Brituré Co., Ltd.

Professional supplier of Synthetic Fiber for Concrete Reinforcement

- **PP Fiber Monofilament Form**
- **PP Fiber Fibrillated Mesh Form**
- **PP Fiber Twisted Bunchy Form**
- **Synthetic Macrofiber**

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PP Fiber Monofilament Form (110F)

◆ Introduction:

Briture PP Fiber 110F is made of 100% virgin homopolymer polypropylene with form of monofilament type, it is mainly used for concrete and motar reinforcement, anti-cracking.

◆ Function

Resist to shrink & crack
Increase freezing & thawing resistance
Prevent mortar split and crackle expansion
Increase seepage resistance
Improve tendons protection
Increase impact resistance and peeling resistance
Increase friction resistance
Replace steel net (using in plastering)

◆ Features

A. Easy to be dispersed in mortar or concrete and no agglomeration, it can guarantee the property of crack resistance effectively

B. Easy to be used: No need to change the proportion of mortar, just put the fibers into the mortar mixture and stir for a moment after adding water.

C. It with fine economic property: The equivalent diameter of fiber is only φ 0.03mm, so the ratio of diameter and surface area is high and on the basis of crack resistance, it can reduce the amount (to about 0.6kg/m 3).

D. Easy to plaster: As the great number of thin fibers spread into mortar evenly, the plastering is much easily and this can improve the binding strength between surface and base.

E. It with stable chemical property, strong acid &alkali resistance, and can be used in any engineering projects.

◆ Applying Instruction:

A. Compound Amount. To resist the common cracks on surfaces, 0.6kg/m3 fibers to cement paint is enough, and for reinforced application 0.9-1kg/m3 is enough.

B. Stirring requirement. The proportion of cement, sand and aggregate is no need to be changed. Put cement, aggregate, additive and fiber together, then stir after adding enough water (Do not stir without water!) and time for stirring can be prolonged for 2~3 minutes in order to make the compound mix completely.

◆ Application:

A). Be suitable for the water–proof layer, floor, inner &outer wall of industrial and civil construction.
B). Increase cracking resistance on the surface of industrial workshop, warehouse and parking lot.
C). Increase cracking & seepage resistance of the ground in natatorium, swimming pool, pond and ditch.
D). Be suitable for any mortar projects and fine aggregate concrete projects.

◆ Specification:

Raw material	100% virgin PP	Fiber Type	Monofilament
Crack Elongation	15-20%	Melting point	160℃
Density	0.91	Tensile Strength	450Mpa min.
Fiber Diameter	25+/-5 microns	Fiber Length	6mm, 12mm, 18mm...
Alkali & Acid resistance	Strong		

PP Fiber Fibrillated Mesh Form 350M

◆ Introduction:

Briture PP Fiber 350M is made of 100% virgin homopolymer polypropylene with form of mesh, it is mainly used for concrete and motar reinforcement, anti-cracking.

◆ Function

Increase seepage resistance
Increase cracking resistance
Improve tensile, bending & folding strength
Prolong endurance
Increase fire resistance
Strong acid & alkali resistance and good endurance
Improve steel protection
Strengthen spurt & fatigue
Improve plastic deformity

◆ Applying Instruction:

A. Length : Generally, the proper length of the fiber added into concrete is 20 mm, and in the shotcrete is 10mm

B. Ratio Design: Usually the proper amount of fiber to concrete is 0.9kg/m3 , and the water-proof layer of the bridge requires 1.35-1.8kg/m3, and the spray concrete in the tunnel is also the same and other materials remain the same. The ratio of fiber and concrete can be determined by tests for special purposes. The fiber has better effects on the concrete with active compound materials, such as silicon ash, coal powder, ground slag and zeolite powder.

C. Mixer Adoption: Double-axle horizontal compelling mixer is better and self-dropping cylinder mixer can be used, too.

D. Mixing Process: Crushed stones, fibers and sands are put into the mixer in succession. After stirring for two minutes, fiber will fully spread and then add cement and water and stir normally. The addition of materials also can be put into as usual, but the stirring time should be properly prolonged to make fiber completely

E. Stirring Time: The purpose of the stirring is to make fiber fully spread into monofilament or the net fully spread, so generally the stirring time is 2-3minutes after the addition of polypropylene fiber-mesh.

◆ Application:

A. Projects like concrete road, bridge, airport road and industrial floor which strictly need cracking resistance. The lifespan of projects will be lengthened for 5-10

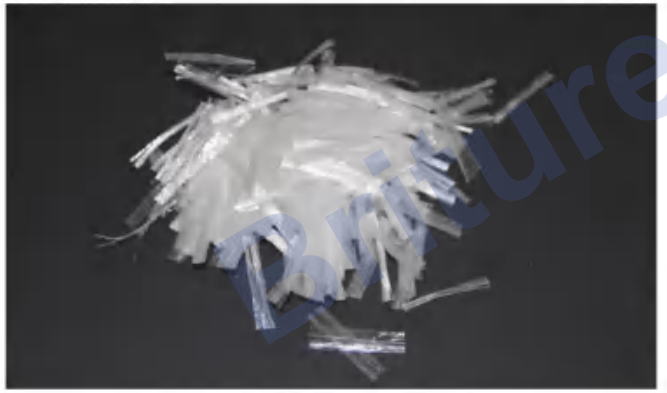
B. The walls of tunnels, mines, roofs and reservoir projects with special construction. When using spray technology in concrete construction, the PP fiber added into

C. River courses and dams, etc. The PP fiber can improve concrete's resistance to crack and squirt and wear to lengthen projects' life span.

