

PP-fiber M6

Polypropylene microfibre



PRODUCT DESCRIPTION

PP-fiber M6 is a monofilament polypropylene fibre with optimal mechanical, physical and chemical properties for use in concrete and mortar.

QUALITIES

- Large surface area per amount of fibre (615 m²/kg)
- High adhesion level
- Not visible on surface
- No healthy risk
- Chemically inert and durable
- Easy to mix
- Easy to pump, without abrasion to pipes and hoses
- 100 % alkali resistant
- Resistant to acids and solvents

INCREASED FIRE RESISTANCE

During a fire, concrete structures can collapse due to water pressure arising from the evaporation of water entrapped in concrete while temperature rapidly increases rapidly. In this case the water vapour cannot escape from the concrete fast enough and the concrete can spall off pieces and cracks may occur. The lost water from hydrated cement can also cause rapid decrease in concrete strength. When **PP-fiber M6** is added to concrete, the polypropylene material in the fibres will melt at 160°C and create many micro canals in the concrete's heat affected zone. This will allow most of the water vapour to escape and the spalling and cracking effect will be significantly reduced.

CONCRETE WITH PP-FIBER M6

- Forms micro canals and not damaging cracks during

fire – the increased water pressure is allowed to escape through the micro canals.

- Reduced risk of spalling.
- Reduced concrete damage to an average depth of 2 cm.
- During fire, the reinforcement will be protected inside the concrete.
- Reduced costs from repair of concrete after fire.
- Reduced amount of micro cracks from plastic shrinkage forces.
- Reduced risk of separation/bleeding.
- Increased concrete density.
- Increased concrete durability regarding temperature changes.
- Increased resistance towards physical damage, reduces the damage of corners and edges.
- Decreased damage during de-moulding and during transport of elements.
- Faster and better construction, by increased cohesion in concrete.

ADDITION OF PP-FIBER M6

- **PP-fiber M6** can be added to dry materials or to the fresh concrete in a concrete mixer. It can also be added in concrete trucks.
- Concrete with **PP-fiber M6** can be pumped and sprayed.
- Concrete with **PP-fiber M6** will have a reduction in slump. Therefore it's recommended to combine the **PP-fiber M6** with use of superplasticizers (**Dynamon**-products).

PP-fiber M6

- Mixing time:
 - In main mixer, normal mixing time is sufficient.
 - In concrete truck: mixing time increased with 1 minute per m³ at highest rotation speed.

DOSAGE

Normal dosage:
1 paper bag (1 kg) for each m³
For extra fire protection: 2 kg
Number of paper bags per box: 20
Number of boxes on pallet: 30

PP-fiber M6 is packed in water soluble paper bags.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

PP-fiber M6 is an article and referring to the current European regulations (Reg. 1906/2007/CE - REACH) does not require the preparation of the material safety data sheet. During use it is recommended to wear gloves and goggles and follow the safety requirements of the workplace.

PRODUCT FOR PROFESSIONAL USE.

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

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.no ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.no

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Material type:	polypropylene
Weight per paper bag (kg):	1.0
Length (mm):	6 ± 1
Diameter (µm):	18 ± 3
Density (g/cm ³):	0.91
Number of fibres (mill/kg):	725
E-modulus (N/mm ²):	3500 - 3900
Tensile strength (N/mm ²):	300
Chemical reaction:	inert
Melting point:	160 - 165°C
Colour:	white
Package:	paper bags of 1.0 kg, 20 bags in one box paper bags are water soluble
Storage:	to be stored dry



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