

WRDA[®] 64

Water-Reducing Admixture ASTM C 494, Type A and Type D

Description

WRDA[®] 64 is a polymer based aqueous solution of complex organic compounds. WRDA 64 is a ready-to-use low viscosity liquid which is factory pre-mixed in exact proportions to minimize handling, eliminate mistakes and guesswork.

WRDA 64 contains no calcium chloride and weighs approximately 1.21 kg/L (10.1 lb/gal).

Uses

WRDA 64 produces a concrete with lower water content (typically 8 to 10% reduction), greater plasticity and higher strength. It is used in ready-mix plants, block and concrete product plants, in lightweight and prestressed work ... wherever concrete is produced.

Advantages

WRDA 64 offers significant advantages over single component water reducers. Water reduction and setting times are more consistent due to the polymer components. WRDA 64 also performs especially well in concrete containing fly ash and other pozzolans.



The use of WRDA 64 produces a plastic concrete that is more workable, easier to place and more finishable than plain or other admixed concrete. In the hardened state, WRDA 64 concrete has higher compressive and flexural strengths at all ages than untreated or conventional admixed concrete.

The greater degree of plasticity achieved, compared with conventional water-reducing admixtures, allows improved finishability.

Finishability

Finishers have stated that the cement paste, or mortar, in WRDA 64 admixed concrete has improved trowelability. The influence of WRDA 64 on the finishability of lean mixes has been particularly noticeable. Floating and troweling, by machine or hand, imparts a smooth, close tolerance surface.

Addition Rate

The addition rate range of WRDA 64 is 195 to 390 mL/100 kg (3 to 6 fl oz/100 lb) of cement. Pretesting is required to determine the appropriate addition rate for Type A and Type D performance. Optimum addition depends on the other concrete mixture components, job conditions, and desired performance characteristics.

Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available. WRDA 64 may be introduced to the mix on the sand or in the water.

Compatibility with Other Admixtures

WRDA 64 is compatible in concrete with all air-entraining admixtures such as Darex® II AEA and Daravair®. Due to the slight air-entraining properties of WRDA 64, itself, the addition rate of air-entraining admixture may be reduced by about 25%.

By combining the separate effects of air-entraining and dispersion, the water requirement of concrete may be reduced up to 15%. EACH ADMIXTURE SHOULD BE ADDED SEPARATELY. While WRDA 64 contains no calcium chloride, it is compatible with calcium chloride in concrete mixes. Again, each should be added separately.

Packaging

WRDA 64 is available in bulk, delivered by metered tank trucks, and in 210 L (55 gal) drums. WRDA 64 contains no flammable ingredients. It will freeze at about -2°C (28°F), but will return to full strength after thawing and thorough agitation.

Architects' Specification for Concrete Water-Reducing Admixture

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

The water-reducing (or water-reducing and retarding) admixture shall be WRDA 64, as manufactured by Grace Construction Products, or equal. The admixture shall not contain calcium chloride. It shall be used in strict accordance with the manufacturer's recommendations. The admixture shall comply with ASTM Designation C 494, Type A water-reducing (or Type D water-reducing and retarding) admixtures. Certification of compliance shall be made available on request.

The admixture shall be considered part of the total water. The admixture shall be delivered as a ready-to-use liquid product and shall require no mixing at the batching plant or job site.