

# FABPRO POLYMERS' SPECTER™ 3.5

Synthetic Micro Fiber

# **DESCRIPTION**

SPECTER™ 3.5 Synthetic Micro
Fibers are manufactured from 100%
virgin homopolymer polypropylene
resins. SPECTER™ 3.5 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:

- Industrial and warehouse floors
- Commercial slab construction
- Concrete pavement
- Whitetopping and overlays
- Thin wall precast
- Shotcrete
- Marine elements

#### **FEATURES**

SPECTER™ 3.5 Synthetic Micro Fiber is a true "Best-in-Class" fiber for reinforcement of concrete. FABPRO's unique technology combines ultra-thin diameter with ultra-high strength, resulting in the highest level of plastic shrinkage crack reduction at only 0.75 lbs per cubic yard of concrete. Millions of high tensile, high modulus filaments in every yard create an extremely dense, three-dimensional network in most cementitious applications. SPECTER™ 3.5's superior ability to reduce early age cracking can be accomplished at a minimum dosage as low as 0.5 lbs per cubic yard, with optimum results at the recommended and engineered dosage rate of 0.75 lbs per cubic yard of concrete.

#### **BENEFITS**

- Measurably reduces the concrete permeability, thus increasing the durability and service life of the concrete.
- Provides three-dimensional reinforcement against micro-cracking.
- Provides excellent plastic shrinkage crack reduction and settlement control.
- Reduces plastic shrinkage on average by 90% at a 0.75 lb dosage rate per cubic yard.
- Increases the impact and abrasion resistance of concrete.

#### PERFORMANCE CHARACTERISTICS

Specific Gravity	0.91		
Melting Point	320 °F (160 °C)		
Ignition Point	1,094 °F (590 °C)		
Absorption	Nil		
Alkali Resistance	Excellent		
Tensile Strength	30,000 psi (206 MPa)		
Length	0.75" (19 mm)		
Denier	3.5		
Chemical Resistance	Excellent		
Modulus of Elasticity	325 ksi (2.24 GPa)		
Fiber Count	61 million per lb (0.45 kg)		











### **GUIDELINES FOR USE**

**Dosage:** The recommended dosage for the SPECTER<sup>TM</sup> 3.5 Synthetic Micro Fiber is  $0.75 \text{ lb/yd}^3$  ( $0.45 \text{ kg/m}^3$ ). It can be used at dosage rates from  $0.5 \text{ lb/yd}^3$  ( $0.3 \text{ kg/m}^3$ ) up to  $1.0 \text{ lb/yd}^3$  ( $0.6 \text{ kg/m}^3$ ).

Mixing: SPECTER™ 3.5 Synthetic Micro Fibers are packaged in preweighed, ready-to-use, degradable bags which are designed to be introduced at any time before or during mixing of concrete produced in accordance with procedures specified in ASTM C94/C94M. Standard practices detailed in ACI 302 for placing, finishing and curing concrete should be followed when using SPECTER™ 3.5 Fibers.

# **ENGINEERING SPECIFICATIONS**

SPECTER™ 3.5 Synthetic Micro Fiber, when used at an appropriate dosage, provides excellent plastic shrinkage and early age crack reduction. The fiber is rust proof, alkali resistant, and compliant with industry codes, when used in concrete mixed in accordance with ASTM C94/C94M.

SPECTER™ 3.5 Synthetic Micro Fiber should be specified for use in concrete slabs:

To	control	bleed	water

- ☐ To reduce plastic shrinkage cracking
- ☐ To increase abrasion resistance
- To improve impact resistance
- To reduce permeability

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

# **STORAGE AND HANDLING**

**Storage Temperature:** SPECTER™ 3.5 Synthetic Micro 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™ 3.5 Synthetic Micro Fibers are packaged in preweighed degradable 0.5 lb (0.23 kg), 0.75 lb (0.34 kg) and 1.0 lb (0.45 kg) bags that can be added directly to the mixing system. SPECTER™ 3.5 Fibers are packaged in ultra-durable, doublewalled boxes, palletized and stretch-wrapped with corner boards to prevent damage from shipping and handling.

#### **RELATED DOCUMENTS**

Safety Data Sheets: SPECTER™ 3.5 Synthetic Micro Fiber

## **ADDITIONAL INFORMATION**

For additional information on SPECTER™ 3.5 Synthetic Micro Fibers, contact your local sales representative or Customer Service at (800) 821-4391.

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