

# PRODUCT DATA • SIKA® ENDURO® PRIME



## ADVANTAGES OF SIKA ENDURO PRIME FIBERS:

- 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
- Packaged for easy dosing into the concrete mix
- Fiber engineered for improved performance characteristics over other macro synthetic fibers

## SIKA ENDURO PRIME MACRO-SYNTHETIC FIBER

SIKA ENDURO PRIME (formerly ENDURO HAR) is the latest high performance macro-synthetic fiber developed from the innovative HPP technology which was pioneered and patented by Fibermesh - A Sika Brand. ENDURO PRIME has been specifically designed to reinforce a concrete slab on grade with extremely high performance characteristics. Specifically engineered and manufactured in ISO 9001 certified manufacturing facility for use as concrete reinforcement.

## FEATURES & BENEFITS

- Geometrically engineered to resist matrix pullout
- Superior increase in flexural toughness
- Increases cohesion and reduces segregation
- Increases impact and shatter resistance
- Reduced wear on concrete pumps and hoses
- Safe and easy to handle
- Simplified logistics
- Optimized balance between high aspect ratio, performance and finishing
- Economical alternative to steel wire mesh and/or steel fibers

## PRIMARY APPLICATIONS

- Industrial Slab on ground
- Precast
- Pavement
- Overlays

## COMPLIANCE

- Complies with ASTM C 1116/C1116M Type III Fiber Reinforced Concrete
- Complies with European Standard EN 14889-2: 2006 Fibres for Concrete Part 2: Class II
- ISO 9001 Quality Assured Facility

## CHEMICAL AND PHYSICAL PROPERTIES

Absorption	Nil	Ignition Point	1100 °F (593 °C)
Acid & Salt Resistance	High	Melt Point	320 °F (160 °C)
Alkali Resistance	Alkali Proof	Specific Gravity	0.91
Electrical Conductivity	Low	Thermal Conductivity	Low
Fiber Length	1.97, 2.17 or 2.36 in (50, 55 or 60 mm)	Equivalent Diameter	0.022 in (0.56 mm)

**WE ARE THE CONCRETE FIBER EXPERTS™**

[WWW.FIBERMESH.COM](http://WWW.FIBERMESH.COM)

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## PRODUCT USE

**MIXING:** The specified dosage per m<sup>3</sup> or yd<sup>3</sup> should be added to the mixer after batching the other concrete materials. After the addition of the fibers, the concrete should be mixed for sufficient time (batch plant: minimum 5 minutes or 70 revolutions) at full mixing speed to ensure uniform distribution of the fibers throughout the concrete mix. Mixing times may vary, please contact Sika Fiber representative.

**PLACING:** ENDURO PRIME macro synthetic polyolefin fibers can be pumped or placed using conventional equipment.

**FINISHING:** Conventional techniques and equipment can be used when finishing ENDURO PRIME fiber concrete.

**APPLICATION RATE:** The application rate for ENDURO PRIME macro-synthetic fibers will vary depending on the application, mix design and the toughness requirements of each particular project. ENDURO PRIME macro synthetic fiber will have a minimum dosage of 3 pcy (1.8 kg/m<sup>3</sup>) in concrete. For specific performance and dosage recommendations see your local Sika Fiber representative.

## COMPATIBILITY

ENDURO PRIME fibers are compatible with all concrete admixtures and performance enhancing chemicals.

## SAFETY

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

## PACKAGING

ENDURO PRIME macrosynthetic fibers are collated in degradable water soluble wrapped bundles (pucks), packaged in a range of box weights. Other packaging options are available such as bulk bags. Store materials in a cool dry place. Do not store in direct sunlight.

## TECHNICAL SERVICES

Trained Sika Fiber specialists are available worldwide to assist and advise in specifications and field service. Sika Fiber representatives do not engage in the practice of engineering or supervision of projects and are available solely for service and support of our customers.

## REFERENCE DOCUMENTS

- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete
- ASTM C1116/C1116M Standard Specification for Fiber-Reinforced Concrete and Shotcrete
- ASTM C 1436 Standard Specification for Materials for Shotcrete
- ASTM C 1609 /C 1609M Standard Test Method for Flexural Performance of Fiber-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
- European Standard EN 14889-2: 2006 Fibres for Concrete

## SPECIFICATION CLAUSE

Fibers for concrete shall be SIKA ENDURO PRIME polyolefin high performance macro-monofilament fiber conforming to ASTM C1116 Type III and manufactured specifically for the reinforcement of concrete.

or

Fibers for concrete shall be SIKA ENDURO PRIME polyolefin high performance macro-monofilament fiber conforming to EN14889-2: 2006 Class II and manufactured specifically for the reinforcement of concrete.

The fibers shall be manufactured in an ISO 9001 certified manufacturing facility. Unless otherwise stated, SIKA ENDURO PRIME macro-synthetic fibers shall be mixed at the batch plant, at the recommended rate of ... lbs/yd<sup>3</sup> (... kgs/m<sup>3</sup>), and mixed for sufficient time (minimum 5 minutes) to ensure uniform distribution of the fibers throughout the concrete mix. Fibrous concrete reinforcement shall be manufactured by Sika Fibers LLC, 4019 Industry Drive, Chattanooga, TN. 37416 USA, tel: 833.236.1255, web site: www.Fibermesh.com.

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PCS-1229E-005 (04/2019)