

## Synthetic Filaments Based on Polyacrylonitrile

# MULTIFIBRAS<sup>®</sup> ACRÍLICAS ANTI-CRACK

### PRODUCT

**MULTI FIBRAS ACRÍLICAS** are synthetic filaments based on polyacrylonitrile to be added to concrete and mortar. It offers three-dimensional reinforcement and intercepts the fissures that occur in the plastic retraction phase or hydraulics of concrete. With high resistance to alkali, it is insoluble in water and does not suffer corrosion; that is why it is indicated for use in concrete and mortar. The acrylic fibers provide better resistance to impact, abrasion and reduction of permeability.

**MULTI FIBRAS ACRÍLICAS** meets the standards **ASTM C 1116 section 4.1.3**.

### BENEFITS

- Better bond in concrete and mortar due to the interlaced Mesh;
- Uniform distribution in the concrete matrix or mortar;
- Any method can be employed in the finish;
- No outcrops on the surface;
- Minimizes breaking or chipping;
- Does not suffer corrosion to alkaline media;
- Anti-magnetic;
- Better resistance to impact and abrasion;
- Increases resistance to fatigue, traction, flexion and compression;
- Reduces micro and macro fissures;
- Reduction of permeability.

### SEGMENTS OF USE

Industrial floors, slabs, decks, pre-cast walls, highway pavements, sports arenas, façades, artifacts of cement, tilt-up panels, dam structures, tunnels with mechanical projection either humid or dry, hydroelectric and nuclear power plants, port and maritime infrastructure and façade mortar, etc.

### APPLICATIONS

**MULTI FIBRAS ACRÍLICAS** should be added to concrete at any moment during the mixing process. It is recommended that it be added to the aggregate during the weighing or in the center of the cement truck before, during or after the loading. A few minutes are necessary to obtain a uniform distribution of fiber in the mixture. Due to the higher density (1.17 g/cm<sup>3</sup>) compared to water (1.00 g/cm<sup>3</sup>), effects of fluctuation are avoided in the mixture with water.

### YIELD

From 0.6 to 2.0 kg per m<sup>3</sup> of concrete. Assess the effects of the fiber on workability, easy-way pumping and aspect of the concrete, evaluating the amounts. For more accurate amounts, consult the designer or engineer.

### PACKAGE

Available in plastic bags or water-soluble 600 g and 1.2 kg.

Technology:



### PHYSICAL PROPERTIES

CHARACTERISTICS	RESULTS	
	AC 60	AC 30
Density	1,17g.cm <sup>3</sup>	1,17g.cm <sup>3</sup>
Elastic modulus	10,5 Gpa	5,8 Gpa
Tenacity	< 600 Mpa	375 Mpa
Elongation	< 16%	32%
Melting point	330° C	
Resistance to alkali	High	High
Resistance to hot alkali	High	High
Resistance to acids and salts	High	High
Fiber length	6,12,18, and 22 mm	
Number of filaments per kg	300 million	

### ARMAZENAMENTO

Should be stored in a dry ventilated place at a temperature below 77°F (25°C).

### EXPIRATION

Indefinite if kept in unopened package.