



Concretum® SUPERFIBER H

High Modulus Polymer Fibers for Sprayed Concrete and Flooring

Concretum® SUPERFIBER H are high modulus polymer fibers with hooked ends for sprayed concretes (tunnelling) and normal concretes in building and civil engineering. Using Concretum® SUPERFIBER H, it is possible to reach the same efficiency as using steel fibers, but with all the advantages of a synthetic fiber.

Applications

The fibers increase the tensile strength and ductility of concrete. Fibers are therefore used for construction materials that put great demands on tensile strength and ductility. Concretum® SUPERFIBER H meet these expectations reliably.

- In general as a replacement of steel fibers.
- Sprayed concrete for tunnelling.
- Sprayed concrete in civil engineering.
- To produce concrete surfacing.
- To produce carriageway surfacing.
- To produce single layer industrial floors.
- To produce concrete industrial floors.
- To produce bottom plates.
- To produce cellar walls.

Properties

Concretum® SUPERFIBER H are extruded high modulus polymer fibers with hooked ends. The high Young's Modulus is due to stretch forming during production. The bond between fiber and concrete is outstanding thanks to the hooked ends and the surface structure. This leads to a substantial increase in residual tensile strength as well as fracture energy of the fiber concrete. The tensile strength of 4000 N/mm² which is required by SIA 162/6 is reached by using only 5 kg of Concretum® SUPERFIBER H (Declaration per m³ concrete).

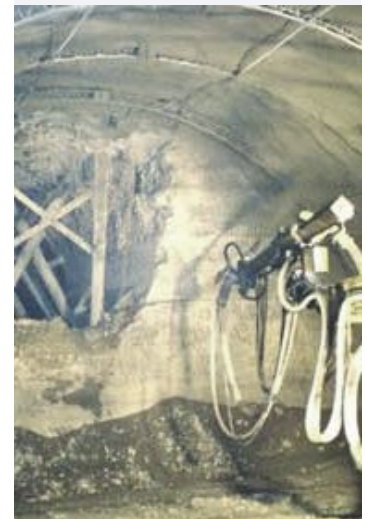
Concretum® SUPERFIBER H meet all requirements of the Swiss standard SIA 162/6 and the European standard EN 14880-2 for synthetic fibers as for applications with structural safety analysis (System 1). The fibers do not have any adverse health effects.

Advantages

- Low rebound with sprayed concrete.
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Further Information

- ↓ Product Information SUPERFIBER H (PDF, 601 kb)
- ↓ Mischanweisung für Betonwerke (German only) (PDF, 949 kb)
- References
- Sources of Supply



Application as a replacement of steel fibers in sprayed concrete.



Automatical conveyance possible.

- No mechanical wear of mixing, pumping and transportation devices.
- Easy to handle because of the low weight.
- Low danger of injury.
- The fibers are heavier than water and sink in the sedimentation tank.
- Fibers that stick out can be burned off.
- High resistance to alkali.
- No corrosion.

Technical data

SUPERFIBER H 880/40	
Diameter	1.2 x 0.5 mm
Equivalent circular diameter	880 µm
Length	40 mm
Aspect ratio	105
Tensile strength	400 - 800 N/mm ²
Young's Modulus	11'300 N/mm ²
Breaking elongation	8 %
Intake of water	0.04 %
Specific density	1.36 kg/m ³
Melting point	256 °C
Dosage	5 - 10 kg/m ³
Packaging	Bag of 5 kg, pallet of 100 bags
Colour	Dark grey
Storage condition	Dry
Application	Replacement of steel fibers
Impact	Higher ductility and tensile strength
Surface	Structured
Shape / geometry	Hooked ends

