

## DESCRIPTION

**FiberForce 650** is a synthetic macrofiber developed from a specific blend of polypropylene and polyethylene resins that possess unique engineering properties. Defined as a tape or ribbon fiber, FiberForce 650 has a rectangular cross-section and is mechanically embossed to enhance bonding. FiberForce 650's physical dimensions are critical to performance, as measured by ASTM C1399 and C1609. FiberForce 650 has excellent distribution and finishing properties.

## PROPERTIES

Material	Polypropylene/ Polyethelene Blend
Absorption	None
Specific Gravity	0.91
Alkali, Salt, and Acid Resistance	High
Melting Point	320°F (160°C)
Electrical Conductivity	Low
Tensile Strength	70 ksi (483 MPa)
Aspect Ratio	2.0 in - 100; 1.5 in - 75
Standard Length	2.0 in (50 mm)
Other Available Length	1.5 in (38 mm)

## FEATURES & BENEFITS

- Crack-width control due to shrinkage/temperature restraint
- Redistributes shrinkage-stresses in concrete
- Increases concrete durability - including impact/abrasion resistance, fatigue strength, and ductility
- Provides post-first crack residual strength, reduces plastic shrinkage and settlement cracking
- Uniformly distributed 3-dimensional reinforcement throughout concrete
- Fast-track construction schedules

## APPLICATIONS

- Slabs-on-ground (industrial) warehouse/distribution centers
- Slabs on composite metal deck
- Topping slabs
- Paving/overlays
- Bridge decks
- Shotcrete
- Precast

## MIXING INSTRUCTIONS

FiberForce 650 is packaged in preweighed water-soluble bags. FiberForce 650 can be preloaded in empty ready-mix drums or added anytime during or after concrete is batched. Mix for 5 minutes at full charging speed (75-100 revolutions) to ensure complete dispersion of fibers. FullForce recommends the utilization of the appropriate water reducing chemical admixture for any slump or workability modification that may be required with this technology.

## PACKING & STORAGE

FiberForce 650 is packaged in 1.5 lb, 2.0 lb, and 2.5 lb bags then palletized for shipment. Pallets and boxes are labeled with the fiber technology and bag weight. Store material in a dry environment. Avoid storing in direct sunlight.

## GENERAL SPECIFICATIONS

The dosage rate for FiberForce 650 is typically between 3 to 11 lb/yd<sup>3</sup>. FiberForce 650 should be added per project specifications or engineer's instructions. For slabs on composite metal deck, the Steel Deck Institute's provision requires a minimum of 4 lb/yd<sup>3</sup>.

## PRODUCT APPROVALS AND COMPLIANCE WITH INDUSTRY STANDARDS

- ASTM C1116: Section 4.1.3 and Note 2
- ASTM D7508
- UL Certification #CBXQ.R19202
- ANSI/SDI C-2017 - Shrinkage and temperature reinforcement alternative to welded wire reinforcing

## TECHNICAL SUPPORT

In-house professional engineers are available for product specification guidance and design support. FullForce technical sales managers are available to assist with field support and guidance related to the use of any FullForce technologies.



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