KingAdd® 100AC

Liquid acrylic copolymer additive for GFRC.

DESCRIPTION

KingAdd 100AC is a high solids single component acrylic copolymer emulsion. It is designed to improve the physical properties of GFRC systems (Glass Fiber Reinforced Concrete).

GFRC is an environment friendly composite system with low consumption of energy and used to produce great varieties of products based on cement-based composite material reinforced with alkali-resistance fiber. The fibers add flexural, tensile and impact strength and the resulting material allows the production of strong light weight products used in architectural, civil engineering and many other applications.

GFRC has reached a great position among Architects, Designers, Engineers and end users for its flexibility to meet performance, appearance, and cost.

APPLICATIONS

KingAdd 100AC is used in the formulation of glass reinforced concrete products. As GFRC is a mixture of several materials, the properties of GFRC vary with the production method, amount and type of glass fiber and composition of the cementitious matrix. In this matrix KingAdd 100AC plays a major role in achieving the long-term physical properties (especially the flexural, tensile, flexibility, etc.) and the elimination of the wet cure process for achieving the maximum strengths.

GFRC having KingAdd 100AC is used in:

- Artificial rock designes.
- Concrete lining for durability.
- Architectural panels and land scape areas.
- Composite mouldings counter top systems.

ADVANTAGES

- Eliminate the need for wet curing.
- Improve significantly the physical properties especially the flexural strength.
- Improving the workability, and the consistency of the cementitious matrix.
- Gives a sprayable non-sag mix.
- UV stable polymer.
- Chloride free.
- KingAdd 100AC is free from formaldehyde and from any corrosion additives.

TECHNICAL PROPERTIES

Colour	Milky white liquid
Solids	≥ 56%
Specific gravity	1.00 - 1.04
pH	6 - 9
Boiling point	100ºC
Water solubility	Fully soluble

- Gives a dense and tight system, which reduces water absorption.
- Gives a flexible system with elimination of cracking and shrinkage.
- The cured film of KingAdd 100AC is not toxic and suitable for potable water contact.
- Decrease the susceptibility to freeze-thaw damage, and helps to protect against chemical and oil attack.

Mix Design

Generally KingAdd 100AC is used in the mixture as 10% from the cement weight. The individual amount of the GFRC matrix is determined by the desired finished product final properties.

A general guide mix desings is as the following: Portland cement: 50 kg

Silica Fine sand: 50 kg Water: 17.5 ltr.

Super-Plasticizer: 0.3 - 0.4% of cement weight KingAdd 100AC: 8 - 10% by weight of cement Glass Fiber: 2 - 3.5% by weight of total mix

METHOD OF USE

APPLICATIONS

When using KingAdd 100AC it is better to add it after adding the water and plasticizer inside the mixer while it is running.

As wet curing is not needed in this system, it is advisable to protect the applied areas during the night by covering it with suitable polyethylene sheets. This action will give better strengths because it controls the heat of hydration during the initial setting time.

PACKAGING

KingAdd 100AC is available in 5, 25 and 200 liters drums.

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CLEANING

All tools should be cleaned immediately after use with fresh clean water. Hardened materials should be cleaned mechanically.

STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.

HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative. KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

QUALITY AND CARE

All products originating from KingKrete's Middle East facility are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, ISO 14001 and ISO 45001.

* Properties listed are based on laboratory-controlled tests.
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