

## **DARATARD® 17** Set retarding admixture

ASTM C494 Type B and D

### Product Description

Daratard® 17 admixture is a ready-to-use aqueous solution of hydroxylated organic compounds. Ingredients are factory pre-mixed in exact proportions to minimize handling, eliminate mistakes and guesswork. Daratard 17 admixture weighs approximately 10.2 lbs/gal (1.17 kg/L).

### Uses

Daratard 17 retards the initial and final set of concrete. At the usual addition rate of 3 fl oz/100 lbs (195 mL/100 kg) cement, it will extend the initial setting time of Portland cement concrete by 2 to 3 hours at 70°F (21°C). Daratard 17 is used wherever a delay in setting time will insure sufficient delivery, placement, vibration or compaction time, such as in:

- Hot weather concreting
- Transit mix concrete
- Prestressed concrete

Daratard 17 is also used in special applications, as in bridge decks where it extends plastic characteristics of the concrete until progressive deflection resulting from increasing loads is completed.

### Product Advantages

- Provides  $\geq 5\%$  water reduction
- Increases compressive strengths and reduces permeability
- Delays time of set to accommodate long haul times, or facilitate placement and finishing during hot weather concreting

### Addition Rates

Addition rates for Daratard 17 will range from 2 to 8 fl oz/100 lbs (130 to 520 mL/100 kg) of cement. The amount to be used will depend upon the degree of retardation required under job conditions. Longer setting times or higher temperatures will require higher addition rates. Conversely, the addition rate will be lower for shorter extensions of time.

### Compatibility with Other Admixtures and Batch Sequencing

Daratard 17 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. In general, it is recommended that Daratard 17 be added to the concrete mix near the beginning of the batch sequence but after the cement and water is combined 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. Daratard 17



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® product lines) is recommended to provide suitable air void parameters for freeze-thaw resistance. Please consult your Grace representative for guidance.

## Packaging & Handling

Daratard 17 is available in bulk, delivered by metered tank trucks, and 55 gal (210 L) drums. Daratard 17 will freeze at about 28°F (-2°C), but will return to full strength after thawing and thorough agitation.

## Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available. Daratard 17 may be introduced to the mix with the sand or with the water.

## Specifications

Concrete shall be designed in accordance with *Standard Recommended Practice for Selecting Proportions for Concrete*, ACI 211.1.

The set-retarding/water-reducing admixture shall comply with ASTM Designation C494, Type D admixture, and shall be Daratard 17, as manufactured by Grace Construction Products, or equal. Certification of compliance shall be made available on request. It shall be used in strict accordance with the manufacturers' recommendations.

The addition rate shall be adjusted to produce the specified retardation of the concrete mix at all temperatures.

[www.graceconstruction.com](http://www.graceconstruction.com)

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

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