

DARACEM[®] 205A

Concrete Superplasticiser

Product Description

DARACEM[®]205A is a liquid concrete superplasticiser that has been developed to allow concrete to attain particularly high performance in both the plastic and hardened states. It is particularly useful for imparting extreme workability to concrete mixes so that large or difficult pours can be made. Alternatively, DARACEM 205A can be utilized to effect large water reductions to achieve high early and subsequent strength.

DARACEM 205A is an extremely powerful deflocculating agent and performs by dispersing cement into its primary particles dramatically increasing flow characteristics of the cement paste.

Main applicational areas are:

- High quality concrete for durable structures
- Reinforced and pre-stressed precast elements
- Bridge decks and structural elements
- Precast or in-situ structures DARACEM 205A meets the requirements of ASTM C494 Type A and F, and BS EN 934-2.

Typical Properties

DARACEM 205A	
Appearance	dark brown liquid
Specific Gravity	1.21 at 20°C
Air Entrainment	Nil
Chloride Content	Nil

Advantages

- High compressive strength concrete especially at early ages
- Low w/c ratio, excellent durability
- Good surface finish, providing highly aesthetic concrete appearance
- Plastic concrete exhibits high cohesion, fluidity and flowability
- Savings in energy consumption when steam curing is employed

Method of Use

DARACEM 205A is supplied ready for use, and should be added to concrete mixes either during the mixing cycle or at the same time as the water, or alternatively it should be added in its supplied form to a normal concrete mix a few minutes before the pour is made.

In the latter case a mixing cycle of at least 2 minutes should be provided to ensure complete dispersion.

Compatibility with Cements

DARACEM 205A is compatible with all Portland, Pozzolanic and Blast Furnace cements. It is also compatible with concrete containing fly ash and or silica fume.

Compatibility with other Admixtures

DARACEM 205A should not be premixed under any circumstances with other admixtures. While some admixtures can be usefully combined within the same mix the performance of this product may well be affected by the presence of other chemicals and we recommend that GCP Applied Technologies be contacted for advice in all such circumstances.

Addition Rates

Range: 0.8%–3.0% volume by weight of cement

The optimum dosage is assessed after preliminary trials depending upon the actual mix constituents and specifications required.

Addition rates outside of the recommended dosage range may be used for special concrete applications. In such circumstances it is important to conduct preliminary trials on the actual mix constituents to assess the effect on the properties of the concrete at the dosage level specified.

Effects of Overdosing

Serious overdosing of DARACEM®205A will generally produce a concrete mix of even greater workability, set retardation and a slight increase in air entrainment may be noticed. In SRC mixes and in cooler weather, set retardation will be further increased. If intentional or accidental increases above the recommended addition rates are encountered, care must be taken to allow for the effect on the stripping time of formwork. In such cases, however, provided the concrete is properly cured the ultimate strength will generally be higher than for normal concrete.

Dispensing

It is preferable that liquid admixtures for concrete should be introduced into a mixer by means of automatic dispensing equipment, details of which can be supplied upon request.

Packaging

DARACEM 205A is supplied in 210 litre, non-returnable containers.

Alternatively, 1000 litre IBCs or bulk deliveries can be arranged

Storage

DARACEM 205A should be stored in original containers or suitable closed tanks, preferably out of direct sunlight and protected from extremes of temperature

Storage Life in Manufacturer's Drums:

12 months from the date of manufacture

Storage Life in Bulk Storage:

12 months from the date of delivery

Technical Service

The Technical Service Department of GCP is available to assist you in the correct and best use of our products. These resources and advice are at your disposal entirely without obligation. Please contact:

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