

PRODUCT DATA SHEET

Enduro Fibre HPP 50mm

MACRO-SYNTHETIC FIBRES FOR CONCRETE

PRODUCT DESCRIPTION

Enduro Fibre HPP 50mm macro-synthetic fibre developed from the innovative HPP (High Performance Polymer) technology which was pioneered by Fiber-mesh. Enduro Fibre HPP 50mm macro-synthetic fibre is specifically engineered and manufactured for use as concrete reinforcement and complies to European Standard EN 14889-2:2006 Polymer Fibres - Definitions, specifications and conformity. Enduro Fibre HPP 50mm has been specifically designed to satisfy the demanding requirements of modern day sprayed concrete reinforcement and equipment.

USES

- Ground Support Slabs
- Precast
- External Pavements
- Overlays/ Toppings
- Roads
- Sea Defence
- Airport Pavements

CHARACTERISTICS / ADVANTAGES

- Geometrically engineered to resist matrix pullout
- Increases flexural toughness
- Reduces rebound
- Increases cohesion and reduces segregation
- Increases impact and shatter resistance
- Non-magnetic
- Rustproof
- Chemically inert and alkali proof
- Reduced wear on concrete pumps and hoses
- Safe and easy to handle
- Simplified logistics
- Economical alternative to steel wire mesh and/or steel fibres Non-magnetic
- Alkali proof
- Requires no minimum amount of concrete cover
- Always positioned in compliance with codes
- Safe and easier to use than traditional reinforce-

ment.

- Saves time & hassle
- Packaged for easy dosing into the concrete mix

APPROVALS / STANDARDS

- Complies with European Standard EN 14889-2: 2006 Fibres for Concrete Part 2: Class II and carries CE marking
- Complies with ASTM C 1116/C1116M Type III Fibre Reinforced Concrete

Reference Documents

- European Standard EN 14889-2: 2006 Fibres for Concrete
- ASTM C1116/C1116M Standard Specification for Fibre-Reinforced Concrete.
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete.
- ASTM C 1609 /C 1609M Standard Test Method for Flexural Performance of Fibre-Reinforced Concrete (Using Beam With Third-Point Loading).
- Concrete Society (UK) Technical Report 65 Guidance on the use of Macro-synthetic Fibre Reinforced Concrete
- Concrete Society (UK) Technical Report 66 External In-situ Concrete Paving

PRODUCT INFORMATION

Chemical Base	Macro monofilament
Packaging	Enduro Fibre HPP 50mm macro-synthetic fibres are collated in water soluble wrapped bundles/pucks to aid rapid dispersion and mixing. The fibre bundles are packaged in 4kg soluble bags and 10 kg boxes. Enduro Fibre HPP 50mm fibres are packaged, shrink wrapped and palletised for protection during shipping.
Shelf Life	24 months from date of production if stored properly in undamaged, unopened, original sealed packaging.
Storage Conditions	Do not store in direct sunlight.
Dimensions	Fibre Length: 50mm
Melting Point	164°C (328°F)
Ignition Temperature	550°C (1022°F)

TECHNICAL INFORMATION

Specific Advice	Safety:	No special handling is required with Enduro Fibre HPP 50mm macrosynthetic fibres. Full Safety Data Sheets are available upon request.
	Absorption	Nil
	Electrical Conductivity:	Low
	Acid & Salt Resistance:	High
	Specific Gravity	0.91
	Thermal Conductivity:	Low
Resistance to Alkalinity	Alkali Proof	

APPLICATION INFORMATION

Recommended Dosage	The dosage rate for Enduro Fibre HPP 50mm macro-synthetic fibres will vary depending on the application, mix design and the toughness requirements of each particular project. Typically, Enduro Fibre HPP 50mm macro-synthetic fibre dosage will be in the range of 2 kg to 9 kg per cubic metre of concrete. When used in conjunction with Fibermesh 150 fibres, the dosage rate and the performance of the concrete can be optimised economically. Sika technical staff can offer advice on dosage rates once performance requirements have been established by the project designer/engineer.
Compatibility	Enduro Fibre HPP 50mm fibres are compatible with all concrete admixtures and performance enhancing chemicals, but require no admixtures to work.

APPLICATION INSTRUCTIONS

Mixing

The specified dosage per cubic metre should be added to the mixer after batching the other concrete materials. After the addition of the fibres, the concrete should be mixed for sufficient time (minimum 5 minutes at full mixing speed) to ensure uniform distribution of fibres throughout the concrete.

Placing

Enduro Fibre HPP 50mm macro-reinforced concrete can be pumped, sprayed or placed using conventional equipment as with other fibrous concrete.

Finishing

Conventional techniques and equipment can be used when finishing Enduro Fibre HPP 50mm fibre concrete.

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.

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.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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

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Product Data Sheet

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