

ADVA[®] Cast 560

Accelerating High Early Strength Concrete Superplasticiser

Product Description

ADVA[®]Cast 560 is an accelerating superplasticising admixture designed to yield high range water reduction, short setting time and very high early compressive strength as required by the precast industry. ADVA[®]Cast 560 is based on a synthetic carboxylated polyether, and conforms to: EN 934-2: Part 2 and ASTM C494-Type F.

Advantages

- ADVA[®] Cast 560 can be used to effect high-range water reductions, leading to considerable increases in compressive strength. Impermeability and durability are correspondingly improved. In this application, near neutral setting time is observed.
- To achieve early release strength, high early strength concrete can be obtained by incorporating ADVA[®] Cast 560 into a concrete mix containing Ordinary Portland Cement, without having recourse to using Rapid Hardening Cement, resulting in a potential cost saving.
- The accelerated strength development given by ADVA[®] Cast 560 means that casting can continue in cold weather without the need for heat curing.
- ADVA[®] Cast 560 provides superior concrete surface finish characteristics with reduced surface defects.

Uses

ADVA[®]Cast 560 Superplasticiser allows concrete to be produced at an easily placeable consistency, with low water/cement ratios, and consequently gives rise to very high early (12-24 hours) and final strength. As a consequence, ADVA[®]Cast 560 is ideal for use in all precast/pre-stressed structures where high-range water reduction and accelerated early strength development are needed for early de-moulding and /or heat energy savings. ADVA[®] Cast 560 improves the surface finish of cast surfaces.

Typical Properties

Appearance	Mid brown liquid
Air Entrainment	1.0% approx.
Chloride Content	Nil

Method of Use

ADVA[®]Cast 560 is supplied ready for use. When producing high workability concrete it should be added with part of the batching water, after the addition of the cementitious component. It should not be added directly to the cement.

After the addition of ADVA[®]Cast 560, a further mixing cycle of at least 2 minutes is recommended to fully disperse the mix components.

Addition Rates

Range	700 ml - 2000 ml per 100 kg cement
	1.0% - 2.25% (v/w) by wt. of cement

ADVA®Cast 560 is a versatile, high performance product that benefits from a wide variety of applications. As with most products of this type, the magnitude of the effect obtained with ADVA®Cast 560 is governed by the quantity of product used and the specific nature of the concrete and its constituent materials.

It is necessary, therefore, to assess performance under plant conditions using site materials to determine optimum dosage and effect on both plastic and hardened concrete properties, such as cohesiveness, workability retention, set characteristics, early rate of strength gain, ultimate compressive strength and shrinkage when these are of consequence. As a guide to these trials, an addition level of 1.5% ADVA®Cast 560 volume/weight of cement is recommended.

For advice and assistance with your trials we would recommend that you consult GCP.

Effects of Overdosing

The effects of overdosing of ADVA®Cast 560 are a function of the degree of overdose. When producing high early strength concrete, an unintentional overdosing will either, increase the level of workability and may induce the onset of segregation, or, if the water content is adjusted accordingly, allow even greater water reduction which causes the mix to become overly cohesive.

Only when there is a large overdose will an increase in setting time be significant. In any situation where overdosing is suspected, a careful inspection of the concrete in its plastic state should be conducted. Particular attention should be paid to consistency and cohesiveness, prior to a decision on the suitability of the concrete for the particular application in question.

Compatibility

With Cements:

ADVA®Cast 560 can be used with all types of Portland Cement, including Sulphate Resisting Cements. It is also effective in concretes containing pulverised fuel ash or GGBFS.

With other admixtures:

ADVA®Cast 560 should not be pre-mixed with other admixtures. The performance of the material may be affected by the presence of other chemicals and we would recommend that GCP be consulted in such circumstances.

Dispensing

It is preferable that liquid admixtures for concrete should be introduced into the mixer by means of automatic dispensing equipment. Such equipment is available from GCP and details will be supplied on request.

Health and Safety

ADVA®Cast 560 is formulated from chemicals which present no fire or health hazards. If, however, it is spilt the floor will be made slippery and should be washed down immediately with cold water.

For further information see ADVA®Cast 560 Safety Data Sheet, or consult GCP Applied Technologies.

Packaging

ADVA®Cast 560 is supplied in 205-litre free, non-returnable drums, or 1000 litre returnable totes.

Alternatively, bulk deliveries can be arranged.

Storage

ADVA®Cast 560 should preferably be stored protected from frost. If the product does become frozen, it should be carefully mixed after thawing out to restore it to its normal state.

Storage life:

12 months from date of manufacture.

Technical Service

The GCP Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

gcpat.ae | United Arab Emirates customer service: +971 4 5139560

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 is a trademark, 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. All rights reserved.

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

P. O. Box 5006, Office 2104, 21 Floor, The Exchange Tower, Opp. JW Marriott Marquis Hotel, Business Bay, Dubai – United Arab Emirates

This document is only current as of the last updated date stated below and is valid only for use in the UAE. 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.ae. 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: 2025-05-15

gcpat.ae/solutions/products/adva-cast-high-range-admixtures/adva-cast-560