

DonFiber PP1000

Fire spalling resistance micro polypropylene fibers



DESCRIPTION

DonFiber PP1000 is a monofilament micro fiber reinforcement, manufactured of 100% polypropylene fibers containing no polyamide, nylon or reprocessed olefin materials. It is designed for use with all cementitious mixes.

The inclusion of DonFiber PP1000 within a concrete mix or cementitious mixes will reduce fire explosive spalling, control plastic shrinkage cracks, and early age cracks.

At high temperatures fibers melt, creating channels within the concrete that prevent explosive spalling. Due to the melting, the internal stresses in the concrete that lead to explosive spalling are reduced.

APPLICATIONS

DonFiber PP1000 is ideally designed to reduce fire explosive spalling, decrease the plastic shrinkage cracking and plastic settlement cracking in the following applications:

- » High rise buildings and residential projects.
- » Multi story parking areas.
- » Schools, universities and commercial buildings.
- » Tunnel Linings.
- » Elevated slabs.
- » Precast concrete.
- » Shotcrete.

ADVANTAGES

- » Controls and inhibits crack formation caused by plastic shrinkage, settlement or other internal stresses in concrete.
- » Reduces fire explosive spalling under rapid heating.
- » Reduces shotcrete rebound.
- » Improves fresh mix properties (homogeneity & cohesiveness).
- » Increases concrete durability.
- » Improves resistance to impact and abrasion.
- » Easily distributed throughout the cementitious mix.
- » Multidirectional reinforcement.
- » Compatible with all types of cement and concrete admixtures.
- » Corrosion resistant.

STANDARDS

DonFiber PP1000 complies with the requirements of ASTM C1116, Type III and EN 14889 Part II, Type 1A, ASTM D7508.



TECHNICAL PROPERTIES @ 25°C:

| | |
|----------------------------|---------------------------|
| Composition: | 100% virgin polypropylene |
| Form: | Monofilament micro fiber |
| Specific gravity: | 0.91 |
| Tensile strength: | 450 - 550 MPa |
| Modulus of elasticity: | 4000 - 5650 MPa |
| Elongation: | 20 - 25% |
| Equivalent diameter: | 30 - 32 microns |
| Melting point: | 160°C |
| Chloride content: | Chloride-free |
| Sulphate content: | Sulfate-free |
| Alkali content: | Alkali-free |
| Alkali and acid resistant: | Good |
| Oxidant resistance: | Excellent |
| Biological resistance: | Excellent |

METHOD OF USE

DonFiber PP1000 is added to the mixer before, during or after batching of 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 PP1000 will vary depending on the area of application and the required properties of concrete mixes. Typical dosage is between 1.5 - 3.0 kg/m³ of concrete.

LENGTH

The standard lengths of Donfiber PP1000 are 6 mm or 12 mm.

Other lengths are available upon request.

PACKAGING

The standard pack of Donfiber PP1000 is 0.6 kg degradable paper bags. The bags are packed into cartons and palletized.

Other packaging is available upon request.

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.

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 PP1000 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.