

PRODUCT DATA SHEET

Fibermesh-150 e3

MICRO-SYNTHETIC FIBRES FOR CONCRETE

PRODUCT DESCRIPTION

Fibermesh-150 e3 micro-reinforcement fibres for concrete are 100 percent virgin homopolymer polypropylene graded monofilament (also described as multifilament) fibres, containing no reprocessed olefin materials. Fibermesh-150 e3 fibres are European Standard EN 14889-2:2006 compliant and have been specifically engineered and manufactured in our ISO 9001:2008 certified facility for use as concrete reinforcement at the recommended dosage rate of 0.9 kg per cubic metre (0.1% by volume) for effective performance.

e3 Technology

Just as graded aggregates enhance concrete, Fibermesh® 150e3 with e3 technology is a blend of graded fibres designed to enhance the distribution and performance of fibre reinforcement. Each package of Fibermesh® 150e3 fibres is engineered in three ways - by length, thickness and mix ratio. The result is superior combinations of crack control and overall concrete performance.

USES

- Ground supported slabs
- Precast
- External Roads & pavements
- Overlays & toppings
- Driveways
- Tanks and pools
- Sprayed concrete
- Walls

CHARACTERISTICS / ADVANTAGES

- Inhibits and controls the formation of intrinsic cracking in concrete
- Increases cohesion and reduces segregation
- Reduces settlement and bleeding
- Reduces plastic shrinkage and settlement cracking
- Increases impact and shatter resistance
- Reinforces against abrasion
- Reduces freeze/thaw damage

- Provides improved durability
- Alternative system to traditional reinforcement when used for secondary crack control) reinforcing in concrete
- Non-magnetic
- Rustproof
- Alkali proof
- Requires no minimum amount of concrete cover
- Always positioned in compliance with codes
- Safe and easier to use than traditional reinforcement
- Reduces construction time

APPROVALS / STANDARDS

- Complies with European Standard EN 14889-2:2006 Fibres for Concrete Part 2: Class 1a and carries CE marking
- ISO 9001:2008 Quality Assured Facility
- Complies with ASTM C 1116 Type III 4.1.3

Reference Documents

- European Standard EN 14889-2: 2006 Fibres for Concrete
- Concrete Society (UK) Technical Report 34 Concrete Industrial Floors
- Concrete Society (UK) Technical Report 22 Non-Structural cracks in concrete
- Fibermesh Guidance notes for Fibermesh Reinforced concrete ground supported slabs.

PRODUCT INFORMATION

Packaging	Fibermesh-150 e3 fibres are available in standard 0.9 kg degradable paper bags, which are designed to be placed directly into the concrete mixer without opening. Fibermesh-150 e3 fibres are packaged, packed into cartons, shrink wrapped and palletized for protection during shipping.
Shelf Life	24 months from date of production
Storage Conditions	The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.
Dimensions	Fibre Length : Graded (also available in single cut lengths 6mm-19mm)
Melting Point	162°C
Ignition Temperature	593°C

TECHNICAL INFORMATION

Specific Advice	Type	Monofilament
	Absorption	Nil
	Specific Gravity	0.91
	Electrical Conductivity	Low
	Acid and Salt Resistance	High
	Thermal Conductivity	Low
	Safety	No special handling is required with Fibermesh-150 e3 fibres. Full Safety Data Sheets are available on request.
Resistance to Alkalinity	Alkali proof	

APPLICATION INFORMATION

Recommended Dosage	The recommended dosage rate for Fibermesh-150 e3 fibres, to achieve effective performance, is 0.9 kg per cubic metre. For special performance, please contact your local Sika representative for recommendations regarding increased application rates.
Compatibility	Fibermesh-150 e3 fibres are compatible with all concrete admixtures and performance enhancing chemicals, but requires no admixtures to work.

APPLICATION INSTRUCTIONS

Mixing

Fibermesh-150 e3 micro-reinforcement is a mechanical, not chemical, process. The addition of Fibermesh-150 e3 multifilament (also termed as monofilament) fibres do not require any additional water or other mix design changes at normal rates. Fibermesh-150 e3 fibres can be added to the mixer before, during or 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

Fibermesh-150 e3 micro-reinforced concrete can be pumped, sprayed or placed using conventional equipment. Hand or vibratory screeds and laser screeds can be used with Fibermesh-150 e3 micro-reinforced concrete.

Finishing

Fibermesh-150 e3 micro-reinforced concrete can be

finished by any finishing technique. Exposed aggregate, broomed and tined surfaces are no problem.

LIMITATIONS

- Fibermesh-150 e3 fibres should not be used to replace structural, load-bearing reinforcement
- Fibermesh-150 e3 fibres should not be used as a means of using thinner concrete sections than original design
- Fibermesh-150 e3 fibres should not be used to increase joint spacing past those dimensions suggested for unreinforced concrete

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 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.

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