

DARACEM[®] 205

High Performance Concrete Superplasticizer

Product Description

DARACEM[®]205 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 205 can be utilized to effect large water reductions to achieve high early and subsequent strength. DARACEM 205 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 deck slabs.
- Precast or in-situ structures. DARACEM 205 conforms to the requirements of:
 - EN 934 Part 2 UNI
 - EN 934-2
 - BS 5075 Part 3
 - ASTM C 494 Type A and F.

Technical Data

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| DARACEM 205 | |
| Appearance | dark brown liquid |
| Specific Gravity | ca. 1.20 at 20 °C |
| Chloride content | nil |
| Storage life | 12 months from the date of manufacture |

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 205 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 205 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 205 is compatible with all GCP Applied Technologies admixtures and particularly can be used in conjunction with airentaining agents. It is advisable to add all admixtures separately to a cementitious mix.

Addition Rates

Range: 0.8%–3.0% by weight of cement (800 g–3000 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

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.

Health and Safety

For further information see the DARACEM 205A SDS (Safety Data Sheet) or consult GCP.

Packaging

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

Alternatively, 1000 litre IBCs or bulk deliveries can be arranged.

Storage

DARACEM 205 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 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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