



ADVANTAGES OF ENDURO HPP45 FIBRES:

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



ENDURO HPP45 MACRO-SYNTHETIC FIBRE

ENDURO HPP45 macro-synthetic fibre developed from the innovative HPP (High Performance Polymer) technology which was pioneered by Fibermesh. ENDURO HPP45 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® HPP45 has been specifically designed to satisfy the demanding requirements of modern day sprayed concrete reinforcement and equipment.

FEATURES & BENEFITS

- 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

PRIMARY APPLICATIONS

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

COMPLIANCE

- 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

CHEMICAL AND PHYSICAL PROPERTIES

Absorption	Nil	Ignition Point	550 °C (1022 °F)
Acid & Salt Resistance	High	Melt Point	164 °C (328 °F)
Alkali Resistance	Alkali Proof	Specific Gravity	0.91
Electrical Conductivity	Low	Thermal Conductivity	Low
Fibre Length	45 mm	Type	Macro monofilament

WE ARE THE CONCRETE FIBRE EXPERTS

WWW.FIBERMESH.AT



PRODUCT USE

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 HPP45 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 HPP45 fibre concrete.

DOSAGE: The dosage rate for ENDURO HPP45 macro-synthetic fibres will vary depending on the application, mix design and the toughness requirements of each particular project. Typically, ENDURO HPP45 macrosynthetic fibre dosage will typically be in the range of 2 kg to 9 kg per cubic meter of concrete. When used in conjunction with Fibermesh 150 fibres the dosage rate and the performance of the sprayed concrete can be optimized economically. Fibermesh technical staff can offer advice on dosage rates once performance requirements have been established by the project designer/engineer.

COMPATIBILITY

ENDURO HPP45 fibres are compatible with all concrete admixtures and performance enhancing chemicals, but require no admixtures to work.

SAFETY

No special handling is required with ENDURO HPP45 macrosynthetic fibres. Full Safety Data Sheets are available upon request.

PACKAGING

ENDURO HPP45 macro-synthetic fibres are collated in water soluble wrapped bundles/pucks to aid rapid dispersion and mixing. The fibre bundles are packaged in 5 & 10 kg cartons. Store materials in a cool dry place. Do not store in direct sunlight. ENDURO HPP45 fibres are packaged, packed into cartons, shrink wrapped and palletized for protection during shipping.

TECHNICAL SERVICES

FIBERMESH is backed by our team of reinforced concrete specialists who can carefully analyze each project and provide fibre reinforced concrete design solutions to ensure maximum project performance and cost efficiency.

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

SPECIFICATION CLAUSE

Fibres for concrete shall be ENDURO HPP45 polyolefin high performance macro-monofilament fibre conforming to EN 14889-2: 2006 Class II and manufactured specifically for the reinforcement of concrete. ENDURO HPP45 macro-synthetic fibres shall be mixed at the batch plant, at the recommended rate ofkg per cubic metre, and mixed for sufficient time (minimum 5 minutes) to ensure uniform distribution of the fibres throughout the concrete mix.

Fibrous concrete reinforcement shall be supplied by:

FIBERMESH AUSTRIA:

Rindler
GmbH

Concrete casted quality

Rindler GmbH
Grossenschwandt 76,
4882 Oberwang
AUSTRIA

phone: + 43 (0) 6245 84 009
mobile: + 43 (0) 664 42 52 074
mail: office@rindler-gmbh.at
www: rindler-gmbh.at