

Polipropilen Elyaf (6 mm)



100% polyamide 6.6–based, polypropylene micro fiber (6 mm)

Description

Hammerfast Polypropylene Fiber 6 mm is a high-performance, polymer-based synthetic micro fiber that disperses homogeneously in plaster, screed, and concrete, providing effective crack control against short-term plastic shrinkage and long-term drying shrinkage in fresh concrete.

Advantages

- Provides long-term and high-level protection against crack formation.
- Does not form clumps; distributes homogeneously throughout the concrete.
- Thanks to its high product density, it does not generate dust during mixing and packaging processes.
- Easy to apply.
- Reduces labor and equipment costs.
- Resistant to corrosion, alkalis, and acids.
- Offers easy storage and more advantageous logistics costs.
- Has a polymer structure that does not interfere with magnetic fields.
- Improves freeze-thaw resistance.
- Enhances the surface properties of concrete and prevents bleeding.
- Reduces internal pressure stress in concrete during fire, minimizing the risk of explosive spalling.

Areas of Application

- Industrial floor concretes
- Screed applications
- Ready-mix concrete production
- Precast concrete elements
- Road and pavement concretes
- Plaster and repair mortars
- Water structures (pools, tanks, etc.)

Application Method and Dosage

- Hammerfast Polypropylene Fiber 6 mm; is used in screed, precast concrete elements, plaster, mortar, and construction chemicals applications, at a dosage determined according to the specific requirements of the application.
- Plasters (Gypsum and Cement-Based): 0,3–1 kg fiber/ton of mortar
- Screeds: 0.3 kg/ton
- Ready-Mix / Precast Concrete: 0,9–1,2 kg/m³

Mixing

- Hammerfast Polypropylene Fiber 6 mm is produced in special water-soluble packages.
- In applications requiring dry mixing, it is mixed with the binder and aggregates to ensure maximum homogeneity.
- At concrete production plants or on-site concrete mixers, it can be added to the concrete along with its packaging, allowing for quick and easy application.
- Hammerfast Polypropylene Fiber 6 mm is compatible with all concrete admixtures and concrete grades.

Technical Properties

Density	1,14 gr/cm ³
Length	6 mm
Filament Diameter	27 microns
Tensile Strength	900 Mpa
Elongation at Break	% 17,55
Melting Point	260 °C
Alkali Resistance	Very Good
Corrosion Resistance	Very Good
Fiber Count	111 million fibers/kg
Fiber Type	Monofilament (Single Fiber)
Water Absorption	None
Raw Material Type	%100 Polyamid 6.6
HS code	5503.40.00.00.00

Note: Values are based on a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5%.

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Precautions

- Fibers should be added slowly and in a controlled manner to the mix to prevent clumping.
- Sufficient mixing time (minimum 3–5 minutes) must be ensured for homogeneous distribution.
- Exceeding the recommended dosage may negatively affect workability and cause difficulties in surface finishing.
- Fiber usage does not eliminate the need for structural reinforcement; it only provides micro-crack control.
- At high dosages, fibers may appear on the surface (hairing); this should be minimized using proper finishing techniques.
- Fibers do not require additional water in the concrete mix; adding water may reduce concrete performance.
- Concrete application rules must be followed under cold and hot weather conditions.
- Using fibers alone is not sufficient to prevent structural cracks; proper concrete design must be applied.
- In pumped concrete applications, dosage and mix design should be controlled to prevent equipment clogging.
- Fibers should be stored in a dry environment and must not be mixed with moist or wet materials.
- Surface curing procedures must not be neglected after application.

Storage and Shelf Life

- The product can be stored for up to 24 months from the production date if kept in its original, unopened packaging, in a dry and closed environment, protected from direct sunlight.
- If unused, the packaging should be tightly sealed, and pallets should not be stacked. High temperatures may increase viscosity and deteriorate the chemical structure of the product.

Packaging

- The standard package weight is 450 g ($\pm 1.5\%$).
- Hammerfast Polypropylene Fiber 6 mm is packed in special water-soluble packages.
- 306 kg of product is shipped per pallet.

Cleaning of Tools

All tools used should be cleaned immediately after application with lukewarm water

Safety Precautions

- Keep out of reach of children.
- Do not eat or swallow.
- Keep away from foodstuffs.
- Avoid inhalation and contact with skin.
- May cause allergic reactions
- In case of contact with eyes, rinse thoroughly with plenty of water and consult a doctor.
- Use gloves, goggles, and protective clothing during application.
- Wash hands thoroughly with water after application.
- For detailed safety information, read the Material Safety Data Sheet (MSDS).

Quality Certificates

- ISO 9001
- ISO 14001



9001:2015



14001:2015