Concrete

PRIOR TO EACH USE OF ANY Sika PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT HTTP://USA.SIKA.COM/ OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800-933-7452. NOTHING CONTAINED IN ANY Sika MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTION FOR EACH Sika PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.

SikaFiber® PPM
Monofilament Polypropylene Micro-synthetic Fiber

Description
SikaFiber® PPM is a monofilament polypropylene fiber primarily used for plastic shrinkage reinforcement in concrete. The use of SikaFiber® PPM reduces plastic shrinkage cracks and plastic settlement in concrete. SikaFiber® PPM meets the requirements of ASTM C-1116, section 4.1.3 Type III fiber, and ICC ES AC32 sections 3.1.1 (plastic shrinkage reinforcement) and 3.1.2 (temperature-shrinkage reinforcement).

Applications
The SikaFiber® PPM can be used in all types of concrete. Typical applications include - slabs, sidewalks, driveways, patios, decks, curbs, precast elements, tunnel concrete etc. SikaFiber® PPM acts mechanically by reinforcing the concrete with multi-dimensional fiber network coated with mortar. The SikaFiber® PPM can decrease plastic and drying shrinkage cracking and increase impact resistance in young concrete. In case concrete is exposed to fire, the presence of SikaFiber® PPM in concrete prevents explosive spalling of the concrete. When used in shotcrete, SikaFiber® PPM will increase the compaction and density of shotcrete, reducing rebound and permitting thicker layers per pass. SikaFiber® PPM does not affect curing process chemically and SikaFiber® PPM does not absorb water.

Benefits
- Reduces plastic shrinkage cracking.
- Reduces plastic settlement.
- 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>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Type</td>
<td>Monofilament polypropylene</td>
</tr>
<tr>
<td>Fiber length</td>
<td>0.5” (13 mm), 0.75” (19 mm) or 1.5” (38 mm)</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.91</td>
</tr>
<tr>
<td>E - modulus</td>
<td>300 ksi</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>25 ksi (minimum)</td>
</tr>
<tr>
<td>Alkali resistance</td>
<td>Excellent Alkali resistance</td>
</tr>
<tr>
<td>Melting point</td>
<td>320°F</td>
</tr>
</tbody>
</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.
Concrete

How to Use

Dosage

Typical standard dosage rate of SikaFiber® PPM in concrete is 1 lb/cu.yd (0.6 kg/m³) or as required by specific mix design.

Mixing

SikaFiber® PPM is packaged in degradable bags which readily break up during the mixing of concrete. SikaFiber® PPM can be added directly to the concrete mixing system during or after the batching of the ingredients and mixed at high speed for four to five minutes. Additional mixing does not adversely affect the distribution or overall performance of SikaFiber® PPM. The addition of SikaFiber® PPM at the recommended dosage rates to a given mix may decrease the workability, which should be adjusted by use of an appropriate water reducing admixture. The addition of SikaFiber® PPM at the normal recommended dosage rate does not require any mix design or application changes.

Application

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

Compatibility: SikaFiber® PPM is compatible with all types of cements, supplementary cementitious materials and Sika admixtures.

Packaging

SikaFiber® PPM is available in 0.5” (13 mm), 0.75” (19 mm) and 1.5” (38 mm) length in various pack sizes in degradable bags.

Storage and Shelf Life

SikaFiber® PPM should be stored in dry warehouse. Protect product from the rain.

When stored in dry conditions shelf life is 5 years.