



Fosroc Fibrecrete FR

Polypropylene fibres to protect coating concrete in tunnels

Uses

- To reduce the appearance of plastic shrinkage cracks in concrete in general and in tunnel coating concrete in particular.
- To improve the performance of the mechanical properties of the concrete.
- To increase the fire resistance of the concrete.

Advantages

- Improves the resistance of the concrete to abrasion and to impacts, providing greater durability.
- Increases the cohesion of the cement mix and its resistance to freeze-thaw cycles.
- Can be used as an alternative to surface meshing for the control of cracks and fissures.
- Resistant to acids and alkalis.
- Self-destructible bag.

Description

Fibrecrete FR comprises polypropylene fibres of 6 mm long, supplied in 1 Kg bags.

Habitual dosage

The usual dosage of Fibrecrete FR is one or two kilos per cubic metre of concrete.

Excess dosage of Fibrecrete FR may considerably reduce the workability of the concrete.

Properties

Design:	Monofilament fibre
Material:	100% Virgin polypropylene
Colour:	Natural
Fibre length:	6 mm
Diameter:	18 µm
Surface:	Coated for dispersion
Density:	0,91 gm 1-nominal

Softening point (melt point):	160 deg. C
Tenacity CN/tex:	28.0 minimum
Elongation:	>20%
Chloride content:	Nil
Absorption:	Nil
Antioxidants & Stabilizers:	5% maximum
Ignition temperature:	400°C
Decomposition temperature:	300°C

	Number of fibres/kg	Surface area Fibres/kg	Spalling depth	
			Max.	Aver.
Fibrecrete FR	720 million	245 m ²	15 mm	6 mm
Monofilament fibre 32 µm	110 million	133 m ²	60 mm	20 mm

Fibrecrete FR is resistant to the chemical compounds of the cement and to the mixing process.

The grade of polypropylene chip used to produce the polypropylene fibre should have concentrations of cadmium, mercury lead & chromium lower than 100 pm (w/w). Consequently the polymer will comply with the US CONEG legislation limit for heavy metals as well as with the European Directive 94/62/EC of 20.12.94 on packaging and packaging waste.

Instructions for use

Compatibility

Fibrecrete FR is compatible with all types of known ingredients and admixtures for concrete.

Mix

For best results, Fibrecrete FR should be added at the start of the concrete mixing process. If it is added later, an extra 5 minutes of mixing time will be necessary in order to ensure uniform dispersion in the mix. The bag is self-destructible.

Finish

Fibrecrete FR concrete mix should be finished off with manual or mechanical surfacing tools in order to provide the smooth, polished appearance of a fibre-free surface.

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Curing

Using Fibrecrete FR does not alter the usual curing conditions for any type of cement mass.

A Fosroc Euco Concre type curing membrane, damp sackcloth or spray water should be used, particularly in areas which are exposed to air or to high atmospheric temperatures.

Package

Fibrecrete FR is supplied in 1 Kg degradable bags, ready for use.

Storage

Fibrecrete FR has a storage period of 12 months, provided it is kept in a clean, dry place and isolated from the ground.

Precautions

Health and safety

Fibrecrete FR is an entirely inert product, and is not considered toxic or harmful to the environment. No special precautions are required for handling, although the safety measures usually employed for any type of cement mix, such as the use of gloves, goggles and protective clothing, should be envisaged.

For further information, consult the Safety Data Sheet for this product.



Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given by it.

Al Gurg Fosroc LLC

Post Box 657, Dubai
United Arab Emirates

telephone:
(+9714) 2039699

fax:
(+9714) 2859649

email:
aqf@fosroc.com

www.fosroc.com

Registered Office: 215 Community, Street No. 13, Nad Al Hamar Road, Al Ramool Industrial Estate, Rashidiya, Dubai

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