D. Military defense works, dock banks and piers... It can greatly strengthen the concrete's spurt resistance and improve projects' safety and extend their life span.

◆ Specification:

Raw material	100% virgin PP	Fiber Type	Fibrillated Mesh
Crack Elongation	10%min.	Melting point	160℃
Density	0.91	Tensile Strength	560Mpa min.
Fiber Diameter	0.035mm	Fiber Length	12mm, 18mm, 20mm
Elastic Modulas	3500Mpa min.	Width	5mm
Alkali & Acid resistance	Strong	Water absorbency	no



PP Fiber Twisted Bunchy Form 500T

◆ Introduction:

Briture PP Fiber 500T is using polyolefin as its raw material, produced the rough surface treatment by special parallel thread extruding & twisting process. It has high break strength, better dispersion and strong combining ability, will be widely used to instead of steel fibre to reinforce the cement concrete and crack-resistant

◆ Applying Instruction:

A. Length: 54mm for common crack-resistant requirement.

B. Ration design of the fibre concrete: Generally the recommended amount to add to the concrete is more than 2.7kg per sqm （volume ratio is 0.3%）, reinforcement adding amount is 5.5kg, Compared with adding 47kg of steel fibre, 5.4kg polymer fibre has the same volume ratio to the concrete.

C. Matching Ratio: Usually, it is no need to Change the matching ratio of the concrete. Considering the requirement of fissure-resistant, the polymer fiber is recommend to combine with the PP fiber mesh form with the volume ratio of 1:1(0.9kg fiber-mesh to per sqm of cement concrete).

D. Mixer Adoption: Double-axle horizontal compelling mixer is priority

E. Mixing process: Crushed stones, fibers and sands are put into the mixer in succession. After stirring for two minutes, fiber will fully spread and then add cement and water and stir normally. The addition of materials also can be put into as common concrete, but the stirring time should be properly prolonged to make fiber com-pletely mixed

F. Shaping & Maintenance: There is no special requirement, may along the vibrating time for 30s, The maintenance of the fibre concrete should be done same as the normal concrete.

◆ Application:

A. Concrete reinforcement

B. Industrial Floor

◆ Specification:

Raw material	polymer (PP/PE)	Fiber Type	Fibrillated Mesh
Crack Elongation	10%min.	Elastic Modulus	5000Mpa min.
Density	0.91	Tensile Strength	600Mpa min.
Fiber Diameter	0.3+/-0.05mm	Fiber Length	40mm, 50mm, 54mm
Break Tensile Ratio	15% min.	Alkali & Acid resistance	Strong

Synthetic Macrofiber 600T

◆ Introduction:

Brite Synthetic Macrofiber 600T is made of Polypropylene. These fibers are wrapped in bundles of water-soluble film and packed in cartons. When used, just put the whole boxes of the fibers into concrete. The cartons and film are dissolved in water and the fibers are evenly dispersed in the concrete mixture.
Available Length: 48mm, 54mm, 64mm...

◆ Features

A. All grades of concrete to provide good anti - fatigue, anti - shrinkage, anti - seismic and good toughness.
B. Simple operation, not easy to group, safety, reasonable price, cost savings.
C. It can be used in highly corrosive, humid environment.
D. The surface has been embossed, which greatly improved the cohesive force between fiber and concrete, and also boosts shrinkage and crack resistance.
E. The strength of synthetic macro fiber is not as strong as that of steel fiber, but the experiment shows that under the same conditions, each cubic meter concrete needs 3kg-6kg of synthetic macro fiber, while steel fiber needs 25kg-40kg. The results show that the concrete with macro synthetic fiber has better toughness and anti-microcrack effect.

◆ Reference Dosage:

The dosage rate is dependent on the actual application however the minimum dosage range is 3kg/ m3-6kg / m3

◆ Application:

Shotcrete, concrete engineering, such as foundations, roads, Bridges, DAMS, especially in the deformation and toughness of the higher requirements of the project, such as mining and water conservancy and hydropower projects.

◆ Specification:

Raw material	virgin PP	Fiber Type	Embossed
Melt flow	3.5	Elastic Modulus	9900Mpa min.
Density	0.91	Tensile Strength	600Mpa min.
Moisture	no	Alkali & Acid resistance	Strong
Fiber Dimension	L: 48mm/54mm/64 mm; T: 0.55-0.60mm; W: 1.30-1.40mm