

Durafiber MaxTen™

High Performance Concrete Fiber

DESCRIPTION:

Durafiber MaxTen MacroFibers - Engineered Fibrous Concrete Reinforcement System - 100 percent virgin polyolefin, nonfibrillating, fully oriented, MacroFilament Fiber designed to provide a high performance concrete reinforcement system. MaxTen MacroFibers are specifically engineered and manufactured to be used as a replacement for welded wire fabric, steel fibers and light reinforcing bars in a variety of secondary reinforcement applications. In addition, MaxTen MacroFibers are used for the reduction of plastic shrinkage cracks, to improve impact, shatter and abrasion resistance, to increase fatigue resistance, to increase toughness and provide long term durability of concrete and cement-based building products.

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 or replaces steel fibers and other forms of steel reinforcement in high performance concrete applications
 - * Increases impact, shatter and abrasion resistance of concrete
 - * Increases fatigue resistance and concrete toughness
 - * Reduces segregation, plastic settlement and shrinkage cracking
 - * Reinforces against water migration; reduces permeability of concrete
 - * Provides long term durability

PRIMARY APPLICATIONS:

MaxTen MacroFibers can significantly enhance the performance of all types of concrete and cement-based building products such as: Industrial Floors Bridge Decks Loading Docks Shotcrete Tunnel Linings Precast Products

CHEMICAL AND PHYSICAL PROPERTIES:

Material	100% Virgin Blended Copolymer	Ignition Point	1,100° F (590° C)
Fiber Type	MacroFilament, Non-Fibrillating	Absorption	Nil
Specific Gravity	0.91	Electrical Conductivity	Low
Fiber Length	1.5" (38 mm) & 2 1/4" (57 mm)	Thermal Conductivity	Low
Tensile Strength	90 - 100 ksi (620 - 685 MPa)	Alkali Resistance	Alkali Proof
Melt Point	320° F (160° C)	Acid & Salt Resistance	High

MIXING, PLACEMENT AND FINISHING:

The addition of MaxTen MacroFibers at the normal recommended dosage rate does not require any mix design changes. Mix in accordance with ASTM C-94. A mid-range water reducer or super-plasticizer is recommended in concrete placements where improved workability and finishability are desired. MaxTen MacroFibers are compatible with all concrete admixtures and performance enhancing chemicals. MaxTen Fiber reinforced concrete can be finished using most finishing techniques. MaxTen Fibers do not affect the finishing characteristics of concrete. They are non-corrosive and will not stain the concrete surfaces. MaxTen Fibers are compatible with power troweled, hand troweled, colored and broom finished concrete.

ENGINEERING SPECIFICATION:

Fibers shall be 100% virgin polyolefin blend, non-fibrillating, fully oriented, macrofilament fiber designed to provide a high performance concrete reinforcement system. 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 hardened concrete. The application rate shall be the minimum recommended dosage rate of 0.2% by volume (3.0 lbs per cubic yard / 1.8 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

ADDITION RATE

The standard recommended dosage rate for MaxTen MacroFibers is 3.0 lbs to 5.0 lbs 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

MaxTen MacroFibers are packaged in pre-measured ready to use degradable bags. Standard bag sizes are 3.0, 4.0 and 5.0 lbs. The MaxTen Fibers are available in 1.5" and 2 1/4" lengths.



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