

## ArmoTec®

MACRO CONCRETE FIBER



high-performance structural macro fibers optimized for road surfaces, industrial floors, prefabricated items and shotcrete

**ArmoTec®** is a synthetic macro fiber made of extra strong polymer, developed for concrete reinforcement. Polymer reinforcing macro fibers are particularly suitable for replacing welded wire fittings and usually used metal fibers in concrete environments where high chemical and corrosion resistance are required.

Additional reinforcement of concrete, due to the homogeneous distribution of a huge amount of **ArmoTec®** macro fibers throughout the concrete matrix, controls the process of cracking and provides concrete with further reinforcement.

Concrete reinforced with **ArmoTec®** macro fibers has three-dimensional reinforcement with increased bending strength, shock resistance and surface abrasive hardness. **ArmoTec®** macro fibers will minimize cracking during shrinkage of concrete. Thanks to the special corrugated surface of the macro fibers, they provide excellent adhesion to concrete, increasing their effectiveness especially in shotcrete.

### ArmoTec®

- Redistributes the load - increased ductility/shock resistance
- Eliminates corrosion – durability
- Eliminates the setting of steel mesh
- Increases precast reinforced concrete production speed up to 50%
- Enhances abrasion and shock protection
- Safer and easier to work than steel
- Reduced tear-and-wear of concrete pumps and hoses

## ArmoTec® PRODUCT PARAMETERS

**Form / configuration** - a firm monofilament of a special corrugated shape. Macro fibers in large quantities are bundled in a water-soluble film.

**Material** - polyolefin with modifiers.

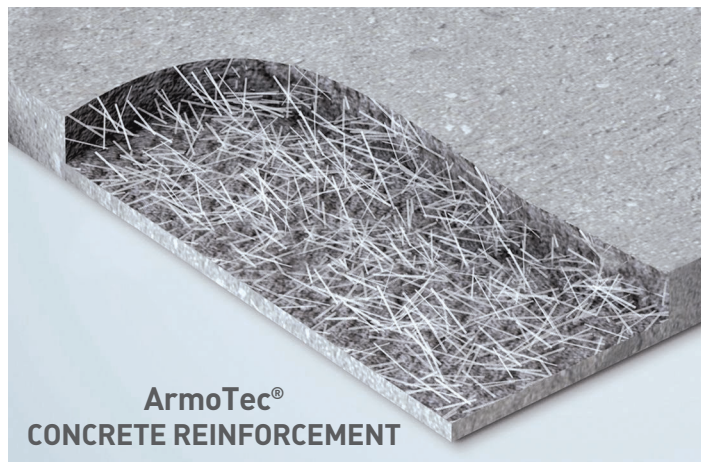
**Packaging** - packages of 3 kg. Other type of packaging is available upon request.

### LLC "C-Light Group"

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## TECHNICAL DETAILS

Fiber length	25/40/55 mm (±2 mm)
Equivalent diameter of single fiber	0,8 mm
Tensile strength	400 MPa
Modulus of elasticity	6,0 GPa
Consistency of concrete with 4 kg/m <sup>3</sup> of ArmoTec	VeBe time 6 sec
Material	Polyolefin 100%
Density	0,91 g/cm <sup>3</sup>
Colour	graphite
Alkali and chemical resistance	excellent
Melting point	160 °C
Ignition point	350 °C
Absorption	zero
Q-ty in 1 kg, more than, pcs	50 000 (for length 40 mm)



## USAGE

**ArmoTec®** structural macro fibers can be added to concrete mix at any time prior to concrete application. It is generally recommended to add any fibrous material in the concrete plant during dosing. Macro fibers must be mixed with concrete for a minimum of three (3) to five (5) minutes with a maximum mixing speed, depending on the type of mixer, to ensure complete dispersion and uniformity. Other impurities can be added regardless of macro fiber addition. Synthetic macro fiber **ArmoTec®** is compatible with all admixtures.

## DOSAGE

The dosage rate will vary depending on requirements for concrete reinforcement and on providing equivalent resistance to tensile strain and bending resistance. The recommended dosage range for **ArmoTec®** is from 2 to 8 kg/m<sup>3</sup>. When used in the appropriate dosage, **ArmoTec®** is an option to replace steel anti-shrink mesh, metal fiber or ordinary steel bars as a safe and easy to use alternative reinforcement system that is resistant to corrosion and alkali.

## STORAGE

Shelf life is up to 36 months under condition that the macro fiber is stored in a dry place at a temperature from 0 to + 40°C without exposure to direct sunlight. The macro fiber must be in the original factory packaging. The placement of boxes with macro 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 macro fiber **PolyMesh®**. 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.