

MAPEFIBRE AT 06 FP

Polypropylene fibers for concrete

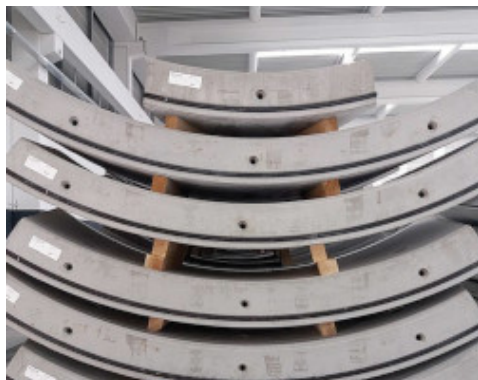


DESCRIPTION

Mapefibre AT 06 FP is a synthetic fibre made of monofilament polypropylene material for reinforcement of concrete. **Mapefibre AT 06 FP** can be used for reduced plastic shrinkage and the fibre can also be used to produce fire-resistant concrete with reduced risk of explosion (spalling) of concrete in case of fire.

WHERE TO USE

- Prevent shrinkage in ready-mix concrete and precast concrete.
- Fire-resistant concrete structures.
- Precast concrete segments for final lining of tunnels, etc.



Example of concrete precast segments for tunnels excavated using TBM



Mapefibre AT 06 FP monofilament microfibres



Example of final lining in a tunnel created using conventional tunnelling method

TECHNICAL CHARACTERISTICS

The nature and the geometrical shape of **Mapefibre AT 06 FP** will effect workability and rheology of concrete, due its great surface area.

Mapefibre AT 06 FP has good resistant to aggressive natural agents, such as chlorides and alkalies. The use of **Mapefibre AT 06 FP** is also particularly suitable for producing fire resistant concrete, such as either the shotcrete lining or the final lining of tunnels, especially when made of precast concrete elements. The polypropylene fibres have a melting point of +160°C. In case of a fire and shock heating of concrete the fibres will melt and form micro canals in the matrix of the concrete. When concrete is shock heated, moisture and humidity inside the concrete will form a great vapour pressure which can lead to explosion (spalling). The micro canals which are left inside the matrix of concrete after the **Mapefibre**

AT 06 FP has melted will ensure that most vapour can escape from concrete without increasing the pressure to a level where risk of spalling can occur. The concrete is therefore acting as a passive fire protection.

PACKAGING

The fibers **Mapefibre AT 06 FP** are supplied in bags of 1 kg and big bags of 200 kg.

DOSAGE

The fibers **Mapefibre AT 06 FP** may be added to concrete at a dosage of 0.5 - 2.5 kg/m³, depending on the required performance.

STORAGE

Mapefibre AT 06 FP can be stored for 12 months in original sealed packaging, protected from rain and direct sunlight.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefibre AT 06 FP is an article and referring to the current European regulations (Reg. 1906/2007/CE - REACH) does not require the preparation of the Safety Data Sheet. During use it is recommended to wear protective gloves and goggles and follow the safety requirements of the workplace.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

Conformity with: CE marking according to EN 14889-2

PRODUCT IDENTITY

Colour:	white
Length (EN 14889-2) (mm):	6 ± 1.5
Equivalent diameter (µm):	18 ± 0.9
Shape:	monofilament
Melting point (ISO 11357-3) (°C):	approx. 160
Density (g/cm ³):	0.91
Tensile strength (EN 10002-1) (MPa):	> 300
Elongation (%):	15-20
Modulus of elasticity (EN 10002-1) (N/mm ²):	approx. 4000
Glass transition temperature:	-18°C
Flash point:	> 320°C

Water absorption (%):	< 0.01
Resistance to alkalis and acids:	yes

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 web site www.mapei.no

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