

PolyMesh[®]

MACRO CONCRETE FIBER

structural macro fibers made of modified polyolefin

Spheres of usage:

- Tunnels, metro
- Road surfaces
- Embankments, dams
 - Reinforced concrete products
 - Industrial concrete floors
 - Parking, storage areas



PolyMesh[®] is a structural macro fiber made from 100% primary polypropylene which has been thermally, chemically and mechanically modified. Perfectly distributed in the concrete grout, the fibers create a highly effective three-dimensional concrete reinforcement system. **PolyMesh[®]** is used to reduce shrinkage of ductile concrete, increase shock resistance and absorb destructive energy. This supertough fiber provides maximum durability, structural improvements and effective control of secondary and temperature cracks. **PolyMesh[®]** fibers are cheaper, more environmentally friendly and lighter than steel reinforcing elements.

PolyMesh[®] is

- Reduced plastic shrinkage and crack formation in concrete
- Absorption of energy of internal stresses
- Increased resistance to shock and destruction
- Chemical inertness and resistance to alkalis and acids
- Safety and ease of use
- Increased frost resistance, no corrosion
- Reduced tear-and-wear of concrete pumps and hoses
- Water-soluble packaging - just add fiber bags to the concrete mixer
- Cost-efficient economical alternative to steel mesh and steel fiber

PolyMesh[®] PRODUCT PARAMETERS

Form / configuration - gray fibers twisted into a bundle, monofilament.

Material - polyolefin 100%, modified.

Packaging - the fiber is packaged in water-soluble bags of 1 kg, in carton boxes of 10 bags (10 kg). Up to 300 kg on a pallet.



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TECHNICAL DETAILS

Fiber length	Diameter of a single fiber	Relative density	Tensile breaking strength	Modulus of elasticity	Solubility in water	Melting point	Chemical Resistance to Acids and Alkalis
54 mm 38 mm 24 mm	0,3 mm	0,91 gram/cm ³	500-600 MPa	min 4 GPa	water-insoluble	160-170°C	excellent grade

USAGE

PolyMesh[®] fibers are added to concrete at any stage of the concrete mixing. Place the required amount of water-soluble fiber bags in a concrete mixer. For equal distribution of fibers, it is necessary to mix the concrete grout for 6-8 minutes. Before unloading fresh concrete on the site, the concrete mixer must be spinned at maximum speed for 2 minutes. **PolyMesh**[®] fibers are developed for equal disperse throughout the concrete grout when mixed with other components.

DOSAGE

The minimum dosage for **PolyMesh**[®] starts at 1 kg/m³. The recommended dosage range for **PolyMesh**[®] is from 2 to 8 kg/m³. Used in the appropriate dosage, **PolyMesh**[®] is the ability to replace steel fibers, welded wire mesh, or significantly reduce steel bars reinforcement. **PolyMesh**[®] fibers are a safe and easy-to-use alternative reinforcing system that is stable in alkaline concrete where high chemical resistance is required.

MATERIAL COMPATIBILITY

PolyMesh[®] is compatible with all commonly used concrete additives and performance enhancing chemicals. **PolyMesh**[®], when added to the concrete grout, does not change the water-cement ratio and the ratio of components.

STORAGE

Shelf life is up to 36 months under condition that the fiber is stored in a dry place at a temperature from 0 to +40°C without exposure to direct sunlight. The fiber must be in the original factory packaging. The placement of boxes with fiber should take place in a room protected from weather conditions, with a humidity of not more than 50%.

ADDITIONAL INFORMATION

C-Light GROUP Company is a certified manufacturer of microfiber **FiberMix**[®] and structural macrofiber **ArmoTec**[®]. We are a full cycle manufacturer, from procurement of raw materials to the finished product. Our production is certified according to the system ISO 9001:2015. We have more than 10 years of experience in the polymer reinforcement market.