

WRDA[®] 79

Water-reducing and retarding admixture ASTM C494 Type A and D

Product Description

WRDA[®]79 is an aqueous solution of modified lignosulfonates containing a catalyst which promotes more complete hydration of portland cement. It does not contain calcium chloride. WRDA 79 is manufactured under rigid control which provides uniform, predictable performance. It is supplied as a dark brown, low viscosity liquid, ready-to-use as received. One Liter weighs approximately 1.18 kg (one gal weighs approx. 9.9 lbs).

Uses

WRDA[®]79 makes a workable mix and yields a stronger, less permeable and more durable concrete. It is used in ready mix plants, job site plants and concrete pavers, for normal weight and light weight concrete, in block, precast and prestressed concrete plants.

Chemical Action

RDA 79 is a chemical admixture meeting the requirements of *Specification for Chemical Admixtures for Concrete*, ASTM Designation: C 494 as a Type A and as a Type D admixture.

As a dispersing agent, WRDA 79 lessens the natural interparticle attraction between cement grains in water. It does this by colloidal action, by adsorption on the cement particles thus reducing their tendency to clump together making the mix more workable with less water. As a cement catalyst, WRDA 79 affects a more complete hydration of the cement, beginning immediately after the cement and water come together at the lower additions of WRDA 79 or immediately after a period of designed and controlled hydration at the higher additions. WRDA 79 increases the gel content of the concrete, the paste or binder that "glues" the concrete aggregates together. The increased gel content adds to the water retention and internal cohesiveness of the mix, reducing bleeding and segregation as it increases workability and placeability.

Addition Rates

WRDA 79 provides water reduction with no retardation through mild to extended initial retardation, as job conditions require. After a period of initial retardation at the higher addition rates, hydration continues rapidly and completely.

The amount of WRDA 79 to be used will range from 190 to 625 mL/ 100 kg (3 to 10 fl oz/100 lbs) of cementitious materials depending upon job requirements.

Compatibility with Other Admixtures

WRDA 79 is compatible with all air-entraining admixtures. By combining the separate effects of air entrainment and dispersion, the water requirement of concrete may be reduced up to 20%. Each admixture should be added separately. WRDA 79 contains no calcium chloride but is compatible in concrete with calcium chloride. Again, each admixture should be added separately.

Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available. WRDA 79 may be added to the concrete mix on the sand or in the water.

Packaging & Handling

WRDA 79 is available in bulk, delivered by metered tank trucks, and in totes and drums. WRDA 79 will freeze at about -2°C (28°F) but will return to full strength after thawing and thorough mechanical agitation.



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 79 as manufactured by GCP Applied Technologies, or approved equal. The admixture shall not contain calcium chloride. It shall meet the requirements of *Specification for Chemical Admixtures for Concrete* ASTM Designation C 494 as a Type A admixture or as a Type D admixture when used at an addition rate of 190 to 625 mL/100 kg (3 to 10 fl oz/100 lbs) of cement. 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 job site.

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