

**BAUCON®****Polypropylene fibres****PRODUCT DESCRIPTION**

**BAUCON®** is a fiber with a diameter of 19 microns made of extruded polypropylene granules, combined in bundles and cut to length 12 mm.

**USE**

- Added to concrete mixture used as microreinforcement minimizing cracking due to the inherent shrinkage of concrete
- For use in concrete mixtures for spraying concrete, screeds and mortars
- The addition of polypropylene fibers eliminates the use of expensive and often ineffective antishrinkage steel mesh reinforcement.

**PRODUCT CHARACTERISTICS**

- Stops the formation of natural shrinkage cracks in the first period of "life" of concrete, where it is low Young's modulus and shrinkage stresses exceed its strength (see figure)
- The addition of polypropylene fibers BAUCON and appropriate selection of the concrete mixture causes cracks are extremely small, and their sizes decreased by two orders of magnitude and cracks are invisible without affect to the strength of concrete.
- Action of polypropylene fibers ceases when the Young's modulus of concrete exceeds the value of Young's modulus of polypropylene
- Reduction of cracks
- Increases strength of concrete
- Increases waterproof
- Additional aeration to increase frost resistance
- Slowdown of carbonation of concrete

**DOSAGE**

BAUCON polypropylene fibers are added to concrete mixture in quantity of  $0.6 \text{ kg/m}^3$ , to the mortar -  $0.9 \text{ kg/m}^3$ . The difference of dosing is result of larger share of the cement matrix in mortars. Despite the low dosage, polypropylene fibers are dispersed in the cement matrix of concrete in large quantity. This is due to their very small thickness - 2.5 dtex\* only, which corresponds to a diameter of 18.7 microns.

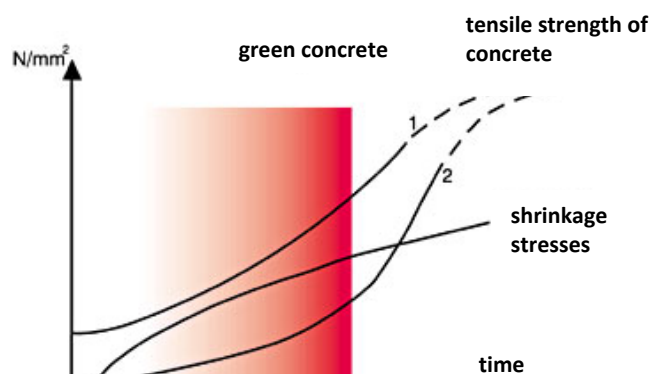
At standard dosage of  $0.6 \text{ kg/m}^3$ :

- total area of fibers is  $141 \text{ m}^2/\text{m}^3$
- the total fiber length is  $2400 \text{ km/m}^3$
- the amount of fiber is approx. 200 062 000 pcs/ $\text{m}^3$

**MIXING**

BAUCON polypropylene fibers are added to the mixer after the aggregate, and before the cement, water and admixtures. Required mixing time of couple of minutes.

Mixing in truck mixer required a high rotational speed (12 -18 RPM), Then pour the appropriate amount polypropylene fibers and leave mixer at high speed for 4 to 6 minutes to obtain regular mix (no less than 70 revolutions)



1 – with polypropylene fibres  
2 - without polypropylene fibres

**MISCELLANEOUS INFORMATION**

All the information herein refers to products stored and used according to our recommendations, has been presented in good faith and takes into account the current state of knowledge and experience of BAUTECH. You are obliged to use the product in accordance with its intended purpose and BAUTECH's recommendations. All the technical information provided is based on laboratory tests and trials. Out-of-laboratory tests may give different results due to the conditions, location, manner of application and other circumstances that are out of BAUTECH's control. Any different recommendations issued by our employees must be made in writing; otherwise, they shall be deemed null and void. These instructions replace all the previous ones and make them void.

**PACKAGING**

0,6 kg bags, 20 pcs in sack

**STORAGE**

in original, tightly closed packaging, in ventilated rooms.

**TECHNICAL DATA**

Linear mass	2,5 dtex*
Lenght	approx. 12 mm
Diameter	approx. 19 µm
Density	approx. 0,9 g/cm³
Specific surface	2 350 cm²/g
Tensile strength	350 N/mm²
Young's modulus	3500 N/mm²
Absorbability	0%
Temperature of deformation	145°C

\*1 dtex = weight in grams per 10 000 m of fibres

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