FIBERFORCE
abcpolymer concrete fibers

# Specification Data Sheet

## FiberForce 850™

## 1. IDENTIFICATION

PRODUCT NAME: FiberForce 850™ (Advanced Performance Blend™)

OTHER IDENTIFICATION: Blend of FiberForce T5-38™ and FiberForce 150™

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

SOURCE: ABC Polymer Industries, LLC
545 Elm Street, Helena, AL 35080

## 2. DESCRIPTION

FiberForce 850 is a blend of steel and microsynthetic fibers.

FiberForce 850 blend marries FiberForce T5-38 at 23 lbs. with FiberForce 150 at 1 lb. to create a blend that provides both plastic-drying shrinkage reinforcement and post-first crack toughness in concrete. This fiber blend also makes for a more durable concrete in all environments and applications.

The combination of steel and microsynthetic fibers enhances the long-term durability of the concrete, resulting in measurable quantifiable gains in impact resistance, surface abrasion resistance, reduced permeability, fatigue strength, and plastic and temperature-shrinkage crack reduction.

## 3. APPLICATIONS

Interior Slabs-on-Ground

- Commercial
- Light, medium, heavy industrial, and warehouse

Exterior Slabs-on-Ground

- Ingress-egress roadways, malls, industrial and warehouse sites
- State DOTs, specification, and code applications

Composite Metal Decks

Precast

- Septic tanks
- Vaults

Shotcrete

## 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
- Reduces water migration, bleed water, and permeability of concrete
- 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

| Microsynthetic Component | FiberForce 150 |
|---|---|
| Material | Polypropylene |
| Absorption | Nil |
| Specific Gravity | 0.91 |
| UV Resistance | Excellent |
| Alkali Resistance | Excellent |
| Electrical Conductivity | Low |
| Equivalent Diameter | 0.0019 in (0.048 mm) |
| Denier | 15 |
| Standard Length | 0.75 in (19 mm) |
| **Steel Component** | **FiberForce T5-38** |
| Material | Cold-drawn shaved steel wire |
| Avg. Equivalent Diameter | 0.061 in (1.56 mm) |
| Avg. Aspect Ratio | 32 |
| Deformation | Corrugated |
| Standard Length | 1.5 in (38 mm) |

## 6. MIXING INSTRUCTIONS

FiberForce 850 is packaged in water-soluble bags that can be added directly into the concrete mix.

To ensure optimum distribution of the fibers, the fibers must be introduced to the ready-mix drum during or after the concrete is batched and loaded in the truck.

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 4.1.1
- ASTM C1116 Section 4.1.3 Note 2

Please contact us with any questions regarding this product or if a Letter of Certification for FiberForce 850 is needed to show compliance with the specifications referenced above or specific project requirements.

FiberForce 850 is also known as Advanced Performance Blend™. All Advanced Performance Blend test data and approvals apply to FiberForce 850.

## 8. GENERAL SPECIFICATIONS

FiberForce 850 should be added per project specifications or engineer's instructions.

The recommended dosage rate for FiberForce 850 is typically between, but not limited to, 24 to 48 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.

FiberForce 850 is not intended to replace primary, structural steel in concrete.

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 850 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-enrty cut saw.

## 10. PACKING & SHIPPING

FiberForce 850 is packaged in 24 lbs. bags. The bags are shipped in 1,728 lbs. pallets.

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