POLIFIBER PLUS®
FIBRA ESTRUCTURAL

DATA SHEET

STRUCTURAL SYNTHETIC FIBERS POLIFIBER PLUS 48 MM CE

POLIFIBER PLUS® is a modified polyolefin structural fiber, designed to be added to shotcrete and poured concrete making it able to avoid cracking and increase its durability, improving metal meshes and fibers attributes and reducing costs.

These fibers replace the armor designed to absorb tensile forces created during the concrete setting and hardening process, making it possible to substitute either totally or partially, depending on the case, the main armors.

When adding **POLIFIBER PLUS®** to concrete or mortar it achieves the following advantages:
Increases energy absorption and tensile strength, capability over the levels required by the EHE-8, and this is why they are considered structural fibers.
They are highly resistant to chemical attacks, and opposite to metal mesh and fibers, reinforced concrete is not affected by corrosion and oxidation/rusting process.
Due to physical and chemical treatments applied to this fiber, an exceptional fiber-concrete adhesion is achieved.
It distributes in a uniform and homogeneous way the tensile forces created during the cracking process, avoiding the formation of small cracks which could turn into bigger ones.
It increases impact and abrasion forces resistance, as well as tensile strength.
It also increases its impermeability and reduces concrete disintegration risks.
It improves its passive resistance to fire, decreasing the phenomenon known as spalling.

Our fiber is specifically indicated to be **used** in:
- Concrete slabs, screeds and floors, as well as precast elements.
- Shotcrete and projected mortar, used in tunnels, mining, pools …
- Piers and marine platforms.
- Security structures: glue, safe, armor.
- In general, for concretes that are used to increase the tensile strength, impact resistance, and energy absorption capacity.

PHYSIO-CHEMICAL PROPERTIES:
- Raw material used: Polypropylene Homopolymer and Polyethylene.
- Density: 0,91 grams / cm^3
- Production process: Extrusion
- Shape: Flat and engraved monofilament
- Fiber length: **48 mm** (*permissible Δ: ±5%)
- Fiber class: type II
- Equivalent diameter: 0,93 mm
- Slenderness (λ): 52,17
- Fiber thickness: 5.700 denniers per filament
- Distortion temperature: 110ºC
- Decomposition temperature: 280ºC
- Tensile strength: **560N/mm^2 (400 MPa)** (*permissible Δ: ±7.5%)
- Elongation at break: 4,4 %
- Elasticity modulus:**20,5 kN/mm^2(6.200 MPa)**(*permissible Δ: ±10%)
- Consistence with 6kg / m^3 fibers: Vebe time 8,72 s
- Total length: 1.579 m / kg. of fiber.
- Fiber frequency: 32.895 fibers / Kg

***% Of permissible variation for the mean of the measurement of at least 30 fibers, according with the Rule UNE-EN 14889-2 .**

APPLICATION DETAILS:
- Dosage: 6 kg/m^3 to achieve the residual resistance to flexion result of 1,5MPa a 0,5mm CMOD and a residual resistance to flexion of 1MPa a 3,5mm CMOD, according with the requirements of the Rule UNE-EN 14889-2.
- Add the fiber directly to the mixer at any time during the mixing or even at the end. Never pour directly in the mixing water before being added to the rest of the concrete components. Once the fiber has been added, prolong the mix for at least 5 minutes.
- The product doesn't need any specific caution to handling.

* Permissible variation: According with Rule UNE-EN 14889-2

EXTRUSION
EXTRUSION DE POLIMEROS, S.A.
AENOR ER Empresa Registrada UNE-EN ISO 9001
IQNet CERTIFIED MANAGEMENT SYSTEM
POLIFIBER®
BUREAU VERITAS Certification