

PRODUCT DATA SHEET

Sika® Fibre

POLYPROPYLENE FIBRE FOR CONCRETE AND MORTAR

PRODUCT DESCRIPTION

Sika Fibre is based on high quality monofilament micro polypropylene fibres. It is designed to minimize and control plastic shrinkage cracks by increasing the strain capacity of fresh concrete. Sika Fibre is available in premeasured, ready to use degradable bags for 1 m³ of concrete.

USES

Sika Fibre is used in the following applications in fresh (green) concrete to reduce the incidence of shrinkage cracking.

- Pavements
- Precast concrete products
- Industrial floors, slabs
- Wet and dry system sprayed concrete production
- Airport apron and car park slabs
- Concrete which is subjected to impact load
- Screeds and plasters etc.

CHARACTERISTICS / ADVANTAGES

Due to their fineness and special surface treatment, Sika Fibre can be easily dispersed in the concrete or mortar and create a dense matrix that leads to:

- Improved cohesiveness of the fresh concrete
- Reduced plastic shrinkage cracks
- Reduced bleeding
- Increased abrasion properties
- Improved freezing and thawing resistance
- When used in shotcrete, it reduces rebound waste
- Increased resistance to impact loads
- Reduced concrete permeability
- Resistance to slab curling
- Improved fire damage properties.

PRODUCT DATA

FORM

COLOURS

White

PACKAGING

Soluble 600g bags (30 bags per box)

STORAGE**STORAGE CONDITIONS / SHELF-LIFE**

3 years (36 months) if stored in original unopened and undamaged packaging in cool, dry and clean condition.

TECHNICAL DATA**CHEMICAL BASE**

100% polypropylene fibre

SPECIFIC GRAVITY

0.91g / cm³

FIBRE LENGTH

12mm

FIBRE DIAMETER

18 micron-nominal

WATER ABSORPTION

Nil

MELT POINT

160°C

IGNITION POINT

365°C

THERMAL CONDUCTIVITY

Low

ELECTRICAL CONDUCTIVITY

Low

SPECIFIC SURFACE AREA OF FIBRE

250m² / kg

ACID RESISTANCE

High

ALKALI RESISTANCE

100%

TENSILE STRENGTH

300 - 400 N / mm²

MODULE ELASTICITY

~ 4000 N / mm²

System Information

APPLICATION DETAILS**CONSUMPTION / DOSAGE**

1 bag (600g) measured for 1 m³ of concrete or mortar

COMPATIBILITY

Sika Fibre can be used with Sika admixtures. Some of them are listed below:

- Sika Ae-200
- Sika Rapid
- Sika FerroGard 901
- Sika Pump
- Sika Retarder
- Sika Accelerators
- ViscoCrete products
- SikaPlast
- Plastiment

Always conduct trials before combining products in specific mixes.

APPLICATION INSTRUCTIONS**DISPENSING**

Sika Fibre should be ideally added at the batching plant. In case of site mixing, additional mixing time of 3 to 5 minutes (70 cycles) is necessary to ensure the uniform fibre dispersion throughout the mix. If mixing is at the batching plant, fibre should be added first along with half of the mixing water. After all the other ingredients have been added, including the remaining mixing water the concrete or mortar should be mixed for a further 3 minutes at full speed to ensure uniform fibre dispersion.

APPLICATION METHOD / TOOL

When using Sika Fibre, the standard procedures for placing, finishing and curing concrete are not changed, the standard rules of good concreting practice, concerning production as well as placing, are to be followed. Refer to relevant standards. Fresh concrete must be cured properly.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.

VALUE BASE

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

HEALTH AND SAFETY INFORMATION**PROTECTIVE MEASURES**

- To avoid rare allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work
- Local regulations as well as health and safety advice on packaging labels must be observed
- For further information refer to the Sika Safety Data Sheet which is available on request
- If in doubt always follow the directions given on the pack or label.

IMPORTANT NOTES

- Sika Fibre is not intended to replace reinforcement steel
- Sika Fibre is not a structural fibre and therefore should not be used as a substitute for structural steel or steel fibre in structural applications. Proper reinforcement and joint spacing should be observed
- Concrete fibre in general can exhibit lower slumps and the use of a superplasticiser such as ViscoCrete is recommended
- Residues of material must be removed according to local regulations
- Fully cured material can be disposed of as household waste under agreement with the responsible local authorities
- Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

FOR MORE SIKA® FIBRE INFORMATION:



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