

FIBERCHEM

Polypropylene fibres for mortars and concretes

Technical Data Sheet, September 2015

DESCRIPTION

Fiberchem consists of polypropylene fibres pre-treated for micro-reinforcing mortars and concretes. Available fibres are 4 – 6 – 9 – 12 – 18 – 24 mm long.

FEATURES

Fibres **Fiberchem** consist of small “bunches” treated on the surface. They disperse easily during wet and dry mixing, so they are particularly suitable for the preparation of pre-mixed dry products.

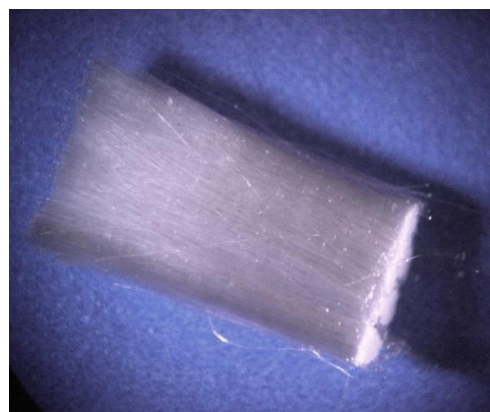
Their thickness ranges from 18 to 35 microns according to their length. As a consequence, the number of fibres per kg varies as well. For instance, the number of fibres in a kilo of fibres 6 mm long (18 μ thick) is about 600 millions, while the fibres 12 mm long are about 300 millions. Using **Fiberchem** to mortars and concretes improves their plasticity and thixotropy, while reducing the plastic shrinkage in the wet state.

In the hardened state, it reduces hydraulic shrinkage and improves all the final characteristics. In particular, it improves waterproofing as well as the resistance to bending, shocks and vibrations.

Plasters and mortars with **Fiberchem 6 mm** can be sprayed using a common spraying machines without clogging the nozzle. They can be applied in layers up to 4 - 5 cm thick per coat without any problem of sliding down and without increasing the waste.

Plasters, mortars and smooth finish mixtures produced with **Fiberchem 4 – 6 mm**, at the recommended dosage, do not show on the surface any fuzz, when applied with a spatula.

Fiberchem 12 – 18 - 24 mm are normally used for mortars to apply in very thick layers, micro-concretes and concretes, in order to reduce hydraulic and plastic shrinkage. Their use integrates the arc-welded mesh net, but does not replace it at a level of bearing capacity.



USE

Fiberchem 4 – 6 – 9 mm are used in the preparation of premixed dry adhesives, plasters, smooth finish mixtures and cement mortars.

For a better dispersion, it is advisable to add them at the beginning of the loading of the components in the mixer and to lengthen the mixing time for 2 minutes.

Fiberchem 12 – 18 – 24 are used in the dry and wet preparation of mortars, micro-concretes and concretes.

When wet mixture is prepared on the building site, it is advisable to add in the mixer the sand and the fibres **Fiberchem**, then the aggregates, and at the end the binders. Keep mixing until a homogeneous mix is obtained.

TECHNICAL
DATA

	Fiberchem 4- 6 - 8 mm	Fiberchem 12- 18 -24 mm
Chemical nature:	Polypropylene	Polypropylene
State:	Fibrous solid	Fibrous solid
Colour:	White	White
Bulk Density:	0,91 kg/dm ³	0,91 kg/dm ³
Tensile strength:	0,38 kN/mm ²	0,40 kN/mm ²
Modulus (Young):	3,50 kN/mm ²	3,50 kN/mm ²
Resistance to alkalis and acids:	Excellent	Excellent
Water absorption:	Negligible	Negligible

DOSAGE

The dosage of **Fiberchem 4 – 6 – 9 mm** is 0,05 – 0,15% on the final mixture. The dosage of **Fiberchem 12 – 18 – 24 mm** is 0,5 – 1,5 kg/m³. The dosage can obviously change in accordance with the expected final characteristics.

STORAGE AND
VALIDITY

Since **Fiberchem** is packed in cardboard boxes, store it in a dry place.

PRECAUTIONS

Fiberchem fibres are not harmful at all; anyway it is advisable to use a dust mask while handling **Fiberchem 4 and 6 mm**.

PACKAGING

25-kilo cardboard boxes

All the data stated in this technical sheet are based on the best of our knowledge and experience. It is advisable to carry out preventive tests. In any case, PENTACHEM does not assume any responsibility for any damage or defect caused by the use of our products, as the employment conditions are not under our control. We also inform that our technical service is at our customers' disposal for any information concerning the correct employment of our products.