

Concretum® SUPERFIBER 40/8

High Modulus Polymer Fibers for Crack Width Limitation

Concretum® SUPERFIBER 40/8 are high modulus polymer fibers for mortar and concrete. They have a higher Young's Modulus as compared to concrete. For this reason, there is a long-term reduction of cracking widths which result of the shrinkage.

Applications

- In general as a replacement of polypropylene fibers
- For long-term cracking width limitation
- To avoid early-age cracking
- To increase the fire-resistance of concretes and mortars

Properties

Concretum® SUPERFIBER 40/8 are shortcut fibers made of a high-performance polymer (synthetic material). The Young's Modulus of this fiber is higher as compared to mortar and concrete and their tensile strength is higher as compared to prestressing steel. The thin fibers feature a better bond to the cement matrix and therefore guarantee a homogeneous and competitive construction material.

Because of Concretum® SUPERFIBER 40/8 the cracks are more evenly distributed in the young concrete. Instead of one big crack various small micro cracks will emerge. Concerning the durability, those small cracks are harmless. Unlike traditional synthetic fibers, Concretum® SUPERFIBER 40/8 bring about long-term cracking width limitation. The fibers are only dosed with 0.6 kg/m³.

Advantages

- Long-term cracking width limitation
- Low danger of injury
- The fibers are heavier than water and sink in the sedimentation tank
- Fibers that stick out can be burned off
- Very high resistance to alkali
- No corrosion
- Simple surface finish
- Low dosage: 0.6 kg/m³ concrete

The fibers do not have any adverse health effects.

Further information

- References
- Sources of Supply



Application e.g. for concrete parking areas or for concrete floors in warehouses.



Technical data

SUPERFIBER 40/8	
Diameter	40 μm
Length	8 mm
Aspect ratio	200
Tensile strength	1'600 N/mm ²
Young's Modulus	42'000 N/mm ²
Breaking elongation	6.5 %
Specific density	1.3 kg/m ³
Melting point	213 °C
Bond strength to the cement matrix	> 3 N/mm ²
Dosage	0.6 kg/m ³
Packaging	Bag of 18 kg, pallet of 21 bags
Colour	Yellowish
Storage condition	Dry
Application	Replacement of polypropylene fibers
Impact	Long-term cracking width limitation

