

ADVA® 380

High-range water-reducing admixture

ASTM C494 Type A and F, and ASTM C1017 Type I

Product Description



ADVA® 380 is a high efficiency polycarboxylate- based super-plasticizer intended for the production of Self-Consolidating Concrete (SCC) in ready-mix applications. ADVA 380 has been formulated to extend slump-flow life while imparting extreme workability without segregation to concrete, to achieve high early compressive strength. ADVA 380 is formulated to comply with ASTM C494 as a Type A and F, and ASTM C1017 Type I admixture.

ADVA 380 is supplied as a ready-to-use brown liquid. One gallon weighs approximately 8.90 lbs (one liter weighs approximately 1.07 kg). ADVA 380 contains no intentionally added chlorides.

Uses

ADVA 380 is recommended for use in the production of Self-Consolidating Concrete and is a component of Grace's Self-Consolidating Concrete System. ADVA 380 can also be used as a conventional high-range water reducer.

- Can produce SCC concrete with extremely high levels of workability without segregation.

- Extended slump life to ease job site placement.
- Ideal for use in applications where concrete needs to achieve high early strength along with high levels of workability.
- Provides superior concrete surface finish characteristics with reduced bugholing.

Self-Consolidating Concrete

SCC produced with ADVA 380 has unique advantages over conventional flowing concrete.

- Self placement — vibration can be eliminated because SCC is highly flowable and will change shape under its own weight to self level and self consolidate within formwork.
- No segregation — SCC is a flowable yet highly cohesive material that will not segregate, and has significantly reduced bleeding.
- No blocking — SCC can pass freely through narrow openings and congested reinforcement without aggregate “blocking” behind obstructions that stop the flow of concrete.

The production of SCC typically requires both the use of specialty admixtures specifically tailored for SCC such as ADVA 380, as well as mix design adjustments. Therefore, for SCC applications, pre-placement testing is strongly recommended to determine the optimal admixture addition rate and appropri-

Product Advantages

- Enhanced cohesiveness compared to conventional superplasticizers
- Excellent rheological properties ensure concrete integrity over long flow distances
- Enhanced slump retention
- Improved air entrainment control



ate mix design parameters. Factors that influence optimum addition rate include other concrete mix components, aggregate gradations, form geometry, and reinforcement configurations. V-MAR® 3 may be used with ADVA 380 to further modify the rheological properties of SCC Concrete.

Addition Rates

ADVA 380 is an easy to dispense liquid admixture. Dosage rates can be adjusted to meet a wide spectrum of concrete performance requirements. Addition rates for ADVA 380 can vary with the type of application, but will normally range from 4 to 16 fl oz/100 lbs (260 to 1050 mL/100 kg) of cement. Should conditions require using more than the recommended addition rate, please consult your Grace representative.

Compatibility with Other Admixtures and Batch Sequencing

ADVA 380 is compatible with most Grace admixtures as long as they are added separately to the concrete mix. However, ADVA products are not recommended for use in concrete containing naphthalene-based admixtures including Daracem® 19 and Daracem 100, and melamine-based admixtures including Daracem ML 330 and Daracem 65. In general, it is recommended that ADVA 380 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 Grace Technical Bulletin TB-0110, *Admixture Dispenser Discharge Line Location and Sequencing for Concrete Batching Operations* for further recommendations. ADVA 380 should not come in contact with any other admixture before or during batching, 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 with other admixtures, 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

ADVA 380 is available in bulk, delivered by metered trucks, in 275 gal (1041 L) totes, and 55 gal (210 L) drums. ADVA 380 will freeze at approximately 32°F (0°C) but will return to full functionality after thawing and thorough mechanical agitation.

Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available.

www.graceconstruction.com

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

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