

## Ha-Be PP-Fibre 18 µm FP

Item No 4505/D

**Polypropylene fibre acc. to EN 14889-2:2006-11 for optimising concrete's fire resistance**

Tested acc. to ÖBV guideline "Increased structural fire protection for underground concrete traffic structures"

### FIELDS OF APPLICATION

Ha-Be PP-Fibre 18 µm FP is an ultra-fine, synthetic fibre designed for reducing the crack formation in cementitious construction materials by improving their resistance to early age shrinkage cracking.

Additionally, Ha-Be PP-Fibre 18 µm FP improves the fire resistance of concrete. At high rising temperatures, the fibre melts and forms micro pores in the concrete that allow the vaporised water pressure to release. Thus, concrete spalling can be reduced or retarded.

#### Application range of Ha-Be PP-Fibre 18 µm FP:

- general building construction
- concrete applied in underground constructions (shotcrete and inner tunnel shells)
- industrial floors
- agricultural buildings
- prefabrication, precast and MCP
- concrete traffic areas
- Foundations and floor slabs
- Screeds

#### Ha-Be PP-Fibre 18 µm FP enables:

- Improvement of fire resistance
- Reduction of shrinkage cracks
- Optimization of green strength
- Improved resistance to impact stress and wear
- High durability of concrete

### DOSAGE

General dosage recommendation:

0.6 – 2.0 kg/m<sup>3</sup>

Dosage recommendation for concrete with high fire resistance:

1.4 – 2.0 kg/m<sup>3</sup>

Polypropylene fibres may affect the consistence and air void content of unset concrete. Before using the fibre, suitability tests are required.

### WORKING PRINCIPLE

Having good dispersing properties, Ha-Be PP-Fibre 18 µm FP disperses homogeneously and three-dimensionally throughout the fresh concrete.

The degree of fibre finesse and its frequency attain a homogeneous stress spread in concrete and minimise shrinkage and stress cracks significantly.

Ha-Be PP-Fibre 18 µm FP improves concrete's bending tension stress, its impact strength and increases its ductility.

### TECHNICAL DATA

Substance	polypropylene
Colour	colourless to white
Available in the following lengths	3, 6, 12, 18 mm
Diameter	18 µm
Form	circular
Bulk density	0.91 g/cm <sup>3</sup>
Melting point	~ 160 °C
Tensile strength	~ 300 N/mm <sup>2</sup>
Elastic modulus	~ 2500 N/mm <sup>2</sup>
Ignition temperature	~ 310 °C
Storage conditions	Store dry. Protect from damp.

## PROCESSING INDICATIONS

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The mixing time must comply with the regulations defined in EN 206-1.

## COMPATIBILITY

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Ha-Be PP-Fibre 18 µm FP is suitable for concrete designs containing OPC or SRC cement, micro-silica or silica fume, fly ash (PFA) and ground granulated blast furnace slag (GGBS).

Polypropylene fibres may affect the consistence and air void content of unset concrete. Before using the fibre suitability tests are required.

## PACKAGING

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Trading units upon request.  
The fibre can be delivered in bags or in big bags.

## HEALTH & SAFETY

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This product is not classified as hazardous according to the CLP regulations. See safety data sheet for further information.

## REMARKS

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This information describes the application- and processing possibilities of a product and its operation principles under regular conditions. Having no influence on the further application and processing, especially in conjunction with other construction materials, the given indication are neither a warranty in respect of the product's properties or its fitness for a particular purpose nor a full instruction of use. This information, any other recommendation or verbal advice are not binding and do not infer to any liability or legal demand.

Due to continuous further development, the most recent Technical Data Sheet is valid and will be supplied on request. All orders are accepted subject to our current general terms and conditions.

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**SUITABILITY- AND PRE-TESTS ARE NECESSARY BEFORE APPLYING THE FIBRE!**