

# ADVA<sup>®</sup> CAST 550

High Range Water Reducer / Superplasticiser For Precast Concrete Applications

## Product Description

ADVA<sup>®</sup>CAST 550 is a high performance, high efficiency, low dosage superplasticising admixture designed to impart extremely high consistence enabling large or difficult pours to be made with minimal vibration and to achieve high compressive early strengths as requested by the precast industry.

ADVA<sup>®</sup>CAST 550 is designed to be used in a wide range of precast concrete applications where high strength and high durability are required. ADVA<sup>®</sup>CAST 550 is based on modified synthetic carboxylated polymers and offers the latest advances in concrete technology.

ADVA<sup>®</sup>CAST 550 conforms to EN 934-2 and is manufactured under controlled conditions to give a consistent product.

## Advantages

- ADVA<sup>®</sup> CAST 550 is extremely efficient, allowing the production of high flow concrete without excessive admixture dosage and low water contents for high early (12-24 hours) and final compressive strength
- As consequence, ADVA<sup>®</sup> CAST 550 is ideal for use in all Precast/Pre-stressed Factory applications, where high range water reduction is desired for strength development and/or heat energy saving
- Excellent concrete rheology and handling properties are maintained
- Impermeability / durability are improved
- Near neutral setting time is observed and can be used to reduce energy requirements of external heat for accelerated curing
- Superior concrete surface finish characteristics with reduced surface defects.

## Typical Properties

ADVA <sup>®</sup> CAST 550	
Appearance	Pale Straw Liquid
Specific Gravity (20 °C)	1.070
Alkali Content (eq.Na <sub>2</sub> O)	0.15%
Chloride Content	Nil
Air Entrainment	1.0 %
Freezing Point	0 °C

## Method Of Use

ADVA®CAST 550 is supplied ready for use.

When producing high consistence concrete or concrete of low w/c ratio it is recommended that ADVA®CAST 550 be added in its supplied form with part of the batching water, after the addition of the cement. It should not be added directly to the cement. After the addition of the admixture, a further mixing cycle of two minutes is suggested to efficiently disperse the mix components.

## Compatability with Cements

ADVA®CAST 550 should not under any circumstances be premixed with other admixtures. The performance of the product will be affected by the presence of other chemical admixtures. We recommend that all admixtures be added separately into the mix.

## Addition Rates

Range	300 ml –800 ml per 100 kg cement
	0.30% –0.80% (v/w) by wt. of cement
As a guide to trials an addition rate of 0.40 – 0.60% volume by weight of cement is suggested.	
For advice and assistance with trials we recommend that you consult GCP Applied Technologies.	

As with most products of this type, the magnitude of the effect obtained with ADVA CAST 550 is governed by the quantity of product used, w/c ratio, and specific nature of the concrete and constituent materials. It is necessary therefore to assess performance under site conditions using actual materials to determine optimum dosage and effect on plastic/hardened concrete properties, such as cohesiveness, consistence retention, set characteristics, early rate of strength gain, ultimate compressive strength and shrinkage when these are of consequence.

## Effects of Overdosing

The effect of overdosing ADVA®CAST 550 is a function of the degree of overdose.

When producing high consistence concrete, overdosing will increase the level of consistence and may induce the onset of segregation. Depending on the extent of the overdose, an increase in setting time may also occur, especially in low ambient temperatures and/or when employing Sulfate-resisting Portland cements or cement replacement materials.

Any situation where an overdose is suspected, careful inspection of the concrete in its plastic state should be conducted. Particular attention to consistency and cohesiveness prior to a decision on the suitability of the concrete for the particular application in question.

## Dispensing

It is preferable that ADVA®CAST 550 should be introduced into the concrete mixer automatic dispensing equipment. Equipment or advice on dispensing can be obtained from GCP Applied Technologies.

## Health and Safety

For further information on Health and Safety matters regarding this product we recommend that you consult the relevant Safety Data Sheet from GCP Applied Technologies. In line with general chemical handling precautions avoid contact with skin or eyes and protective gloves/goggles should be worn.

## Packaging and Storage

ADVA®CAST 550 is supplied in both 15 or 205 non returnable drums and 1,000 litre totes. Alternatively, bulk deliveries can be arranged. ADVA®CAST 550 should when possible be stored away from extremes of temperature and then protected from frost. The product should be kept out of direct sunlight in shaded storage at all times.

### Storage Life in Manufacturer 's Drums :

12 months from date of manufacture.

### Storage Life in Bulk Storage:

12 months from date of delivery.

## Technical Service

Our Technical Service department of GCP Applied Technologies is available to assist you in the correct use of our performance chemicals.

gcpat.uk | Customer Service: Tel: 01925 855330 Fax: 01925 855350

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