

# Durafiber Monofilament Fibers

## DESCRIPTION:

Durafiber Monofilament Fibers - Engineered Fibrous Concrete Reinforcement System - 100 percent virgin homopolymer polypropylene monofilament fiber containing no reprocessed olefin materials and specially engineered and manufactured for use as secondary reinforcement in ready mix concrete and cement-based building products. Durafiber Fibers meet the material specifications described in ASTM C-1116, Type III, Section 4.1.3 "Synthetic Fiber-Reinforced Concrete and Shotcrete". At the minimum recommended dosage rate of 0.067% by volume (1.0 lb/yd<sup>3</sup> / .67kg/m<sup>3</sup>), Durafiber Monofilament Fibers have met or exceeded the specified value for performance of ASTM C-1116, Section 21, I<sub>5</sub>Toughness Index.

## FEATURES AND BENEFITS:

Saves construction time and money by eliminating the purchase, storage, handling, cutting, placing and waste of welded wire fabric - Always positioned in compliance with industry codes, automatically - Requires no minimum amount of concrete cover - Safe and easy to use - Will not rust, rot or corrode; chemically inert - Non-magnetic - alkali proof.

- \* Reduces the in-place cost versus welded wire fabric when used for non-structural temperature and shrinkage crack reinforcement in hardened concrete
- \* Inhibits and controls the formation of cracks caused by intrinsic stresses
- \* Increases impact, shatter and abrasion resistance of concrete
- \* Reduces segregation, plastic settlement and shrinkage cracking
- \* Reinforces against water migration; reduces permeability of concrete

## PRIMARY APPLICATIONS:

Durafiber Monofilament Fibers can significantly enhance the performance of all types of concrete and cement-based building products such as: Slab on Grade Precast Driveways Stucco Sidewalks Curbs Walls Composite Decks Overlays/Toppings Tilt-up Panels Thin Sections Shotcrete Slope Paving Water Tanks

## CHEMICAL AND PHYSICAL PROPERTIES:

Material	100% Virgin Polypropylene	Acid & Salt Resistance	High
Fiber Type	Monofilament	Alkali Resistance	Alkali Proof
Specific Gravity	0.91	Absorption	Nil
Fiber Length	1/2" (13 mm), 3/4" (19 mm) & Multi-Length	Electrical Conductivity	Low
Melt Point	320° F (160° C)	Thermal Conductivity	Low
Ignition Point	1,100° F (593° C)		

## MIXING, PLACEMENT AND FINISHING:

The addition of Durafiber Monofilament Fibers at the recommended dosage rate does not require any mix design changes. Mix in accordance with ASTM C-94. Durafiber Monofilament Fibers are compatible with all concrete admixtures and performance enhancing chemicals. Durafiber Monofilament Fiber reinforced concrete can be finished by any finishing techniques and do not affect the finishing characteristics of concrete. They are non-corrosive, alkali resistant and will not stain the concrete surfaces. Durafiber Monofilament Fibers are compatible with power troweled, hand troweled, colored, stamped, dry shake and broom finished concrete

## ENGINEERING SPECIFICATION:

Fibers shall have been engineered and manufactured for use as secondary reinforcement in ready mix concrete and cement-based building products. The fibers are to be used for non-structural temperature and shrinkage crack reinforcement in plain concrete as defined in ACI 318.1 and Chapter 26 of the Uniform Building Code. The application rate shall be the minimum recommended dosage rate of 0.067% by volume (1.0 lb per cubic yard / .67 kg per cubic meter) The fibers must meet the material specifications described in ASTM C-1116, Type III, Section 4.1.3 "Synthetic Fiber-Reinforced Concrete and Shotcrete". The fibrous concrete reinforcement system shall be manufactured by:

Industrial Systems, Ltd 112 W. Route 120 (Rand Rd.) Lakemoor, IL 60050 815-344-5566 815-344-5588 Fax

## ADDITION RATE

The standard recommended dosage rate for the Monofilament Fibers is 1.0 lb per cubic yard depending on the application. The fibers are added directly to the concrete mixing system, during or after the batching of the other ingredients and mixed at the time and speed recommended by the mixer manufacturer (usually four to five minutes).

## PACKAGING

The Monofilament Fibers are packaged in pre-measured ready to use degradable bags. Standard bag sizes are .75, 1.0 1.5 and 7.5 lbs. The Monofilament Fibers are available in .5", .75" and Multi-Lengths.



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