BUILDING TRUST

PRODUCT DATA SHEET

SikaFiber®-142

(formerly MFiber 142)

POLYPROPYLENE MACRO FIBRES FOR CONCRETE AND SHOTCRETE

DESCRIPTION

SikaFiber®-142 is a fiber extruded from polypropylene. It is formed into an embossed fiber that can be used in concrete mixes for both sprayed and cast in-situ applications. The inclusion of fibers in a concrete mix will contribute to improving the durability of concrete by increased crack propagation resistance and by its energy absorption characteristics. The fibers will disperse uniformly throughout the concrete mix and effectively act as an anchoring mechanism within the cement matrix thereby improving the toughness and ductility of the material.
SikaFiber®-142 can maximize concrete service life by providing superior resistance to attack from damaging environmental elements such as water, chlorides, and corrosive environments such as sewerage conduits and/or saline water.

USES

- Wet shotcrete applications in tunneling or mining applications
- Any subsurface construction
- Any structure where impact toughness shall be increased

CHARACTERISTICS / ADVANTAGES

- Easy to dose either at the batch plant or on site concrete mixer truck prior to application
- Minor impact on flow & slump properties of fresh concrete
- High resistance to acid/alkalis attack suitable for use in wet underground conditions and subsurface constructions exposed to damp conditions
- Reduces construction time compared to a solution with conventional reinforcement

APPROVALS / STANDARDS

SikaFiber®-142 complies with EN 14889-2 Class II and ASTM C1116 / C1116M.

PRODUCT INFORMATION

Chemical Base	Polypropylene
Packaging	6 kg water soluble bags
Appearance / Colour	Straight colourless embossed fibres
Shelf Life	48 months from date of production
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions away from humidity and direct sunlight.
Density	~910 kg/m³

Length	~56 mm
Melting Point	160–165°C
Cross section	Rectangular
Diameter	~1.0 mm

TECHNICAL INFORMATION

Tensile Strength	~500 N/mm² (MPa)	(EN 14889-2)
Tensile Stiffness	~10,000 MPa (Young's modulus)	

BASIS OF PRODUCT DATA

- 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.
- Internal Reference - Version: MBS_CC-UAE/ Fiber_142_08_21/v1/10_22

LIMITATIONS

- The addition of fibers to a concrete might decrease its consistency. This should not be compensated by adding water to the mix. The recommendation is to optimize the mix either by adapting the mix design or by adding a superplasticizer. The mechanical performance of fibers is influenced by the concrete mix design and cementitious materials used. In order to evaluate properly preliminary tests under practical conditions with regard to mixing, placing and curing are advisable.
- Partial or total replacement of steel reinforcement by fibres must be designed by an appropriately qualified Engineer. Contact Sika Technical Service for additional information.
- It is recommended that where automated fiber dosing systems are utilized, that they be checked for suitability and calibrated accordingly.

ECOLOGY, HEALTH AND SAFETY

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

APPLICATION INSTRUCTIONS

Add SikaFiber®-142 to the concrete mixer after water and admixtures. After addition of the fibers mix for at least 2-3 minutes to ensure even distribution of fibers within the concrete mix.

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.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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