SPECTER™ HP MICRO FIBER

FABPRO POLYMERS'

SPECTER HP™

Synthetic Micro Fiber

DESCRIPTION

SPECTER™ HP Synthetic Micro Fibers are manufactured from 100% virgin homopolymer polypropylene resins. SPECTER™ HP Fibers meet the requirements of ASTM C1116/C1116M "Standard Specification for Fiber-Reinforced Concrete" and the requirements of ICC ES AC32 Section 3.1.1 for plastic shrinkage reinforcement.

APPLICATIONS

Recommended for use in:

- Slab-on-ground construction
- Concrete pavement
- Whitetopping and overlays
- Architectural precast
- Shotcrete
- Decorative concrete
- Stucco
- Cement-based packaged products
- Marine elements

FEATURES

FABPRO POLYMERS' SPECTER™ HP Synthetic Micro Fiber is a "*Best-in-Class*" new generation of polypropylene microfiber for concrete reinforcement. FABPRO'S unique technology combines ultra-thin diameter with high strength, resulting in the highest level of plastic shrinkage crack prevention available. Over one hundred million high tensile and high modulus filaments per yard of SPECTER™ HP create an extremely dense, three-dimensional network in any cementitious application.

SPECTER™ HP's superior ability to reduce early age cracking is accomplished at an engineered dosage rate of only 0.5 lb/yd^3 (0.3 kg/m^3) of fibers. Independent test results have consistently confirmed that only 0.5 lb (0.23 kg) of SPECTER™ HP consistently produces superior PSCR results compared to other monofilament fibers at a typical 1.0 lb/yd^3 (0.6 kg/m^3) dosage rate – providing better performance at a significantly reduced in-place cost.

BENEFITS

- Inhibits and controls the formation of intrinsic cracking in concrete.
- Reduces plastic shrinkage cracking by an average of 90% at a dosage rate of 0.5 lb/yd^3 (0.6 kg/m^3) with over 110 million fibers.
- Measurably reduces concrete permeability, thus increasing the durability and service life of the concrete.
- Provides three-dimensional reinforcement against micro-cracking.
- Increases the impact and abrasion resistance of the concrete.
- Performs as an excellent companion in blends with macro synthetic fibers and steel fibers.

PERFORMANCE CHARACTERISTICS

Specific Gravity	0.91
Melting Point	320°F (160°C)
Ignition Point	1,094°F (590°C)
Absorption	Nil
Acid & Alkali Resistance	Excellent
Tensile Strength	70 ksi (480 MPa)
Length	0.5" (13 mm) & 0.75" (19 mm)
Modulus of Elasticity	1,230 ksi (8.48 GPa)
Denier	0.9

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GUIDELINES FOR USE

Dosage: The recommended dosage for the SPECTER™ HP Synthetic Micro Fiber is 0.5 lb/yd^3 (0.3 kg/m^3).

Mixing: SPECTER™ HP Synthetic Micro Fibers are packaged in pre-weighed, ready-to-use, degradable bags which are designed to be introduced at any time before or during mixing of concrete. When using SPECTER™ HP Fibers, please follow standard mixing procedures as specified in ASTM C94/C94M.

Standard practices detailed in ACI 302 for placing, finishing and curing concrete should be followed when using SPECTER™ HP Fibers.

ENGINEERING SPECIFICATIONS

SPECTER™ HP Synthetic Micro Fibers are specifically engineered for reducing plastic shrinkage cracking in concrete and mortars. The fibers control cracking caused by plastic shrinkage, plastic settlement, thermal expansion and contraction in concrete. SPECTER™ HP fibers also contribute to reduced water migration, and to increased surface resistance to impacts, abrasion and shattering. The fiber manufacturer must document evidence of compliance with building codes in accordance with ICC-ES AC32, and ASTM C1116/C1116M, Section 4.1.3, Type III.

SPECTER™ HP Synthetic Micro Fiber should be specified for use in concrete slabs, precast and shotcrete:

- ❑ To help control bleed water
- ❑ To reduce plastic shrinkage cracking
- ❑ To increase abrasion resistance
- ❑ To improve impact resistance
- ❑ To decrease rebound

FABPRO POLYMERS does not recommend this fiber for use in slabs as a substitute for primary/structural reinforcement.

STORAGE AND HANDLING

Storage Temperature: SPECTER™ HP Fibers should be stored at temperatures below 140°F (60°C). Avoid storing near strong oxidizers and avoid sources of ignition. Use caution when stacking to avoid unstable conditions. Store in a sprinkled warehouse.

PACKAGING

SPECTER™ HP Fibers are available in a variety of packaging options. The typical bag size is 0.5 lbs (0.23 kg). Bags are packaged in ultra-durable boxes, palletized and stretch-wrapped with corner boards to prevent damage from shipping and handling.

RELATED DOCUMENTS

Safety Data Sheets: SPECTER™ HP Synthetic Micro Fiber

ADDITIONAL INFORMATION

For additional information on SPECTER™ HP Synthetic Micro Fibers, contact your local sales representative or Customer Service at (800) 821-4391.

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