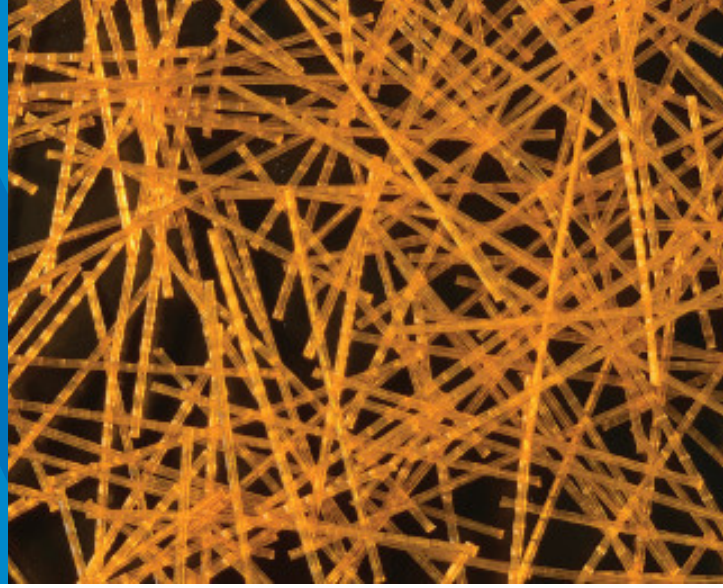


MAPEFIBRE IT 39 NV

Structural polypropylene fibres for high ductility
concrete and shotcrete

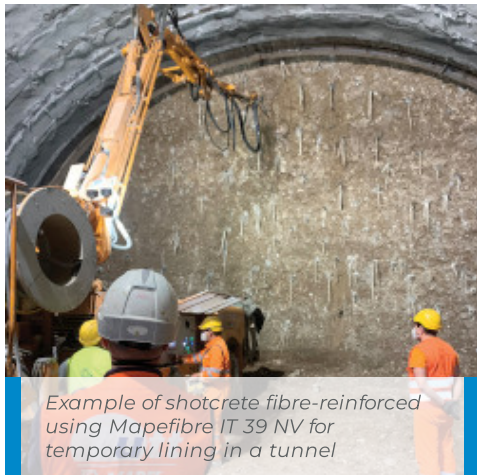


DESCRIPTION

Mapefibre IT 39 NV are structural polypropylene fibres for the production of high ductility fibre-reinforced concrete and shotcrete.

WHERE TO USE

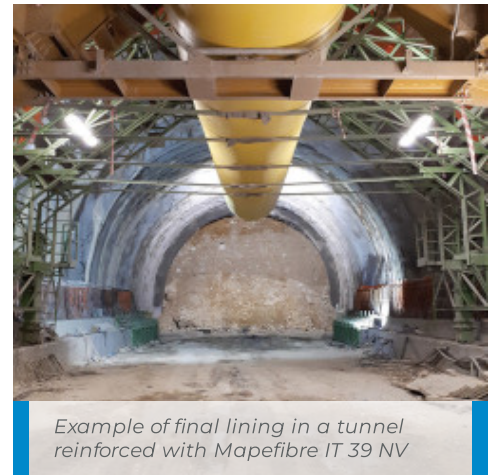
- Shotcrete for initial and/or final linings in tunnels and structures below ground level.
- Pre-cast concrete elements for final linings in tunnels, wells, etc.



Example of shotcrete fibre-reinforced using Mapefibre IT 39 NV for temporary lining in a tunnel



Water-soluble pucks of Mapefibre IT 39 NV



Example of final lining in a tunnel reinforced with Mapefibre IT 39 NV

TECHNICAL CHARACTERISTICS

Mapefibre IT 39 NV fibres are characterized by a 60 aspect ratio and special wavy shape: this helps obtain a high level of adhesion in the cementitious paste, thereby increasing the ductility of concrete in the post-failure phase. The type and special geometry of the fibres help maintain the workability of concrete compared with concrete mixes without fibres without modifying the rheological properties of the mix design. As well as these important advantages, the special shape of Mapefibre IT 39 NV helps prevent them floating to the surface, particularly on large areas. The exclusive use of virgin raw materials makes Mapefibre IT 39 NV fibres highly resistant to the attack from external agents, such as carbon dioxide and products containing chlorine. Mapefibre IT 39 NV polypropylene fibres are resistant to

alkaline environments, which means they are compatible with the concrete mixes they are added to and, therefore, highly durable over the years.

Adding **Mapefibre IT 39 NV** fibres can reduce the damages to concrete (both shotcrete and precast elements) caused by a fire. In the event of fire, the polypropylene fibres in the cement matrix help reduce spalling.

PACKAGING

Mapefibre IT 39 NV fibres are supplied in 5 kg and 6 kg plastic bags with water-soluble pucks. Other sizes are also available upon request.

CONSUMPTION

Add **Mapefibre IT 39 NV** fibres to the concrete at a rate of 1-5 kg per cubic metre, depending on the performance characteristics required.

STORAGE

Mapefibre IT 39 NV fibres may be stored for 24 months in their original packaging away from rain and direct sunlight.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefibre IT 39 NV 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.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Appearance:	monofilaments
Colour:	orange/milk white
Length (EN 14889-2) (mm):	55 ± 5%
Equivalent diameter (EN 14889-2) (mm):	0.91 ± 5%
Shape:	wavy
Melting point (ISO 11357-3) (°C):	160 ± 5
Density (kg/dm ³):	1
Tensile strength (EN 10002-1) (MPa):	560
Modulus of elasticity (EN 10002-1) (GPa):	3.9
Water absorption (%):	< 0.01
Resistance to acids/alkalis:	total

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

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.com.

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