

# DARACEM<sup>®</sup> 190

High Quality Superplasticizer for Readymixed Concrete

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## Product Description

DARACEM<sup>®</sup>190 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 190 can be utilized to effect large water reductions to achieve high early and subsequent strength. DARACEM 190 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
- Ready mixed concrete , especially during cold season.
- Normal reinforced concrete
- Bridge decks and structural elements
- Precast or in-situ structures DARACEM 190 conforms to the requirements of:
  - EN 934 Part 2
  - UNI EN 934-2
  - BS 5075 Part 3
  - ASTM C 494 Type A and F

## Product Advantages

- High compressive strength concrete especially at early ages.
- Low water/cement 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.

## Technical Data

Appearance	dark brown liquid
Specific Gravity	ca. 1.19 at 20 °C
Chloride content	nil
Storage life	12 months from the date of manufacture

## Compatibility With Cements

DARACEM 190 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 190 is compatible with all GCP Applied Technologies admixtures and particularly can be used in conjunction with airentraining agents. It is advisable to add all admixtures separately to a cementitious mix.

## Method of Use

DARACEM 190 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.

## Addition Rates

Range: 0.8%–1.5% by weight of cement (800 g–1500 g per 100 kg cement).

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

## Effects of Overdosing

The effects of over-dosing DARACEM®190 are a function of the degree of over-dose. Over-dosing of DARACEM 190 will generally produce an increase in workability and its retention, with a slight increase in air entrainment noticeable. There could also be a delay in setting times, depending on the type of cement used and water/cement ratio. If accidental or intentional over-dose has been made, care must be taken to allow for the effect on the stripping time of formwork, if this is of consequence. 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.

## Health and Safety

For further information see DARACEM 190 SDS (Safety Data Sheet), or consult GCP.

## Packaging

DARACEM 190 is supplied in 230 kg free, non-returnable containers.

Alternatively, bulk deliveries can be arranged.

## Storage

DARACEM 190 should preferably be stored protected from frost. If the product does become frozen it should be carefully mixed after thawing out to restore it to its normal state.

## Technical Service

The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

gcpat.uk | United Kingdom customer service: +44 (0) 1480 478421

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