCRIPTION

DonFiber PP Macro is a synthetic macro fibre reinforcement, manufactured from 100% copolymer/polypropylene fibres. It is designed for use with all cementitious mixes, especially for shotcrete applications and tunnel linings to increase impact resistance.

The inclusion of DonFiber PP Macro within a concrete mix or cementitious mixes will reduce and control plastic shrinkage cracks and early age cracks, increase crack control under high pressure and minimize spalling in conjunction points.

APPLICATIONS

DonFiber PP Macro is ideally designed for the following applications:

- » Shotcrete.
- » Tunnels linings, segments, and slope stabilization.
- » Slab on grade.
- » Elevated slabs, industrial floors.
- » Parking areas.
- » Precast concrete.
- » Water tanks, Irrigation project, channels.
- » Coastal Structures, ports, quays and marinas.
- » Residential applications.

ADVANTAGES

- » Controls and inhibits crack formulation caused by plastic shrinkage, settlement or other internal stresses in concrete.
- » Reduces shotcrete rebound.
- » Improves fresh mix properties (homogeneity & cohesiveness).
- » Increases concrete durability, shock, impact & fatigue Resistance.
- » Replaces light gauge welded-wire reinforcement and traditional shrinkage and temperature reinforcement.
- » Easily distributed throughout the cementitious mix.
- » Restrains shrinkage cracking and acts as post-crack reinforcement.
- » Compatible with all types of cement and concrete admixtures.
- » Rust-free.

STANDARDS

DonFiber PP Macro complies with the requirements of ASTM C1116, Type III, ASTM D7508 and EN 14889 Part II, Type II.



TECHNICAL PROPERTIES:

Composition:	100% virgin polypropylene
Form:	Embossed macro fiber
Specific gravity:	0.91
Aspect ratio:	70
Equivalent diameter:	0.78 mm (min tolerance $\pm 5\%$)
Tensile strength:	640 MPa
Modulus of elasticity:	> 11 GPa
Melting point:	165°C
Chemical resistance:	Alkali and acid resistance
Magnetism:	Non-magnetic
Corrosion:	Non-corrosive

METHOD OF USE

MIXING

DonFiber PP Macro with a sufficient dosing, can be added into mix in the aggregate band directly. It can also be added to the ready mix truck ensuring proper distribution within concrete.

Mix for 5 - 6 minutes at high speed after the addition of the final dosage to ensure uniform distribution of fibers.



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DOSAGE

Dosage of DonFiber PP Macro will vary depending on the area of application and the required properties of concrete mixes. Typical dosage is between 2.0 – 7.5 kg/m³ of concrete.

DonFiber PP Macro can be used as secondary reinforcement and replace traditional shrinkage and temperature steel mesh within concrete, following necessary project calculations.

PACKAGING

DonFiber PP Macro is available in 54 mm fibre length (min tolerance 2%). Filled in degradable pucks or bags with various pack sizes.

STORAGE

Store in original unopened packaging in dry and shaded areas at temperatures between 5°C and 30°C, protected from moisture and direct sunlight and away from flammable or oxidizing materials.

DonFiber PP Macro should not be stacked on top of each other unless proper precautions are taken.

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

CAUTIONS

HEALTH AND SAFETY

There are no health risks associated with proper use of the product.

For further information refer to the Material Safety Data Sheet.

FIRE

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

MORE FROM DON CONSTRUCTION PRODUCTS

A wide range of construction chemical products are manufactured by DCP which include:

- » Concrete admixtures.
- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

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.