

# MAPEFIBRE NS18

Polypropylene microfibres for concrete



## DESCRIPTION OF THE PRODUCT

**Mapefibre NS18** are 18 mm-long mono-filament, polypropylene microfibres. When added to concrete, **Mapefibre NS18** improve the resistance of concrete to cracks caused by plastic shrinkage. The special “mono-filament” formation makes the dispersion and distribution within the concrete mix easier.

## WHERE TO USE

**Mapefibre NS18** are recommended to improve the resistance of concrete to cracks caused by plastic shrinkage as well as the fire resistance properties and the durability of concrete. Moreover, the homogeneity of concrete during the pouring phase is enhanced:

- production of concrete used for industrial floors, airport forecourts and multi-storey car-parks;
- production of precast reinforced concrete panels and pipes and concrete elements;
- production of fire-resistant concrete;
- production of pervious concrete.

## RECOMMENDATIONS

The use of **Mapefibre NS18** does not offer any advantage from a structural point of view, and may not be considered as an alternative solution to metal reinforcement.

It is also necessary to ensure that the design of the concrete mix is correct to prevent cracking phenomenon, and that curing of the concrete is carried out accordingly to avoid sudden evaporation of the water from the surface of the cast concrete.

## COMPATIBILITY WITH OTHER PRODUCTS

**Mapefibre NS18** are compatible with other admixtures used in the production of high-quality concrete, and especially with:

- acrylic-based super-plasticising agents from the **Dynamon** range, for an improved mix design, consistency and maintenance of workability;
- curing surface films from the **Mapecure** range, for correct curing of the concrete;
- **Mapecrete System**, innovative technology used in the production of concrete with volumetric stability;
- **Mapeform Eco** and **DMA** stripping compounds, used for stripping concrete from moulds.

## HOW TO USE

Add **Mapefibre NS18** in the cement mixer together with all the other ingredients (cement, aggregates, water and admixtures). Mix until a homogenous blend is obtained.



Pouring concrete with the addition of Mapefibre NS18 to counter plastic shrinkage

## CONSUMPTION

The normal dosage of **Mapefibre NS18** is 600 g/m<sup>3</sup>, usually added to the concrete. Higher dosage can be used for special applications such as shotcrete or fire resistance.

## PACKAGING

**Mapefibre NS18** are supplied in boxes with 30 degradable/pulpable paper bags, 600 grams each.

## STORAGE

**Mapefibre NS18** may be stored for 36 months in their sealed bags. Protect from direct sunlight and rain.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Mapefibre NS18** is an article and referring to the current European regulations (Reg. 1906/2007/EC - REACH) does not require the preparation of the Safety Data sheet.

Where applying the product, it is recommended to wear gloves and goggles and follow the safety requirements of the workplace.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Length of fibres (mm):	18
Diameter (µm):	32 ± 1.6
Density (g/cm <sup>3</sup> ):	0.91
Flame point:	+400°C
Melting point:	+160°C-170°C
Water absorption:	none
Resistance to alkalis, acids and salts:	high
Tensile strength (N/mm <sup>2</sup> ):	400-500



Example of industrial flooring admixed with Mapefibre NS18

## WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.com](http://www.mapei.com)

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