

CONCERA[®] SA8080 Data Sheet

High range water-reducing admixture - ASTM C494 Type A and F and ASTM C1017 Type I

Product Description

CONCERA[®] SA8080 is a high efficiency polycarboxylate based linear dose water reducer and high range water reducing admixture. A unique formulation of polycarboxylate dispersants and rheology modifiers enables CONCERA[®] SA8080 to be successfully used in a wide variety of applications ranging from dry cast and zero slump mixes to highly flowable self-consolidating mixes. Throughout this diverse range of applications, CONCERA[®] SA8080 provides superior overall workability, rheology and finishability resulting in productivity improvements, excellent strength and durability properties.

CONCERA[®] SA8080 is supplied as a ready-to-use liquid that weighs approximately 8.65 lbs/gal (1.04kg/L). It does not contain intentionally added chlorides.

Product Advantages

- Linear dose capability 3" (75mm) slump concrete to SCC
- Enables very high flow segregation-resistant concrete
- Provides extended slump flow retention
- Consistent and predictable performance
- Improved strength and durability
- Improved pumpability and finishability with harsh aggregates
- Reduces required job-site QC support
- Faster cycle times and truck turnaround
- Easier and faster placement and finishing
- Sustainability benefits

Uses

Dry-Cast and Zero/Low Slump Mixes

CONCERA[®] SA8080 enables the discharge of dry-cast, zero slump and low slump fast and efficiently. This improves cycle times and feed rates of curbing, barrier wall, pipe machines and hollow-core. In addition, CONCERA[®] SA8080 results in improved strength and durability through better cement dispersion, compaction and hydration along with superior finishability and form finish.

3" to 8" Standard Slump Concrete

CONCERA® SA8080 performs consistently and linear as a water reducer, mid-range water reducer and high range water reducer. CONCERA® SA8080 improves movement of the concrete under energy thereby allowing concrete to be floated and finished faster and easier, even with mix designs containing manufactured sands. In many cases, cementitious contents can be reduced without negatively impacting finishability, strength or durability properties. Concrete slump retention and pumpability properties are superior with pump pressures reduced due to the slicker surface properties of the mix.

Control Flow Concrete

CONCERA® SA8080 is recommended for use in the production of Control Flow Concrete, a highly flowable conventionally proportioned concrete category with slump flows that reside between conventional and self-consolidating concrete. Typical water content of base mixture (without CONCERA® SA8080) should be sufficient to produce an untreated 2-5 inch (50-125 mm) slump.

- Produces concrete with extremely high levels of workability without segregation. Slump flows can vary from 16 to 25 inches (410 to 635 mm) with the types of materials used, but will typically range from 18 to 22 inches (460 to 560 mm)
- Provides superior water tolerance to the concrete, making it less susceptible to normal manufacturing moisture fluctuations
- Extends slump life to enable batch plant adjustments and predictable job site plastic properties

Self-Consolidating Concrete

CONCERA® SA8080 can be used to make self-consolidating concrete (SCC) with superior water tolerance and very high levels of workability without segregation. In addition, CONCERA® SA8080 produces SCC concrete that is less sticky and has improved finishability and form finish even when used in mix designs containing harsh aggregates. CONCERA® SA8080 can be used by itself or in conjunction with ADVA® products to achieve optimal properties.

Addition Rates

CONCERA® SA8080 is an easy-to-dispense liquid admixture. Dosage rates can be adjusted to meet a wide spectrum of concrete mix proportions and performance requirements and typically range from 2-24 oz/cwt (130-1560 ml/cwt kg). Please consult your GCP representative for further technical guidance.

Compatibility with Other Admixtures and Batch Sequencing

CONCERA® SA8080 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 the product be added to the concrete mix near the end of the batch sequence for optimum performance. Please see GCP Technical Bulletin TB-0110, *Admixture Dispenser Discharge Line Location and Sequencing for Concrete Batching Operations* for further recommendations.

For concrete that requires air entrainment, the use of an ASTM C260 air-entraining agent, such as DAREX® II AEA is recommended to provide suitable air void parameters for freeze-thaw resistance. Please consult your GCP representative for guidance.

APPLICATIONS	SLUMP/FLOW	TYPICAL DOSAGE	BENEFITS
Low slump (i.e. Curb, Barrier)/ Dry cast	0-3" (0-75mm)	2-4 oz/cwt (130-260 ml/cwt kg)	Better feed from truck, faster feed through extruding machine, better finish directly from machine, faster cycle times, improved strength and density.
Traditional slump ranges	3-8" (75-200mm)	3-8 oz/cwt (195-520 ml/cwt kg)	Linear dose performance, improved finishability and pumpability with manufactured sands. Excellent slump retention.
Control Flow Concrete	16-24" (405-610mm)	8-18 oz/cwt (520-1170 ml/cwt kg)	Faster placement with reduced labor and QC, segregation resistant, excellent slump retention.
SCC Concrete	20-28" (510-710mm)	10-24 oz/cwt (650-1560 ml/cwt kg)	Highly flowable and superior water tolerance, enhanced consistency, finishability with manufactured aggregates.

Packaging & Handling

CONCERA® SA8080 is available in bulk, delivered by metered tank trucks, in totes and drums.

CONCERA® SA8080 will begin to freeze at approximately 32°F (0°C) but will return to full strength after thawing and thorough agitation. In storage and for proper dispensing, the temperature should be maintained above 32°F (0°C).

Dispensing Equipment

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

Specifications

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

The high-range water-reducing admixture shall be CONCERA® SA8080 high range water reducer as manufactured by GCP, or its equivalent. It shall be manufactured to meet all the requirements of Specification for Chemical Admixtures for Concrete, ASTM Designation C494 as a Type A and F and ASTM C1017 Type I admixture.

The admixture shall be delivered as a ready-to-use, liquid product and shall not contain added chlorides. It shall be used in strict accordance with manufacturers recommendations.

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GCP Applied Technologies Inc., 2325 Lakeview Parkway, Suite 450, Alpharetta, GA 30009, USA

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

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