SikaFiber® HP
Monofilament Polypropylene Concrete Micro Fiber

Description
SikaFiber® HP is a new generation of micro monofilament polypropylene fiber for use in concrete. SikaFiber® HP is specifically designed for the purpose of controlling plastic shrinkage and settlement cracking. SikaFiber® HP meets the requirements of ASTM C-1116, Type III and ICC-ES AC32.

Applications
SikaFiber® HP creates, due its ultra thin diameter and ultra high strength, an extremely dense three dimensional network of reinforcing fibers in the concrete. SikaFiber® HP acts mechanically by reinforcing the concrete with fiber network coated with mortar. SikaFiber® HP does not affect curing process chemically and SikaFiber® HP does not absorb water. SikaFiber® HP can be used in all types of concrete such as residential or commercial slabs on ground (SOG), concrete overlays, precast applications, shotcrete or stucco. Synthetic fibers help the concrete at early ages, which is especially beneficial to precasters where stripping time and handling is important. SikaFiber® HP can decrease plastic shrinkage cracking and increase impact resistance in concrete. SikaFiber® HP when used in shotcrete applications will increase the compaction and density of shotcrete, reducing rebound and permitting thicker layers per pass.

Benefits
■ Reduces the rate of hydration of cement and controls concrete temperature.
■ Higher fiber count per pound than standard monofilament micro fibers.
■ Virtually invisible in concrete.
■ Allows for lower dosage compared to other monofilament types of fiber.
■ Reduces the formation of plastic shrinkage cracking in concrete.
■ Provides multi-dimensional reinforcement.
■ Improves impact, shatter and abrasion resistance of concrete.
■ Enhances durability and toughness of concrete.
■ Reduces bleeding.
■ Excellent finishability.

Typical Data
<table>
<thead>
<tr>
<th>Fiber type:</th>
<th>Monofilament polypropylene micro fiber</th>
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</thead>
<tbody>
<tr>
<td>Fiber length:</td>
<td>0.25” &amp; 0.5” (6 &amp; 12 mm)</td>
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<tr>
<td>Specific gravity</td>
<td>0.91</td>
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<tr>
<td>E-modulus:</td>
<td>500 ksi</td>
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<tr>
<td>Alkali resistance</td>
<td>Excellent Alkali resistance</td>
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</table>

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

How to Use

Dosage
Standard application rate for SikaFiber® HP is a minimum of 0.5 to 1.0 pounds per cubic yard (pcy). Dosages outside the recommended range may be used for special requirements and applications, for further detail please contact your local regional office, the Technical Service Department at 1.833.236.1255 or email us at sikafiber@us.sika.com.
### Mixing

SikaFiber® HP can be added directly to the concrete mixing system during or after the batching of the ingredients and mixed at high speed for five minutes or 70 revolutions in a ready mix truck. Additional mixing does not adversely affect the distribution or overall performance of SikaFiber® HP. The addition of SikaFiber® HP at the recommended dosage rates to a given mix may decrease the slump; however, additional water should not be added. Only a water reducer or high range water reducer is recommended in concrete placements where improved workability and finishability are required for placement.

### Application

The addition of SikaFiber® HP at the normal recommended dosage rate does not require any mix design or application changes. A water reducer or high range water reducer is recommended in concrete placements where improved workability and finishability are desired.

### Tooling & Finishing

Fiber reinforced concrete can be finished by most finishing techniques. SikaFiber® HP does not affect the finishing characteristics of concrete. SikaFiber® HP can be used in power/hand troweled concrete, colored and broom finished concrete.

### Packaging

SikaFiber® HP fibers are available in a variety of packaging options. The 0.5 lb bag is standard. Bags are packed into carton, palletized and shrink-wrapped for protection during shipping.

### Storage and Shelf Life

SikaFiber® HP should be stored in dry warehouse. Protect product from the rain and direct sunlight.

If stored in dry conditions shelf life is 5 years.