FRC HPS-650
MACRO-SYNTHETIC FIBER

ADVANTAGES OF FRC HPS-650 MACRO 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
- Reduces construction time

FRC HPS-650 MACRO-SYNTHETIC FIBER

FRC HPS-650 is an engineered graded macro-synthetic fiber featuring e3 patented* technology manufactured to an optimum gradation and highly oriented to allow greater surface area contact within the concrete resulting in increased inter-facial bonding and flexural toughness. FRC HPS-650 is made with 100% virgin olefin materials. Specifically engineered and manufactured by Sika (formally Propex) in an ISO 9001 certified manufacturing facility for use as concrete reinforcement. FRC HPS-650 is private labeled for FRC Resources and meets all the same codes and standards as Fibermesh 650 and SikaFiber Force 650.

FEATURES & BENEFITS

- Graded macro-synthetic fiber for concrete reinforcement
- Alternative to traditional steel wire fabric and rebar
- Provides impact, abrasion and shatter resistance
- Greater surface area provides increased flexural toughness (residual strength)
- Improved ductility
- Provides improved durability
- Control of drying shrinkage and temperature cracking
- Pumpable reinforcement

PRIMARY APPLICATIONS

- Slabs-on-ground
- Sidewalks /Driveways
- Parking areas
- Overlays & toppings
- Exterior pavements
- Non-magnetic applications
- Shotcrete
- Composite metal decks

COMPLIANCE

- Complies with ASTM C 1116/C 1116M, Type III fiber reinforced concrete
- ISO 9001 Quality Assured Facility
- UL Classified: For use as an alternate or in addition to the welded wire fabric used in Floor-Ceiling D700, D800, D900 Series Designs. Fibers may also be used in Floor-Ceiling Design Nos. G229, G243, G256, G514

CHEMICAL AND PHYSICAL PROPERTIES

Absorption	Nil	Ignition Point	759.2°F (404°C)
Acid & Salt Resistance	High	Melt Point	324°F (164°C)
Alkali Resistance	Alkali Proof	Specific Gravity	0.91
Electrical Conductivity	Low	Thermal Conductivity	Low
Fiber Length*	1.5” & 1.75” Graded	Tensile Modulus	725-1015 ksi
		Tensile Strength	86 ksi

*Also available in single cut lengths

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PRODUCT USE

MIXING: FRC HPS-650 macro reinforcing is a mechanical, not chemical, process. Due to fiber efficiency, minor mix design modifications may be required depending on the application. Consult your FRC Resources Fiber representative for recommendations. FRC HPS-650 fiber is added to the mixer during or after batching the other concrete materials. After the addition of the fibers, the concrete should be mixed for a 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 your FRC Resources Fiber representative.

PLACING: FRC HPS-650 macro-reinforced concrete can be pumped, sprayed or placed using conventional equipment.

FINISHING: FRC HPS-650 macro-reinforced concrete can be finished by normal finishing techniques.

APPLICATION RATE: The standard recommended dosage rate for FRC HPS-650 fibers is between 3-7.5 lbs/yd^3. For specific performance and dosage recommendations see your local FRC Resources Fiber representative.

COMPATIBILITY

FRC HPS-650 fibers are compatible with all concrete admixtures and performance enhancing chemicals.

SAFETY

No special handling is required with FRC HPS-650 fibers. Full Safety Data Sheets are available upon request.

PACKAGING

FRC HPS-650 macro-synthetic fibers are available in 3 or 4 lb toss-in degradable bags. Bags are packed into cartons, palletized and shrink-wrapped for protection during shipping. Other packaging options are available. Store materials in a cool dry place. Do not store in direct sunlight.

TECHNICAL SERVICES

Trained FRC Resources Fiber specialists are available to assist and advise in specifications and field service. FRC Resources 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
- ACI 506 Guide for Shotcrete
- ASTM C1116/C1116M Standard Specification for Fiber-Reinforced Concrete and Shotcrete
- ASTM C 1399 Standard Test Method for Obtaining Average Residual-Strength of Fiber-Reinforced Concrete
- ASTM C 1436 Standard Specification for Materials for Shotcrete
- ASTM C 1550 Standard Test Method for Flexural Toughness of Fiber Reinforced Concrete (Using Centrally Loaded Round Panel)
- 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 34 Concrete Industrial Floors

SPECIFICATION CLAUSE

Fibers for concrete shall be FRC HPS-650, 100% virgin polyolefin fibers, e3 patented technology containing no reprocessed olefin materials. The fibers shall conform to ASTM C1116 Type III and manufactured specifically for the reinforcement of concrete. The fibers shall be manufactured in an ISO 9001:2008 certified manufacturing facility. Unless otherwise stated, FRC HPS-650 fibers shall be mixed at the batch plant, at the recommended rate of __lbs/yd^3, and mixed for sufficient time (minimum 5 minutes) to ensure uniform distribution of the fibers throughout the concrete mix. Fibrous concrete reinforcement shall be suppled by FRC Resources, Seminole, FL. 33772. Tel: 727.433.4350
Website: www.FRCresources.com

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FRC RESOURCES PROVIDES MICRO SYNTHETIC, MARCO SYNTHETIC, STEEL AND BLENDED FIBERS.