

# DARACEM<sup>®</sup> 216

Mid–High Range plasticiser for Readymix Applications

## Product Description

DARACEM<sup>®</sup>216 is a high efficiency Mid – High range plasticising admixture specifically designed for the production of ready mixed concrete. It can be used to give water reductions of between 15 – 25%, or increased concrete workability in a wide range of concrete mix designs, resulting in excellent plastic and hardened properties.

It is also beneficial in improving cohesion of concretes especially in applications where difficult or inaccessible pours are to be made. DARACEM 216 is based on modified synthetic carboxylated polymers. It conforms to EN 934-2 and is manufactured under controlled conditions to give a high quality consistent product.

## Typical Properties

Appearance	Dark brown liquid
Specific Gravity (20°C)	1.120
Chloride Content	Nil
Air Entrainment	1.0%

## Method of Use

DARACEM 216 is supplied ready for use. When producing normal-high consistence concrete it should be added in its supplied form with part of the batching water, after the addition of the cementitious component.

## Advantages

- DARACEM 216 can be used to effect mid to high range water reductions leading to considerable increases in compressive strength
- Flexible dose response allows water reductions from 10 – 25%
- High workability concrete can be obtained by incorporating DARACEM 216 into a concrete mix designed for 50mm slump
- Minimal impact on setting time when used in place of traditional MRWR products
- Providing suitable mix designs are employed, concretes containing DARACEM 216 remain cohesive and easily pumped and placed.

## Compatibility with Cements

DARACEM 216 can be used with all types of cements, including limestone cements. It is also effective in concretes containing fly ash or ground granulated blast furnace slag. For use with special cements we recommend you contact GCP Applied Technologies.

## Compatibility with Other Admixtures

DARACEM 216 should not be premixed under any circumstances with other admixtures. The performance of the product will be affected by the presence of other chemicals and we recommend that GCP be consulted in such circumstances.

## Addition Rates

Range	500 ml - 1100 ml per 100 kg cement
	0.50%-1.10% (v/w) by wt. of cement
As a guide to trials an addition rate of 0.7% volume by weight of cement is suggested.	
For advice and assistance with trials we recommend that you consult GCP Applied Technologies.	

As with most products of this type the magnitude of the effect obtained with DARACEM 216, is governed by the quantity of product used, water-cement ratio, and the specific nature of the concrete and constituent materials. It is necessary therefore, to assess performance under site conditions using actual materials to determine optimum performance and dosage and effect on both plastic and hardened concrete properties such as cohesiveness, workability retention, setting characteristics, rate of early strength gain, ultimate strength and shrinkage where these are of importance.

## Effects of Overdosing

The effects of over-dosing DARACEM 216 are a function of the degree of over-dose.

When producing high workability concrete, over-dosing will increase the level of workability and may induce the onset of segregation.

Depending on the extent of the over-dose, an increase in the setting time may also occur, especially in low temperatures and/or when employing sulfate resisting cement or cement replacement materials.

In any situation where over-dosing is suspected, a careful inspection of the concrete in its plastic state should be conducted. Particular attention should be paid to consistency and cohesiveness, prior to a decision on the suitability of the concrete for the particular application in question.

## Dispensing

It is preferable that DARACEM 216 should be introduced into the mixer by means of independent automatic dispensing equipment.

## Health and Safety

For further information on Health and Safety matters regarding this product we recommend that you consult the relevant Safety Data Sheet from GCP Applied Technologies. In line with general chemical handling precautions avoid contact with skin or eyes and protective gloves/goggles should be worn.

## Packaging and Storage

DARACEM 216 is supplied in 205 non returnable drums and 1,000 litre totes. Alternatively, bulk deliveries can be arranged. DARACEM 216 should preferably be stored away from extremes of cold or heat. The product should be kept in shaded storage at all times.

- Storage Life in Manufacturer 's Drums: 12 months from date of manufacture.
- Storage Life in Bulk Storage: 12 months from date of delivery.

## Technical Service

Our Technical Service department of GCP Applied Technologies is available to assist you in the correct use of our performance chemicals.

## North America customer service: 1-877-4AD-MIX (1-877-423-6491)

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate, and is offered for consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations, and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation, or suggestion is intended for any use that would infringe any patent, copyright, or other third party right.

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