

ZYLA[®] 614R

Water-reducing and retarding admixture: ASTM C494 Type B and D

Product Description

ZYLA[®]614R is a ready-to-use aqueous solution of organic compounds specifically designed as an admixture for use in Portland cement concrete. The ingredients are factory pre-mixed in exact proportions under strict quality control to provide uniform results. One gallon weighs approximately 9.4 lbs (one liter weighs approximately 1.13 kg).

ZYLA[®]614R is approved as an ASTM C494 Type B retarding and Type D water-reducing and retarding admixture.

Product Advantages

- Consistent air entrainment
- Consistent performance across cement chemistries
- Provides combination of slump life and improved strengths
- Creamier and more homogeneous concrete texture
- Reproducible set performance

Uses

Set Retarder

ZYLA[®]614R is used to retard the initial and final set of concrete. At the usual addition rate of 3 to 5 fl oz/100 lbs (195 to 325 mL/ 100 kg) cementitious it will extend the initial setting time of Portland cement concrete by approximately 2 to 3 hours at 70 °F (21 °C). ZYLA[®]614R is used wherever a delay in setting time will insure sufficient delivery, placement, vibration or compaction time. It may be used in all types of concrete.

Water-Reducing Properties

Along with set retardation, ZYLA[®]614R typically provides 5% water reduction in a concrete mix. This water-reducing action produces greater plasticity and workability in the fresh concrete and the strength and permeability of the hardened concrete are measurably improved. ZYLA[®]614R is designed for use on jobs where extended setting times are desired.

Concrete Workability

Although ZYLA[®]614R is formulated primarily as a concrete water reducer and set retarder for all types of concrete, it is also used to aid placing of low-slump concrete such as curb and gutter, paving and pervious concrete. It reduces the amount of hand finishing required in these applications and makes it easier to discharge from the truck, while better controlling the setting time.

Addition Rates

The addition rate range of 3 to 5 fl oz/100 lbs (195 to 325 mL/ 100 kg) of cement or cementitious is typical for most applications. However addition rates of 2 to 8 fl oz/100 lbs (130 to 520 mL/ 100 kg) of cement or cementitious may be used if local testing shows acceptable performance. Pretesting is required to determine the appropriate addition rate for desired performance. The optimum addition rate depends on the other concrete mixture components, job conditions, and desired performance characteristics.

Compatibility with Other Admixtures and Batch Sequencing

ZYLA®614R is compatible with most GCP 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 it 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 GCP Technical Bulletin TB-0110, *Admixture Dispenser Discharge Line Location and Sequencing for Concrete Batching Operations* for further recommendations. ZYLA®614R should not come in contact with any other admixture before or during the batching process.

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 GCP Applied Technologies representative for guidance.

Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available. ZYLA®614R should be introduced to the mix through the water tank pipe or through a separate hose.

Packaging & Handling

ZYLA®614R is available in bulk, delivered by metered tank trucks and 55 gallon (210 L) drums. ZYLA®614R will freeze, but will return to full effectiveness after thawing and thorough mechanical agitation.

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 B and D admixtures, and shall be ZYLA®614R, as manufactured by GCP Applied Technologies, 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.

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