

DARACEM[®] 116

Superplasticiser for the production of high workability concrete

Product Description

Daracem 116 is a modified naphthalene sulfonate-based superplasticiser for the production of high workability concrete. It is a low viscosity liquid, which has been formulated by the manufacturer for use as received. Daracem 116 contains no added chloride. Daracem 116 is formulated to comply with the chemical admixture specification for concrete: SS EN 934-1: 2008. One litre of Daracem 116 weighs approximately 1.19kg ± 0.02kg.

Dispersion

Daracem 116 is a superior dispersing admixture having a marked capacity to disperse the cement agglomerates normally found in a cement-water suspension. The capability of Daracem 116, in this respect, exceeds that of normal water-reducing admixtures.

Product Advantages

- Daracem 116, in prestress/precast work, can be used to substantially reduce or eliminate the high energy requirements of external heat for accelerated curing.
- It is excellent for early strength development of slag cement concrete.
- It is compatible with a wide range of cements.
- It can produce high slump flowable concrete at no loss in strengths.
- It produces low water-cement ratio concrete and therefore, high strengths.
- It aids in rapid discharge of concrete from truck mixers thereby reducing on-the-job time and improving mixer utilisation.

Application

Daracem 116 produces concrete with extremely workable characteristics referred to as high slump, flowing concrete. Daracem 116 allows further reduction of the mix water that reduces its water-cement ratio to achieve the desired strength.

Daracem 116 is ideal for use in prestress, precast, bridge deck or any concrete where it is desired to keep the water-cement ratio to a minimum and still achieve the degree of workability necessary to provide easy placement and consolidation.

Daracem 116 will also fluidise concrete, making it ideal for tremie concreting or other applications where high slumps are desired.

The Daracem range of products are supplied to leading concrete producers and used in major infrastructure project.

Daracem 116, used as a synergised admixture system, can be used to replace your current admixture system with better mix optimisation.

Compatibility with Other Admixtures

Most water reducers or water-reducing retarders are compatible with Daracem 116 as long as they are separately added to the concrete. Pretesting of the concrete should be performed to optimise dosages and addition times of these admixtures. The admixtures should not be in contact with each other before they enter the concrete. Daracem 116 is recommended to be used in ambient temperatures above 15 °C. Daracem 116 should not be used in concrete subject to more than 70 °C heat curing. Daracem 116 is not to be used with polycarboxylate-based admixtures such as ADVA®.



Addition Rates

Addition rates of Daracem 116 can vary with the type of application, but will normally range from 350 to 1,350mL / 100kg of cementitious material. In most instances the addition of 600 to 900mL / 100kg of cementitious material will be sufficient. When combined with DARATARD® or WRDA® from GCP Applied Technologies, Daracem 116 dosage rates can be effective from 100 to 400mL / 100kg of cementitious material, when added separately to the mix. At a given water-cement ratio, the slump required for placement can be controlled by varying the addition rate. Should job site conditions required using more than the recommended addition rates, please consult your local GCP representative.

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.

Packaging

Daracem 116 is available in bulk and in 205L drums. Daracem 116 contains no flammable ingredients. It will begin to freeze at approximately 0 °C, but will return to full strength after thawing and agitation. In storage and for proper dispensing, Daracem 116 should be maintained at temperatures above 0 °C.

Health and Safety

See Daracem 116 Material Safety Data Sheet or consult GCP Applied Technologies.

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