

ADVA[®] Cast 575 Data Sheet

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

Product Description

ADVA[®]Cast 575 is a high efficiency, low addition rate polycarboxylate-based high-range water reducer designed for the production of a wide range of concrete mixes, from conventional to Self-Consolidating Concrete (SCC). It is designed to impart extreme workability without segregation to the concrete.

ADVA[®]Cast 575 is supplied as a ready-to-use liquid that weighs approximately 8.9 lbs/gal (1.1 kg/L). ADVA[®]Cast 575 does not contain intentionally added chlorides.

Product Advantages

- Excellent dosage efficiency, moisture control and air control
- Superior air entrainment control
- Enhanced concrete cohesiveness with low viscosity for rapid placement
- Superior finish on cast surfaces
- Enhanced strength development

Uses

ADVA[®]Cast 575 is a plant-added superplasticizer that is formulated to impart improved workability to the concrete and to achieve high early compressive strength as required by the precast industry. ADVA[®]Cast 575 can be used for the production of SelfConsolidating Concrete in precast/prestressed applications and may be used in conventional concrete production.

ADVA[®]Cast 575 may be used in low water-cementitious ratio applications where concrete stability and improved tolerance to concrete material variability are required.

ADVA[®]Cast 575 may be used to produce concrete with very low water/cementitious ratios while maintaining normal levels of workability.

Addition Rates

ADVA[®]Cast 575 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[®]Cast 575 can vary from 2 to 10 fl oz/100 lbs (130 to 650 mL/100 kg) with the type of application, but will typically range from 3 to 6 fl oz/100 lbs (200 to 390 mL/100 kg) of cementitious.

Should conditions require using more than the recommended addition rate, please consult your GCP Applied Technologies representative.

Mix proportions, cementitious content, aggregate gradations and ambient conditions will affect ADVA®Cast 575 dosage requirements. If materials or conditions require using more than the recommended addition rates, or when developing mix designs for Self-Consolidating Concrete please consult your GCP Applied Technologies representative for more information and assistance.

Compatibility with Other Admixtures and Batch Sequencing

ADVA®Cast 575 is compatible with most GCP 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®65. In general, it is recommended that ADVA®Cast 575 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.

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 DARAIR® 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.

Packaging & Handling

ADVA®Cast 575 is a light blue liquid available in bulk, delivered by metered trucks, in totes and drums. ADVA®Cast 575 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.

ADVA® Cast 575 ASTM C494 Type F High-Range Water Reducer Test Data

	US UNITS - CONTROL	US UNITS - ADVA® CAST 575	METRIC - CONTROL	METRIC - ADVA® CAST 575
Cement (pcy) (kg/m ³)	517	517	307	307
Coarse aggregate (pcy) (kg/m ³)	1944	1944	1153	1153
Fine aggregate (pcy) (kg/m ³)	1144	1214	679	720
Water (pcy) (kg/m ³)	248	211	147	125
w/cm	0.48	0.41	0.48	0.41
Slump (inches) (mm)	3.5	3.25	89	83
Plastic air (%)	5.4	5.5	5.4	5.5

Compressive strength

1 day (psi) (MPa)	1460	2050	10.1	14.1
7 day (psi) (MPa)	4380	6040	30.2	41.6
28 day (psi) (MPa)	5570	7270	38.4	50.1
Initial set time (hr:min)	4:56	3:57	4:56	3:57
Length change 28 day (%)	-0.027	-0.029	-0.027	-0.029
Freeze-thaw resistance (RDME %)	88	91	88	91

gcpat.com | North America Customer Service: +1 (877) 423 6491

This product or its use may be covered by US Patent Nos. US8187376 and/or US8317918.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate, and is offered for consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations, and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation, or suggestion is intended for any use that would infringe any patent, copyright, or other third party right.

ADVA, DAREX, DARACEM, and DARAVAIR are trademarks, which may be registered in the United States and/or other countries, of GCP Applied Technologies, Inc. This trademark list has been compiled using available published information as of the publication date and may not accurately reflect current trademark ownership or status.

© Copyright 2018 GCP Applied Technologies, Inc.

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Suite 400, Alpharetta, GA 30009, USA

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

This document is only current as of the last updated date stated below and is valid only for use in the United States. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.com. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2023-06-28

gcpat.com/solutions/products/adva-cast-high-range-water-reducers/adva-cast-575-data-sheet