

X-Mix PPF

High Performance Crack Control Micro Fiber

Product Description:

X-Mix PPF are high performance polypropylene fibers, developed as a crack control fibers for cementitious materials. They are available in 19mm and 12mm lengths for concrete and 6mm lengths for plaster and mortar. It is used to inhibit the formation of cracks which can occur through plastic shrinkage, premature drying and early thermal changes.

Advantages:

- Cost effective
- Replaces anti crack mesh reinforcement
- Decreases construction time and labor
- Inhibits intrinsic cracking in concrete
- Disperses uniformly throughout the mix
- Do not rust
- Explosive spall control

USES

X-Mix PPF is primarily used as a crack controlling fiber for cementitious materials. Typical applications are:

- Crack control in readymix concrete, precast concrete, conventional shotcrete, screeds, renders, mortars, micro-silica concrete
- Concrete slabs, pavements, driveways, imprinted concrete
- Explosive spall control
- slab on grade applications

Laboratory Test Data

Specific gravity	0.9 g/cm ³ ±0.05
Alkali content	Nil
Sulphate content	Nil
Air entrainment	Air content of concrete or mortar will not be significantly increased
Chloride content	Nil
Fiber thickness	30 to 32 microns
Young's modulus	5500 to 7000 MPa
Tensile strength	350 Mpa
Melting Point	160°C

Specification Compliance:

ASTM C1116, Type III
BS EN 14889 - 2
ASTM D3379

DOSAGE

Depends on the fiber length.

Length	Dosage (kg/m ³)	Number of fibers/kg	Dosage for
6mm	0.3	222 million	plaster
6-12mm	0.6	111 million	mortar
18mm	0.9	50 million	Mortar & concrete

Explosive Spall Control (Fire)

Section 6.1 of the European Standard EN 1992 Eurocode 2 states 2 kg/m' of polypropylene fibers be used to control explosive spalling in high strength concrete as a result of fire. Lower dosages can be used but spalling resistance will have to be determined by specific fire testing.

Standard Lengths

6mm, 12mm, 18mm, 24mm.

Use at other dosages

Dosages outside the typical ranges quoted above can be used to meet particular requirements, Contact X-Calibur for advice.

Effects of overdose

Overdosing of X-Mix PPF will generally produce a reduction in workability, and an increase in the cohesiveness of the mix.

Dosing Instructions

Add directly with the bag to the mortar or concrete mix while being mechanically mixed either at the batch plant or the truck mixer.

Mix for a minimum of 5 minutes after addition of fibers to ensure complete distribution of the fibers.

Packaging

0.6 kg and 0.9 kg of fiber packed in water soluble paper bags for easiest mix.

Shelf Life

Indefinite when stored under shade in a dry environment.

Storage

Store under shade out of direct sunlight and below 40°C. Keep dry at all times.

Limitations

Maximum size of aggregate 32mm

Do not try to mix fibers in to the mix by hand Do not use in place of structural reinforcement

Health and Safety

This product is for industrial use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. The MSDS can be obtained via our website www.ncc.com.eg

Authorized Technical Specialist

Please note that only NCC X-Calibur Authorized Technical Specialists (ATs) are permitted to change any of the information in this data sheet or to provide written recommendations concerning the use of this product. Visit www.ncc.com.eg for a full list of NCC X-Calibur ATs.

Datasheet Validity

NCC X-Calibur makes modifications to its product datasheets on a continuous basis. Please check the datasheet update section on www.ncc.com.eg to ensure you have the latest version.

Warranties

NCC X-Calibur supplies products that comply with the properties shown on the current data-sheets.

In the unlikely event that products supplied are proved not to comply with these properties, then we will replace the non-compliant product or refund the purchase price. NCC X-Calibur does not warrant or guarantee the installation of these products as it does not have control over the installation or end use of the products. Any suspected defects must be reported to NCC X-Calibur in writing within five working days of being detected. NCC X-Calibur Construction Chemistry Inc.

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