

POLYFIBER - M

Polypropylene Monofilament

PRODUCT DESCRIPTION

POLYFIBER M is a Polypropylene fiber designed specifically to provide concrete with protection against early age crack formation.

When added to concrete during mixing, the fibers disperse uniformly and produce a three dimensional network of micro reinforcement.

Every fiber helps to prevent the tiny fissures that can occur when concrete's tensile strength is weak. By reducing early age crack formation, the number of weakened planes and the potential for future crack formation will also be reduced.

POLYFIBER M should be used in any application where decreased cracking and increased durability is desired. Such application include should not be limited to industrial a commercial floors, pavements overlays elevated slabs, residential concrete, precast concrete, barrier walls, tunnel and culvert lining, water reservoir linings, bridge deck overlays and various concrete systems, almost any concrete product can be benefit from **POLYFIBER M**.

TYPICAL APPLICATIONS

- Slab on grade.
- Drive ways and parking lots
- Sidewalks & Shot Crete Toppings.
- Septic Tanks & other precast items.
- Water Channels.
- Concrete Canals.

PRODUCT FEATURES

Due to its physical configuration, **POLYFIBER M** has several advantages when used in concrete.

Firstly, polypropylene fiber provides a greater volume per unit weight than any other fiber; this translates into higher efficiency and better performance.

Secondly, the monofilament structure and size of **POLYFIBER M** allow it too quickly and evenly disperse, while at the same time, reduce the potential finishing difficulties that are sometimes associated with other fiber configurations.

Finally, **POLYFIBER M** is strong, and maintains a high work of rupture, it has the toughness necessary to withstand the severe mechanical abuse that occurs mixing.

PROPERTIES

Material

100% polypropylene

Specific Gravity

0.90

Fiber Type Monofilament

Fiber Length

0.75 inch

Toxicity Non toxic

Water Absorption Nil

Alkali Resistance High

Acid Resistance High

Thermal Conductivity Low

Mildew Resistance High

Electric Conductivity Low

Color White

Melt Point 170 *C

Ignition Point Over 590 *C

Fiber Thickness 0.0965 mm. ** 10 %

Young's Modulus 3600

Plastic Shrinkage 100% reduction of plastic shrinkage cracking.

Freeze - Thaw
High Resistance

Chemical Resistance

High Resistance To alkalis in concrete.
POLYFIBER M does not induce the growth of bacteria and algae.

Permeability

Dramatically decrease concrete Permeability.

Bond Strength

Increase the bond between concrete & reinforcing steel.

Impact Resistance

Increase impact resistance of concrete.

Compressive Strength

Improves concrete compressive strength.

Flexural Strength

Increase flexural strength of concrete.

Split Tensile Strength

Improves split tensile strength.

Stability

Is not effected by Ultra Violet Light.

STANDARDS

POLYFIBER M is tested to the appropriate sections of the following Standards:
ASTM D-1204, ASTM D-638

GUIDE FOR APPLICATION

PROCESSING

POLYFIBER M is packed in per measured bags with required projects size, ranging dose starts from 0.5 cubic meters.

Add **POLYFIBER M** into the mixer and mix for 4-5 minutes or 60-70 revolution at full speed to insure uniform distribution.

PLACING / FINISHING

Fiber reinforced concrete may appear slightly stiffer than plain concrete without affecting workability; it increases the concrete cohesive properties.

However, if additional workability is required, a water reducer or super plasticizer should be used instead of adding water.

This increase in cohesion will also reduce segregation, resulting in less or slower bleeding With this in mind, it is important not to begin finishing too early.

Finishing is accomplished best with steel or magnesium trowels and floats, wooden tools open the surface and may expose additional fibers.

Also, it is not recommended to use a tined rake to move or place fiber reinforced concrete.

The tines can disrupt the fibers uniform three dimensional distribution.

For exterior textured or broom finishes, use a dry stiff bristled broom. If broomed in one direction, most of the fibers that are on or near the surface will be aligned with the textured ridgs.

Any additional surface fibers will quickly wear off by light friction.

For smooth hand trowel finish, the normal practice of using the machine trowel, finish to bring up sufficient mortar to achieve a closed surface, durable surface is also applicable to fiber reinforced concrete.

DOSAGE

As recommended by the specified, normal the dosage rate for ready mix concrete to replace secondary wire mesh is 0.8 Kg. 1m3.

If you require any special application please consult, **POLYCOO** - Technical department for dosage rate.

PACKAGING

Normally 0.8 Kg., other pack sizes could be supplied on request.

SHELF LIFE

Over 10 years

HEALTH AND SAFETY

POLYFIBER M is safe for employees to handle, is not considered hazardous and does not affect human skin.

TECHNICAL SERVICES

For any further technical advice and recommendation for the use of all **POLYCOO** products, please consult the nearest **POLYCOO** technical office.



Under technical collaboration with

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