



# Expanfiber

High performance micro polypropylene fiber

## Uses

Expanfiber\* is primarily used as a crack controlling additive for cementitious materials. Typical applications are:

- crack control in ready mix concrete, precast concrete, conventional shotcrete, screeds, rendering mortars, micro-silica concrete
- concrete slabs, pavements, driveways, imprinted concrete
- water retaining structures, marine concrete etc.
- patch repair, thin section walling etc.

## Advantages

- Cost effective - replaces anti crack wire mesh
- User friendly - decreases construction time and labor
- Versatile - Inhibits intrinsic cracking in concrete, improves
- finishing characteristics, concrete durability and acts as a rust proofer.
- Disperses uniformly throughout the mix and does not rust.

## Standards compliance

Expanfiber\* complies with the requirements of ASTM C111.6

## Description

Expanfiber\*, is a high performance micro polypropylene fiber, developed as a crack controlling additive for cementitious materials. It is available as monofilament 12mm in length for concrete and 6mm in length for plaster and mortar. It is used to inhibit the formation of small cracks which can occur through plastic shrinkage, premature drying and early thermal changes, in order to provide utilization of the intrinsic properties of the hardened cementitious material.

Expanfiber\* is based on selected raw materials and manufactured under controlled conditions to give a consistent product.

Expanfiber\* is supplied in two sizes:

- 12mm fiber length is designed for concrete mixes, with aggregate size greater than 5mm
- 6mm fiber length is designed for mortar mixes.

## Specification

Where shown on the contract documents, concrete shall be manufactured using Expanfiber\*, a high performance micro polypropylene fiber. The crack controlling additive shall meet the requirements of ASTM C111.6 and have a tensile strength of minimum 300 N/mm<sup>2</sup>

## Properties

**Form** : Virgin Polypropylene fiber

**Specific gravity** : 0.91 g/cm<sup>3</sup>

**Alkali content** : Nil

**Sulphate content** : Nil

**Air Entrainment** : Air content of concrete will not be significantly increased

**Chloride content** : Nil

**Fiber thickness** : 18 and 30 microns

**Youngs Modulus** : 5500 - 7000 MPa

**Tensile Strength** : 350 N/mm<sup>2</sup>

**Melting Point** : 160°C

## Dosage

The optimum dosage of Expanfiber\* to meet specific requirements should always be determined by trial mixes using the materials and conditions that will be experienced in use.

As a guide to trials, the following dosage levels of Expanfiber\* are recommended.

## Product

**Fiber length** : 12mm  
6mm

**Aggregate size, max** : 32mm

### Dosage

**12mm / 6mm fibers** : 0.60 / 0.91 Kg/m<sup>3</sup>

**Typical areas of application** : Ready Mix Concrete

**Surface area** : 0.6 mm – 200m<sup>2</sup>/Kg  
0.91mm – 132m<sup>2</sup>/Kg

## Use at other dosages

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

## Effects of overdosing

Overdosing of Expanfiber\* will generally produce a reduction in workability and an increase in the cohesiveness of the mix.



CONSTRUCTION CHEMISTRY

## Technical support

Fospak offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

## Estimating

### Supply

**Expansfiber\* :** 0.60 kg and 0.91 kg bags  
**(12mm & 6mm fibers)**

All bags are supplied in cardboard box containers.

## Storage

Should be stored in warehouse conditions below 35°C.

## Additional Information

Fospak manufactures a wide range of complementary products which include :

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialized flooring materials

Fospak additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fospak's 'Systematic Approach' to concrete repair features the following:

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fospak office - as below.

\* Denotes the trademark registered

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