

Cem-Add AC100

Liquid acrylic copolymer additive for GFRC



Description

Cem-Add AC100 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

Cem-Add AC100 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 Cem-Add AC100 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 Cem-Add AC100 is used in:

- ▲ Artificial rock designs.
- ▲ 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.
- ▲ Cem-Add AC100 is free from formaldehyde and from any corrosion additives.

Technical Properties @ 25°C:

Colour:	Milky white liquid
Solids:	≥ 56%
Specific gravity:	1.00 - 1.04
pH:	6 - 9
Boiling point:	100°C
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 Cem-Add AC100 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 Cem-Add AC100 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 designs is as the following:

Portland cement: 50 kg

Silica Fine sand: 50 kg

Water: 17.5 ltr.

Superplasticiser: 0.3 - 0.4% of cement weight

Cem-Add AC100: 8 - 10% by weight of cement

Glass Fiber: 2 - 3.5% by weight of total mix

Method of Use

Applications

When using Cem-Add AC100 it is better to add it after adding the water and plasticiser 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.

Cem-Add AC100

Cleaning

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

Packaging

Cem-Add AC100 is available in 5, 25 and 200 litres drums.

Storage

Cem-Add AC100 shelf life is 10 months if stored on shaded area at temperatures between 5°C and 40°C.

Protect from freezing.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

Cautions

Health and Safety

Cem-Add AC100 is non-toxic. Avoid skin and eye contact. Rubber gloves and eye protection should be worn all the times. The use of barrier cream is recommended on exposed areas of the skin.

For further information refer to the Material Safety Data sheet.

Fire

Cem-Add AC100 is non-flammable.

More from Don Construction Products

A wide range of construction chemical products are manufactured by DCP which include:

- ▲ Concrete admixtures.
- ▲ Grouts and chemical fixings.
- ▲ Concrete repairs.
- ▲ Industrial flooring.
- ▲ Structural protection.
- ▲ Waterproofing.

Note:

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