XLINK®

THE CONCRETE FIBER

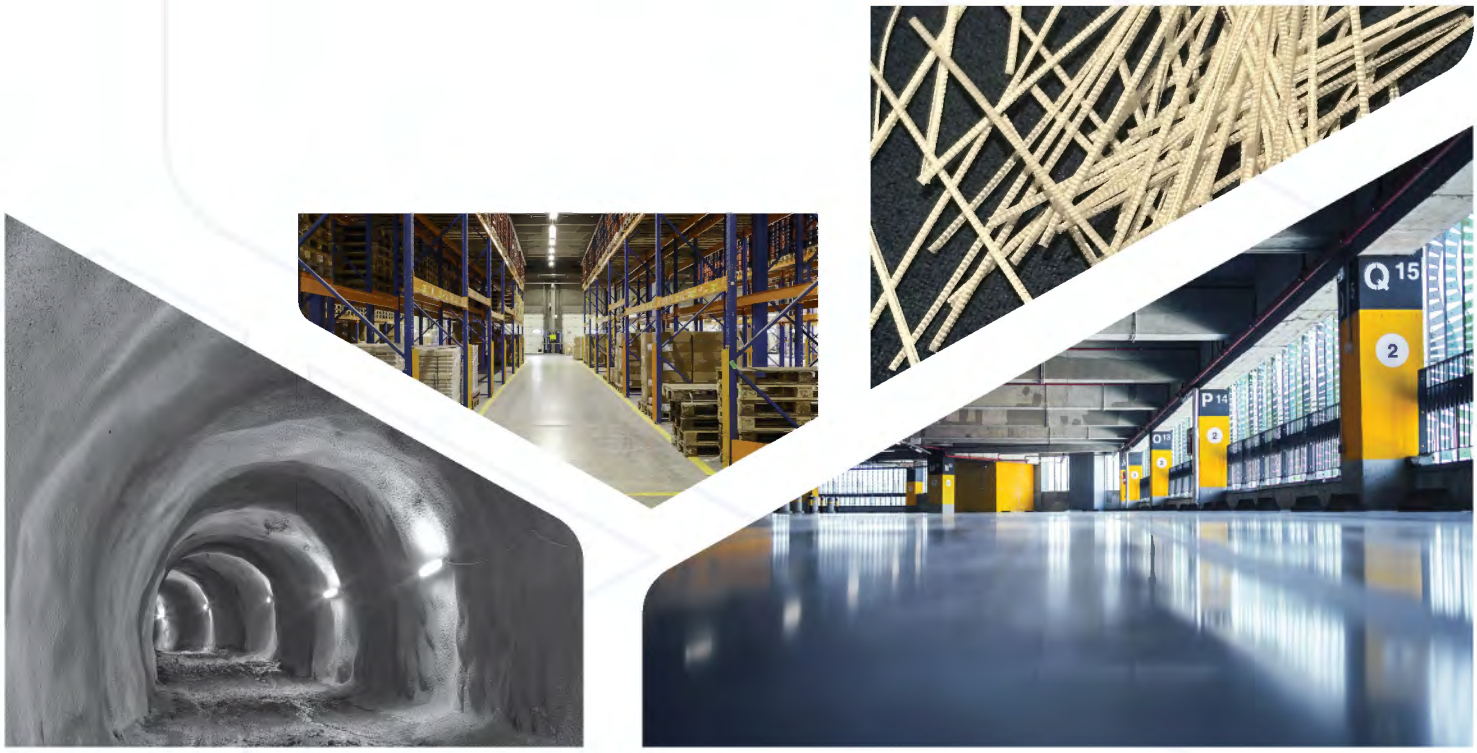
XLINK® is a high-performance polypropylene (PP) macro-synthetic fiber designed to enhance concrete applications. Produced through extrusion, it features a surface embossing pattern and a new-generation mechanical anchoring, developed to meet various performance requirements of concrete. It is ideal for ready-mix concrete, precast elements, and shotcrete, and is suitable for both above-ground and underground applications. The embossed surface improves fiber-matrix adhesion, significantly increasing the residual flexural strength of concrete.

APPLICATIONS OF XLINK® MACRO:

- **Industrial flooring on grade (Slab-on-Ground)**: improved durability, better crack control, and more uniform stress distribution.
- **Railway systems and plate elements for structural reinforcement**: increased load-bearing capacity, improved load distribution, and long-term performance.
- **Tunnel linings and shotcrete applications**: enhanced structural integrity, ductility, and crack resistance.
- **Mining applications**: improved stability and safety of underground structures thanks to the three-dimensional reinforcement provided by the fibers.
- **Precast structural elements**: improved strength, ductility, and design flexibility in modular solutions.
- **Dams and hydroelectric plants**: effective reinforcement for large-scale infrastructure subject to high mechanical and environmental stresses.
- **Concrete roads, highways, and bridges**: increased resistance to abrasion, dynamic loads, and atmospheric agents, **with improved durability of bridge deck covers**.

ADVANTAGES OF XLINK® MACRO:

- **Full support in design** and **dedicated technical assistance**.
- **Improved load redistribution**, with increased ductility and toughness.
- **Durability with no risk of corrosion**.
- **Reduction/elimination** of steel reinforcement mesh.
- **Faster casting and production times**, with efficiency improvements of **up to 40–50%**.
- **Improved resistance to abrasion and impact**.
- **Significant reduction in carbon footprint** (**80–85%** compared to steel reinforcement).
- **Greater safety and lighter handling.**
- **Reduced wear of equipment** (pumps and concrete pipelines).
- **Lower overall project costs**, with rebound reduction **up to 35–40%** in shotcrete.



TECHNICAL CHARACTERISTICS	XLINK® 50 MACRO
Fiber Class	Class II – structural use **(EN 14889-2:2006)**
Tensile Strength	640 – 750 MPa
Elastic Modulus (Young's)	10 GPa
Dimensions	50 mm (L) × 0,55 mm (W)
Geometry / Structure	Monofilament with continuous embossing
Base Material	100% virgin copolymer polypropylene
Number of Filaments	> 100.000 pcs/kg
Melting Point	160°C
Alkali Resistance	**Excellent**
Electrical Conductivity	**No**
Water Absorption	**No**
Available Lengths	30 mm, 40 mm, 50 mm, 55 mm
Packaging	3 kg (paper bags) – other options available on request
Dosage	1.5 – 7.5 kg/m³ depending on application

CERTIFICAZIONE DI SISTEMA QUALITÀ DNV ISO 9001

EPD INTERNATIONAL EPD SYSTEM

CE

TEST RESULTS EN 14889-2

Fr1 (MPa)	Standard limit Fr1 (MPa)	Fr4 (MPa)	Standard limit Fr4 (MPa)
1.7 MPa	**1.5 MPa**	**1.7 MPa**	**1.0 Mpa**

Average values obtained on C30/37 concrete specimens with 3 kg/m³ of XLINK® Macro 50, tested after 28 days in accredited European laboratories.

OFFICE & PRODUCTION

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