Concrete Admixtures and Fiber

IMIFIBER-MP

Monofilament Polypropylene Fiber for Concrete and Mortar

DESCRIPTION

IMIFIBER-MP fiber is made from monofilament virgin polypropylene and are engineered specifically for use in concrete and cement based products. IMIFIBER-MP fiber provide multi-dimensional secondary reinforcement which is uniformly distributed throughout the concrete mix. IMIFIBER-MP aids in achieving optimum strength and durability as well as eliminating 78% to 100% of plastic shrinkage cracks in concrete.

ADVANTAGES

- Controls surface cracks due to plastic shrinkage
- Reduces permeability
- Resistant to impact stress
- Prevents mildew
- Economical to use
- Provides secondary, multi-dimensional reinforcement
- Replaces welded steel reinforcing

USES

- Roofs
- Tiles on Slopes
- Pools
- Patios
- Precast Concrete
- Parking Lots
- Industrial Floors
- Pumped Concrete
- Tanks
- Bridges
- Tunnels
- Ramps
- Offices
- Sidewalks
- Cellular Concrete
- And Many Others...

APPLICATION

IMIFIBER-MP comes packaged in water-soluble bags, and is used at the rate of 1 to 1.5 Lb. per cubic yard of concrete. (600grm to 900 grm per cubic meter of concrete) It can be added to the concrete at the plant during the batching process or in the field, mixing for 4 to 5 additional minutes. We recommend adding IMIFIBER-MP at the plant to avoid loss of slump and other problems brought on by excessive mixing.

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TECHNICAL INFORMATION

IMIFIBER-MP controls the formation of cracks due to plastic shrinkage and increases flexural strength while the mix is still in its plastic state. This eliminates the formation of wider cracks, which normally form during the time of plastic shrinkage. The fiber are distributed evenly, creating a matrix, which under direct or flexural stress transforms a sudden brittle rupture into a ductile slow rupture. The absence of these wider fissures in the tension zone of concrete reinforced with fibers enhances its resistance to rupture.

RESULTS OF TESTS USING IMIFIBER-MP

Flexural	550 PSI	640 PSI	116	Greater Than / Equal To Control
Compression	4,530 PSI	5,210 PSI	115	Greater Than / Equal To Control
Freeze/Thaw Durability	88.50%	93.10%	105	Greater Than / Equal To Control
Formation of Cracks	-	-	81.8 Recuction	Min. 40%
Bond Strength	18,970 Lbs.	19,970 Lbs.	105	Greater Than / Equal To Control

*** ICBO - International Conference of Building Officials**

Based on these results, IMIFIBER-MP aids in inhibiting plastic shrinkage without affecting the performance of the concrete in terms of flexural or compressive strength or bond.

IMIFIBER-MP PHYSICAL PROPERTIES

- *Material* 100% Virgin Polypropylene
- *Color & Form* White Monofilament Fiber
- *Tensile Strength* 97 Ksi avg (0.67 KN/mm²)
- *Modulus (Young's)* 580 Ksi (4.0 KN/mm²)
- *Melting Point* 330°F (165°C)
- *Chemical Resistance* Excellent
- *Alkali Resistance* Excellent
- *Acid & Salt Resistance* High
- *Ignition Point* 1100°F(600°C)
- *Absorption* NIL
- *Specific Gravity* 0.91
- *Bulk Density* 56 lbs/cu ft (approx)
- *Loose Density* 15-25 lbs/cu ft (approx)
- *Denier* 15
- *Dosage (Normal)* 1 lb/cu yd
- *Fiber Length (Normal)* ¾"
- *Normal Fiber Length* ¾"
- *Fiber Count* 12 Million per Lb.

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