

DARACEM® 19

High-range water-reducing admixture

ASTM C494 Type A and F, and ASTM C1017 Type I

Product Description

Daracem® 19 is an aqueous solution of a modified naphthalene sulfonate. Daracem 19 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 19, in this respect, exceeds that of normal water-reducing admixtures. It is a low viscosity liquid manufactured for use as received. Daracem 19 contains no added chloride. Daracem 19 is formulated to comply with *Specifications for Chemical Admixtures for Concrete*, ASTM C494 as a Type A and Type F admixture, and ASTM C1017 as a Type I admixture. One gallon of Daracem 19 weighs approximately 10 lbs (1.2 kg/L).

Uses

Daracem 19 produces concrete with extremely workable characteristics referred to as high slump. Daracem 19 also allows concrete to be produced with very low water/cement ratios at low or normal slumps.

Daracem 19 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 19 will also fluidize concrete, making it ideal for tremie concreting or other applications where high slumps are desired.

Addition Rates

Addition rates of Daracem 19 can vary with type of application, but will normally range from 6 to 20 fl oz/100 lbs (390 to 1300 mL/100 kg) of cement. In most instances the addition of 10 to 16 fl oz/100 lbs (650 to 1040 mL/100 kg) of cement will be sufficient. At a given water/cement ratio, the slump required for placement can be controlled by varying the addition rate. Should job site conditions require using more than recommended addition rates, please consult your Grace representative.

Product Advantages

- Can produce high slump flowable concrete with no loss in strength
- Can produce low water/cement ratio concrete and therefore, high strengths
- Concrete produced with Type I cement may be substituted for normal concrete produced with Type III cement to achieve early strengths
- At high slump, exhibits no significant segregation in comparison to concrete without a superplasticizer at the same slump



Compatibility with Other Admixtures and Batch Sequencing

Daracem 19 is compatible with most Grace admixtures as long as they are added separately to the concrete mix, usually through the water holding tank discharge line. However, Daracem 19 is not recommended for use in concrete containing ADVA® superplasticizers or MIRA® 92. In general, it is recommended that Daracem 19 be added to the concrete mix near the end of the batch sequence for optimum performance. Different sequencing may be used if local testing shows better performance. Please see Grace Technical Bulletin TB-0110, *Admixture Dispenser Discharge Line Location and Sequencing for Concrete Batching Operations* for further recommendations. Daracem 19 should not come in contact with any other admixture before or during the batching process, even if diluted in mix water.

Pretesting of the concrete mix should be performed before use, and as conditions and materials change in order to assure compatibility, and to optimize dosage rates, addition times in the batch sequencing and concrete performance. For concrete that requires air entrainment, the use of an ASTM C260 air-entraining agent (such as Daravair® or Darex® II AEA) is recommended to provide suitable air void parameters for freeze-thaw resistance. Darex AEA is not recommended. Please consult your Grace representative for guidance.

Packaging & Handling

Daracem 19 is available in bulk, delivered by metered tank trucks, and in 55 gal (210 L) drums.

It will begin to freeze at approximately 32°F (0°C), but will return to full strength after thawing and thorough agitation.

In storage, and for proper dispensing, Daracem 19 should be maintained at temperatures above 32°F (0°C).

Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available.

www.graceconstruction.com

North American Customer Service: 1-877-4AD-MIX1 (1-877-423-6491)

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