

PRODUCT DATA SHEET

SikaFiber®-154

Polypropylene macro fiber for use in concrete

DESCRIPTION

Polypropylene macro fiber for use in concrete

USES

SikaFiber®-154 is used for structural purposes in concrete, mortar and grout.

FEATURES

- Improves the ductility of concrete.
- Transfers tensile stresses and bridges cracks in cementitious applications.
- Decreases crack propensity due to constrained deformations induced by drying shrinkage and temperature gradients and allows to partially or fully substitute related mesh reinforcement.
- Excellent resistance in alkaline and acidic environment.
- Provides rust free reinforcing solutions.
- Easy to dose with limited impact on workability.
- Safe to handle.
- No negative impact regarding machinery wear.

PRODUCT INFORMATION

Fibre type	Polypropylene
Packaging	5,0 kg water soluble bundles in carton boxes For other packaging options please contact us
Appearance and colour	Colourless
Shelf life	The shelf life is 48 months, if stored in original packaging
Storage conditions	<p>Store in original packaging between +5 °C and +30 °C in a closed room protected from humidity (water soluble bundles) and direct sun light. In addition, fibres should be protected against fire.</p> <p>The disposal of the product and its packaging is the responsibility of the end user. Please take into account requirements according to local legislation.</p>

Density	0.91 kg/m ³
Length	Fibre length - 65mm (Aspect ratio - 68)
Melting point	ca. 150 - 170°C
Ignition temperature	ca. 350°C
Cross section	Fibre sectional shape - Irregular Fibre longitudinal shape - Straight Fibre surface - Embossed
Diameter	0.95mm
Tensile strength	(acc. EN 14889-2) - 440 MPa
Modulus of elasticity in tension	(acc. EN 14889-2) - 4500 MPa Young's modulus >7000 MPa

APPLICATION INFORMATION

Recommended dosage	2.5 – 8.0 kg/m³ Higher dosages are generally possible but substantial re-design of a given concrete mix design is required.
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DOSING AND MIXING

Appropriate fibre dispersion can be achieved either by adding the fibres to the aggregate belt or by adding the fibres via a sufficient dosing equipment directly into the mixer or ready-mix truck to the already mixed concrete. While processing attention shall be paid that fibres do not separate or agglomerate (e.g. during discharge to mixer), regarding the latter one special care should be taken that fibres are added to zones with sufficient shear. Our recommendation is to continue mixing for minimum 90-120 seconds after the addition of fibres. Very high fibre dosages may require significantly higher mixing time in order to achieve sufficient fibre dispersion.

ADVICE

The addition of fibres 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 fibres 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. For any further advice, please contact your local technical sales contact.

COMBINATION

Because of its inert nature, this fibre is combinable with all products of the Sika product range. As generally recommended also for combination of this fiber with SikaControl AER products, initial and identity testing should be performed.

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.

ECOLOGY, HEALTH AND SAFETY

If treated according to the purpose of use no harm or injury to be expected. Common rules of occupational health and safety should be applied while handling this fiber. Consult the Safety Data Sheet (SDS) for detailed information.

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.

Sika Egypt

1st Industrial Zone (A)
Section #10, Block 13035
El Obour City, Egypt
TEL: +202 44810580
FAX: +202 44810459
egy.sika.com



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