

## FiberForce 750™

### 1. IDENTIFICATION

PRODUCT NAME: FiberForce 750™  
(Performance Plus DOT™)

OTHER IDENTIFICATION: Blend of FiberForce 650™  
and FiberForce 550™

RECOMMENDED USE: Temperature-shrinkage  
reinforcement and post-first crack toughness in  
concrete.

SOURCE: ABC Polymer Industries, LLC



### 2. DESCRIPTION

FiberForce 750 is a blend of macrosynthetic fibers developed for use as a post-first crack reinforcement in concrete.

FiberForce 750 marries FiberForce 650 with FiberForce 550 in a proprietary blend to optimize the benefits of both fibers. Both FiberForce 650 and FiberForce 550 are manufactured from a blend of polypropylene and polyethylene resins. The FiberForce 650 component is a tape or ribbon fiber with a mechanically embossed surface to enhance bonding. The FiberForce 550 component is a modified fibrillated tape fiber where the main fibrils have been enlarged to increase tensile properties.

ASTM C1609 testing has shown that FiberForce 750 meets or exceeds the performance capabilities of competitor's products while providing excellent distribution and finishing.

FiberForce 750 has been accepted by several State DOTs, specifications, and code applications.

### 3. APPLICATIONS

#### Interior

- Commercial, industrial, and warehouse slabs-on-ground
- Composite metal deck

#### Exterior

- Slabs-on-ground, Roadway & Highway Pavements
- Shotcrete
- Bridge Decks

#### Precast

- Septic tanks
- Burial vaults
- Utility vaults

### 4. FEATURES & BENEFITS

- Provides post-first crack residual strength to concrete
- Provides temperature-shrinkage reinforcement
- Increases concrete durability - including impact and abrasion resistance and fatigue strength
- Reduces plastic shrinkage and settlement cracking
- Measurably reduces permeability, thus increasing freeze-thaw durability
- Provides uniformly distributed reinforcement throughout the concrete, not just in one plane as with traditional steel reinforcement
- A cost-effective alternative to traditional steel reinforcement
- Delivered to site pre-mixed

## 5. PHYSICAL PROPERTIES

| Fiber Components        | FiberForce 650 / FiberForce 550         |
|-------------------------|---|
| Material                | Polyolefin                              |
| Absorption              | Nil                                     |
| Specific Gravity        | 0.91                                    |
| Alkali Resistance       | Excellent                               |
| Melting Point           | 330 °F (165 °C)                         |
| Electrical Conductivity | Low                                     |
| Equivalent Diameter     | 0.015 in (0.38 mm) / 0.035 in (0.89 mm) |
| Aspect Ratio            | 100/43                                  |
| Standard Length         | 1.5 in (38 mm)                          |
| Other Available Length  | 2 in (50 mm)                            |

## 6. MIXING INSTRUCTIONS

Concrete mixing plant personnel should establish the correct mix design based upon the quantity of FiberForce 750 being added to the mix. Adjustments to the mix may be required and a mid-range or hi-range water reducer is recommended.

FiberForce 750 may be added to the concrete mix at any time before, during or after the batching process, except at the same time as the cement.

A minimum of 75-100 revolutions at mixing speed or 5-7 minutes of mixing at high speed may be needed to ensure complete dispersion of the fibers.

Follow ASTM C94, "Standard Specifications for Ready-Mixed Concrete" in assembling a homogeneous mix.

Our **Professional Engineers** are available for consultation on how to establish the optimum design.

## 7. PRODUCT APPROVALS & COMPLIANCE WITH INDUSTRY STANDARDS

- ASTM C1116, Section 4.1.3 and Note 2
- ASTM D7508
- FiberForce 750 is listed by UL in CBXQ.R19202 (Fiber Reinforcement and Concrete Additives) for use as an alternate or in addition to the welded wire fabric used in Floor-Ceiling Designs Nos. D700, D800, and D900 Designs.

### WARRANTY AND LIMITATION OF LIABILITY

As used herein, the term "ABC" shall refer to ABC Polymer Industries, LLC. and its subsidiaries.

The terms of ABC's invoices shall be governed by and construed in accordance with the laws of the State of Alabama.

ABC's fibers are intended to reduce plastic shrinkage cracking and provide secondary temperature shrinkage reinforcement. ABC's fibers should not be used as structural reinforcement. ABC Polymer Industries, LLC warrants that the product sold hereunder is of merchantable quality and conforms to the seller's standards and specifications. The seller's sole liability for claim shall be limited to replacement of defective or non-conforming product. In no event shall the seller be liable for any special, incidental, consequential, or exemplary damages. ABC Polymer Industries, LLC recommends that each user determine the suitability of the product(s) for their particular application.

ABC engineering and sales personnel are available to assist in selecting the appropriate fiber for a given specification / application. Said personnel will provide an overview of anticipated performance based upon experience and testing data. ABC personnel will provide recommendations, but are not the final arbiters on design. ABC personnel will provide onsite support where our products are utilized and when deemed necessary, but will not participate in the supervision of any project. ABC's responsibility is to support our customers and to provide our customers with the best materials and assistance in marketing these products.

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- ANSI/SDI C-2011-Shrinkage and temperature reinforcement alternative to welded wire reinforcing (WWR) for composite steel floor decks when used at a minimum dosage rate of 4 lbs. per cubic yard.

FiberForce 750 is also known as Performance Plus DOT™. All Performance Plus DOT test data and approvals apply to FiberForce 750.

Please contact us with any questions regarding this product or if a Letter of Certification for FiberForce 750 is needed to show compliance with the specifications referenced above or specific project requirements.

## 8. GENERAL SPECIFICATIONS

FiberForce 750 should be added per project specifications or engineer's instructions.

The recommended dosage rate for FiberForce 750 is typically between, but not limited to, 3 to 11 lbs. per cubic yard. However, a specific dosage rate should be established by the project engineer or government agency for a given application based on project conditions and requirements.

For dosage rates outside the typical range, please contact your **Regional FiberForce Representative**.

## 9. PLACING & FINISHING

Standard placement and finishing techniques are recommended for FiberForce 750 fiber reinforced mixes.

To optimize the slab surface finishing process, make sure that the fibers on the surface of the slab are encapsulated in the concrete matrix.

To improve the quality of consolidation of the concrete, use a laser or vibrating screed. We also recommend using an early entry saw.

## 10. PACKING & SHIPPING

FiberForce 750 can be packaged into bags as small as 0.50 lb. and as large as 30 lbs. Depending on the size of the order, the pallets will range between 648 and 1,080 lbs.

All orders that are less than a truck load can be shipped within 48 hours of purchase order receipt.

