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FIBRILs F

FIBRILs is registered trade name of an alkali – resistant polyolefin fibres for the purpose of reinforcement of concrete and cement – bound products.

FEATURES

- Fibrillated micro synthetic fibres for reinforcing concrete
- High strength and ductility
- High modulus
- Good bond within concrete due to special shape and porosity
- Special fibre coating ensures excellent distribution throughout the concrete matrix
- Good resistance to all acids and alkalis

APPLICATION

- Precast concrete elements
- Pre-covering in tunnels
- Extruded roadway structures
- Rigid concrete floors
- Foundation layers
- Parking areas and airport runways
- Consolidation of walls
- Marine / coastal concrete

TECHNICAL CHARACTERISTIC

| | | | |
|---------------------------------|----------------------------|--------------------------------|-------------------------|
| Raw material | Modified Olefin/PP tapes | Young's Modulus 10-30 % (GPa) | ≥ 3,5 |
| Structure | monofil net | Shape | fibrillated tapes |
| Thickness | 18, 32 mic | Equivalent diameter | 80 mic |
| Numbers of fibres | 18,5 mio/3 mm–3,1 mio/18mm | Area weight | 0,91 kg/dm ³ |
| Length/diameter ratio | 1 : 40/3mm – 1:225/18 mm | Elongation at break | 6-10 % |
| Density * (kg/m ³) | 0,9 – 0,94 | Tensile strength (MPa) | ≥ 385; 4,5 cN/dtex |
| Fibre length (mm | 3,6,12,18,24,36 | Melting point | 160 °C |
| Absorptive capacity * (%) | 0 | Ignition point | 590 °C |
| Colour | Natural | Chemical resistance | Excellent |
| Surface | microporosity /round | Alkali resistance | Excellent |

* All values are nominal and measured according NBN EN 14889-2 (2006), NBN EN ISO 6892-1(2009)

Tornado Plus reserves the right to change specifications of all products without prior notice

PACKAGING

For simple applications and dosage, the fibres are packed into bags 910 gr, 10 kg, 20 kg and in big bags. Fibres is simple added to the wet concrete. Store materials in a cool dry place. Do not store in direct sunlight.

DOSAGE

Depending on the structural requirements, the recommended quantity to be added is normally 0,91 to 2 kg micro fibres per m³ of concrete.

PROCESSING

Fibres are treated at the surface with special chemical substance, which improves mixing of the concrete and enables regular dispersion of the fibres in the concrete mass.

The fibre put into the mixer directly or can be added by means of a dosage machine. An additional mixing time of 2-3 min is required, depending on the dosage. At the end of the mixing process, the fibres have to be distributed evenly.

SAFETY

No ecological, toxicological or safety risks

Unlike steel reinforcement, there is no risk of injury from protruding fibres. Projecting fibres disappear within polishing. On unpolished concrete, they can be removed with a flame torch.

The above-mentioned values are indicative and are provided without any guarantee. Tornado Plus does not assume any responsibility resulting from the applications of these data. All reports are available for consultations.

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