

# DonFiber PP Macro X

High-performance macro polypropylene fibres for flooring applications



## DESCRIPTION

DonFiber PP Macro X is a synthetic macro fibre reinforcement for structural use, manufactured from 100% copolymer/polypropylene fibres in the shape of twisted bundles of monofilament fibers. It is designed for use with all cementitious mixes, and specially for use as a secondary reinforcement in slab on grade applications and industrial floors.

The inclusion of DonFiber PP Macro X 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 provide ductility, high energy absorption and flexural toughness to concrete, and eliminate the need for steel mesh and steel fibres.

## APPLICATIONS

DonFiber PP Macro X is ideally designed for the following applications:

- » Slab on grade.
- » Industrial floors and parking areas.
- » Precast concrete.
- » Concrete roads, pavements, bridge decks.
- » Port concrete linings.
- » Shotcrete.
- » Concrete blocks.
- » Water tanks, Irrigation project, channels.
- » Residential applications.
- » Tunnels segments linings and tunnel floors.
- » Ground stabilization.

## ADVANTAGES

- » Controls and inhibits crack formulation caused by plastic shrinkage, settlement or other internal stresses in concrete.
- » 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.
- » Restrains shrinkage cracking and acts as post-crack reinforcement.
- » Easily distributed throughout the cementitious mix.
- » Compatible with all types of cement and concrete admixtures.
- » Rust-free.



## TECHNICAL PROPERTIES:

Composition:	100% virgin polypropylene
Form:	Monofilament micro fiber (Twisted bundle)
Specific gravity:	0.91
Equivalent diameter:	0.48 - 0.50 mm (min tolerance 5%)
Aspect ratio:	121
Tensile strength:	560 - 650 MPa
Modulus of elasticity:	7.2 - 8.5 GPa
Melting point:	165°C
Ignition point:	> 360°C
Absorption:	Nil
Chemical resistance:	Alkali and acid resistance
Magnetism:	Non-magnetic
Corrosion:	Non-corrosive

## STANDARDS

DonFiber PP Macro X complies with the requirements of:

- » ASTM C1116, Type III
- » EN 14889 Part II, Type II.
- » ASTM D7508.
- » ICC AC 383.



# DonFiber PP Macro X

## METHOD OF USE

### MIXING

DonFiber PP Macro X can be added to the aggregate band at the concrete batching plant. 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.

### DOSAGE

Dosage of DonFiber PP Macro X will vary depending on the area of application and the required properties of concrete mixes. Typical dosage is between 2.0 – 5.0 kg/m<sup>3</sup> of concrete.

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

### PACKAGING

DonFiber PP Macro X is available in 54 mm fibre length (min tolerance 2%), filled in:

- » 500 grams water soluble bag.
- » 5 kg packs.

### 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.

If these conditions are exceeded, DCP Technical Department should be contacted 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 X 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.