



ConcastTM ARG 12

Alkali Resistant Glass Fiber- Chopped Strands (6mm, 12mm)

Product Description : Concast ARG 12 is an Alkali Resistant Glass (ARG) fiber used to reinforce cement and other alkali materials and to limit crack propagation in mortar & concrete. Concast ARG 12 is a high integrity strand to meet the requirements of conventional “premix” products. The chopped fibres disperse as strands in a matrix of mortar. The excellent strand integrity of Concast ARG 12 allows longer mixing time, and ensures uniform dispersion in the matrix and stable bending strength of GRC.

Uses:

- Concrete flatwork flooring
- Commercial and industrial floors/ pavements
- Precast concrete applications
- Composite metal deck
- Plaster works

Features & Benefits :

- Greater impact resistance of concrete
- Increased durability
- Improved surface quality
- Increases overall durability, fatigue resistance and flexural toughness
- Addition of fibers doesn't change the recipe of concrete
- Easily added to concrete mixture at any time prior to placement
- In case of fires, fibers sublime with no volume increase or release of harmful gases
- In the absence of stress and corrosion, there is no risk of rust stains on the

Why Concast ARG 12 ?

Parameters	Concrete	Concast ARG 12	Steel	Polypropylene
Density	2.4	2.7	7.8	0.9
Elastic Modulus (Gpa)	30 to 40	72	210	1.5 to 9.5
Tensile Strength (Mpa)	3 to 4	1700	500 to 1100	100 to 500
Abrasion Resistance	Very Less	High	Low	Low
Combustibility	Non-combustible	Non-combustible	Non-combustible	Combustible
Dispersion	High	High	-	Lower than concrete

With its total affinity to cementitious composites, high tensile strength and modulus of elasticity, our Concast ARG 12 range of glass fibers are an ideal reinforcement for concrete, already efficient at very early stages of the cracking process. Moreover, glass fiber density is similar to concrete, which allows a quick dispersion for very short mixing times, with minimum clumping risk and exceptionally low influence on workability.

Effect of Zirconia (ZrO₂) Content in ARG Fiber?

Zirconia is what confers alkali resistance in glass. The higher the zirconia content the better the resistance to alkali attack. AR glass fiber also has excellent acid resistance.

Concrete is very alkaline and as such it will quickly corrode normal glass fiber. For effective reinforcement only glass fibers that have been specially developed to be alkali resistant, such as those containing zirconia should be used, and not those dependant on a surface coating for corrosion protection.

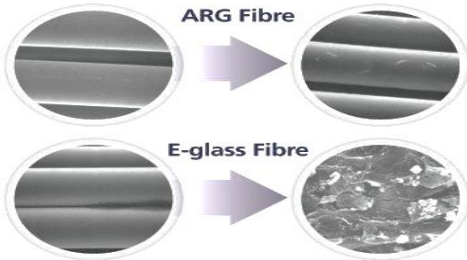


Figure : Difference between High Zirconia Alkali Resistant Glass fibres and E-glass fibre when tested in cement.

Head at 80°, 200 hrs in saturated cement solution (pH=12.9)

Technical Specifications:

Cut Length	: 6/12 mm
Diameter	: 14 MICRONS
Tensile Strength	: 1700 MPa
Initial Modulus	: 72000 MPa
Zirconia (ZrO ₂) Content	: 16%
UV Stability	: Very Good
Alkaline Resistance Stability	: Excellent

Application Methodology :

Concast ARG 12 can be mixed in plaster/ wet mix/ RMC plant or truck or into the site mixer as well. But it should be added to the concrete mix as the last ingredient and mixed for about 5-6 minutes, long enough till it disperses properly.

Packaging: Available in 600 grams pouches, 1 kg and 25 kg LDPE bags.

Shelf Life: 2 years in unopened package.

Storages: Store in dry condition, preferably in plastic sheet or wooden pallet in godown away from direct Sunlight.

Value Base :

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.



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