



# **BISEAL<sup>®</sup>**

## **FIBER**

### **POLYPROPYLENE FIBERS FOR REINFORCEMENT OF CONCRETE AND MORTAR**



#### **DESCRIPTION**

**BISEAL<sup>®</sup> FIBER** are 100 % virgin-polypropylene fibers of 12 mm length without reprocessed olefin materials and produced in according to specifications ASTM C 1116 TYPE III GMP. These fibers are suitable for adding to concrete and mortars and have been specially studied for concrete industry. When fibers have been distributed homogeneously in the mixture, provide a reinforcement three-dimensional structure, which improves mechanical properties such as impact resistance, and also lead a long lasting for concrete and allow to control and minimize the cracking due to shrinkage.

#### **APPLICATION FIELDS**

- Plasters, pre-mixing and repair mortars.
- Pre-cast, screed concretes and generally pumped concrete and inclined casting concrete tubes.
- Provide concrete support and cohesion in sloping planes and/or slide mould placement.
- Avoid and control of cracking due to shrinkage for concrete applications with a low volume to surface ratio such as industrial floors, pipes, prefabricated elements, slabs, etc.
- Shotcrete mortars.
- Spalling phenomenon reducer.
- Making of concrete on roads and tunnels.
- Use in pre-cast concrete, extruded concrete, slabs and gunite.

#### **ADVANTAGES**

- Prevents the formation and the propagation of cracking by shrinkage.
- Increases the mechanical strengths for concretes or mortars; flexural, compression and impact.
- Compatible with other **BISEAL<sup>®</sup>** admixtures.

- Resistant to alkaline compounds present in concrete.
- Does not reduce the workability of the concrete or mortars. Does not absorb water.
- Replaces the secondary reinforcement bars, which are recommended to minimize the cracking in concrete surfaces.
- Reduces partially the permeability of the concrete.
- Non-toxic.

#### **APPLICATION INSTRUCTIONS**

##### **Mixing and application**

**BISEAL<sup>®</sup> FIBER** can be used in concrete industrial plants or in the job place. A suitable number of bags must be added directly into the mixer during the mixing step. However, avoid adding directly the fibers on the water. In order to get a better and homogeneous dispersion for the fibers into the concrete mixture, an increase in time for 5 minutes in the mixing is recommended.

#### **CONSUMPTION**

600 g per cubic meter of concrete or 140 g per bag of cement.

#### **IMPORTANT INDICATIONS**

- **BISEAL<sup>®</sup> FIBER** does not replace the reinforcement bars for structure which have been established in calculus.
- **BISEAL<sup>®</sup> FIBER** does not avoid carrying out methods for concrete curing if weather conditions require them.
- For further information or applications not included herein, consult out Technical Department.

#### **PACKAGING**

**BISEAL<sup>®</sup> FIBER** is supplied in bags of 600 g.

## STORAGE

**BISEAL® FIBER** does not cause to deteriorate itself along the time. However, it should be stored in its original unopened packaging, in a dry and covered place and protected from frost and sunlight.

## SAFETY AND HEALTH

**BISEAL® FIBER** is non-toxic and non-corrosive product.

Safety Data Sheet for **BISEAL® FIBER** is available by request.

The final user must do disposal of the product and its empty containers according to official regulations.

## TECHNICAL DATA

Product characteristics	
CE Marking, EN 14889-2	
Description: Polypropylene fiber packaged in water-soluble paper for concrete admixture.	
Colour	Natural
System	Monofilament
Section	Circular
Fiber length, (mm)	12
Diameter, (µm)	31
Density, (g/m <sup>3</sup> )	0,91
Humidity, (%)	2,65
Fluidity, EN ISO 1133:2006 (gr/10')	6,12
Young's elastic module, (kN/mm <sup>2</sup> )	3,5
Tensile strength, (MPa)	300-400
Linear density, EN ISO 1973:1966 (dtex)	6,70 (±10%)
Tenacity, EN ISO 5079:1996 (cN/tex)	40±5
Ignition temperature, (°C)	>400
Deflection temperature, ISO 11357-3:1999 (°C)	110
Decomposition temperature, ISO 11357-3:1999 (°C)	280
Melting point, ISO 11357-3:1999 (°C)	164,41
Consistency of concrete for a dosage of 600 g/m <sup>3</sup> Slump Method, UNE EN 83313:1990, (cm)	5-5-6-5
Consistency of concrete for a dosage of 600 g/m <sup>3</sup> Vebe Test, EN ISO 12350-3:2006, (s)	9,7-11,6-13,6-16,1
Number of fibers approximately per bag of 600 g	73 x 10 <sup>6</sup>

## GARANTIEE

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### DRIZORO, S.A.U.

C/ Primavera 50-52 Parque Industrial Las Monjas  
28850 TORREJON DE ARDOZ – MADRID (SPAIN)  
Phone. +34 91 676 66 76 - +34 91 677 61 75  
e-mail: [info@drizoro.com](mailto:info@drizoro.com) Web site: [drizoro.com](http://drizoro.com)