

# DATASHEET

## Fibrofor<sup>®</sup> HIGH GRADE



### Product description

High Grade is an upgraded, bundled, fibrillated high performance fiber serving as a structural concrete reinforcement. The particularly rough surface ensures efficient anchoring inside the concrete and guarantees fast three-dimensional distribution through-out the matrix during the mixing process. The enhanced technical parameters of the concrete can be used for structural design purposes.

High Grade serves as a structural reinforcement, increases the impact resistance of the concrete and can also be used in structural applications.

High Grade prevents sedimentation – the subsequent settlement of the matrix.

High Grade creates a high level of resistance of concrete structures exposed to aggressive waters.

### Application

High Grade is used in a wide variety of fields: prefabrication applications; pumped, crane-truck-applied and shotcrete; bridge and concrete ceiling construction; floor slabs and concrete walls; repair of concrete structures; concrete piles; thin-section walls; special foundations and various special applications in the area of concrete construction.

On the basis of Eurocode 2 and the Fibre Concrete Guidelines it is possible to prove the adequate structural strength of slabs, concrete fields, foundations, walls and other structures and eliminate the steel reinforcement partially or completely.

### Dosage

The recommended approximate addition rate for High Grade is 1 kg/m<sup>3</sup> (1.7 lb/yd<sup>3</sup>) of concrete as a structural reinforcement. For shotcrete and gunnit, the recommended addition rate is 1,5 to 6 kg High Grade per m<sup>3</sup> (2.5 to 10.0 lb/yd<sup>3</sup>).

High Grade is available in standard lengths of 19 mm (<sup>3</sup>/<sub>4</sub> in.) (type 190) and 38 mm (1½ in.) (type 380).

**Physical properties**

Material	pure coated polyolefins twisted-fibrillated
Form	
Bulk density	0,91
Lengths	standard, tolerance +/- 5%
Colour	beige
Resistance to acids/alkalis	inert
Tensile strength	≈ 400 N/mm <sup>2</sup> (5'800 lb/in <sup>2</sup> )
Modulus of elasticity	≈ 4900 N/mm <sup>2</sup> (71'000 lb/in <sup>2</sup> )
Softening point	≈ 150° C (300° F)
Foil thickness	≈ 80 µm (0.00315 in.)

**Processing**

The addition of High Grade for dry mixing in concrete production facilities does not require any extension of the mixing time. The selected mixing times of the individual concrete formulations can be retained. Special mixtures for special products may require an extension of the mixing time.

High Grade can also be added directly to mobile concrete mixers. The rule here is: Per m<sup>3</sup> (yd<sup>3</sup>) of matrix, 1 minute mixing time at maximum rpm of the mixing drum.

High Grade can be readily processed with any additives known to us.

**Caution:** The addition of will increase the rigidity of the concrete!  
Optimise the desired placement consistency using concrete plasticiser!  
Do not add any additional water!

**Packaging**

Bags	1 kg (2.2 lb)
Boxes	12 bags of 1 kg (26.5 lb)
Pallet	25 boxes = 300 kg (661 lb)

**Warranty**

High Grade fulfils the standard EN 14889-2 and therefore guarantees a consistently high quality.

Brugg Contec AG does not have any control over production processes using High Grade. Therefore, Brugg Contec AG declines any liability for the associated end products.

**Partner for India**

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