

# 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 Fibre 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 fibre. The fibres 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 fibre 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.
- » Gives a dense and tight system, which reduces water absorption.
- » Gives a flexible system with elimination of cracking and shrinkage.

## TECHNICAL PROPERTIES @ 25°C:

|                   |                    |
|-------------------|--------------------|
| Colour:           | Milky white liquid |
| Solids:           | ≥ 56%              |
| Specific gravity: | 1.05 ± 0.05        |
| pH:               | 6 - 9              |
| Boiling point:    | 100°C              |
| Water solubility: | Fully soluble      |

- » 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 desings 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 Fibre: 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 litre drums.

## STORAGE

Cem-Add AC100 has a shelf life of 10 months from date of manufacture 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 nonflammable.

## MORE FROM DON CONSTRUCTION PRODUCTS

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

- » Concrete admixtures.
- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

#### Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.