

WRDA[®] 20

Water-Reducing Admixture: ASTM C494 Type A

Product Description

WRDA[®]20 is an aqueous solution of modified glucose polymer containing a catalyst which promotes more complete hydration of the portland cement.

WRDA[®]20 is manufactured under rigid control to ensure uniform predictable performance. It is supplied as a dark brown, low viscosity liquid and is ready to use as received. WRDA[®]20 weighs approximately 1.20 kg/L (10.0 lbs/gal).

Uses

WRDA[®]20 is a general purpose water-reducing concrete admixture that is recommended for use in a wide variety of applications where concrete with normal setting characteristics is required. It is used in ready mix, job site, and concrete paver plants; for normal and lightweight concrete; in block, precast and prestress work ... wherever concrete is produced.

Advantages

WRDA[®]20 produces a mix with lower water content (typically 5% to 10% reduction) and higher compressive and flexural strengths at all ages than untreated concrete. WRDA[®]20 produces plastic concrete that is easier to place and finish, and yields a stronger, less permeable and more durable concrete.

Finishability

Finishers have stated that the cement paste or mortar in WRDA[®]20 admixed concrete has improved trowelability. Floating or troweling by hand or machine imparts a smooth, close tolerance surface.

Chemical Action

As a dispersing agent, WRDA[®]20 lessens the natural interparticle reaction between cement grains in water. The admixture is adsorbed onto the cement particles, where it reduces their tendency to clump together and thereby reduces the amount of water needed to produce a workable mix.

As a cement catalyst, WRDA[®]20 initiates a more complete hydration of the cement, beginning immediately after the cement and water come together. WRDA[®]20 also adds to the water retention and internal cohesiveness of the mix, reducing bleeding and segregation as it increases workability and placeability.

Addition Rates

WRDA®20 meets the requirements of ASTM C 494 as a Type A, Water-Reducing Admixture. Excellent results are obtained using an addition rate of 160 mL/100 kg (2.5 fl oz/100 lbs) of cementitious materials. In some cases it may be necessary to modify the addition rate due to variations in cement, aggregate and other jobsite conditions.

Compatibility with Other Admixtures

WRDA®20 is compatible with all other GCP admixtures. When used in combination with other admixtures, each admixture should be added separately into the mix.

Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available. WRDA®20 may be added to the concrete mix on the sand or with the mix water.

Packaging

WRDA®20 is available in bulk, delivered by metered tank trucks and 210 L (55 gallon) drums.

Architects' Specifications

Concrete shall be designed in accordance with Standard Recommended Practice for Selecting Proportions for Concrete, ACI 211.

The water-reducing admixture shall be WRDA®20 as manufactured by GCP Products, or its equivalent. It shall meet all the requirements of Specification for Chemical Admixtures for Concrete ASTM Designation C 494, as a Type A admixture. Certification of compliance shall be made available on request.

The admixture shall be delivered as a ready-to-use, liquid product and shall require no mixing at the batching plant or jobsite. The admixture shall not contain calcium chloride. It shall be used in strict accordance with manufacturer's recommendations.

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GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA

GCP Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6

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