

# ADVA<sup>®</sup> 655

High Range Water Reducer/Superplasticiser with Enhanced Consistence Retention Performance

## Product Description

ADVA<sup>®</sup>655 is a high performance liquid superplasticiser designed for the production of ready-mixed concrete.

Intended for use in a wide range of concrete applications and as well as a superplasticising effect, ADVA<sup>®</sup>655 will also provide extended slump retention properties. ADVA<sup>®</sup>655 offers the great-est slump retention and is particularly beneficial for long or difficult pours where concrete consistence of up to two hours is required. ADVA<sup>®</sup>655 is based on next generation modified synthetic car-boxytated polymers and offers concrete producers the advantages of the latest advances in concrete technology. ADVA<sup>®</sup>655 conforms to BS EN 934-2 and is manufactured under controlled conditions to give a consistent product.

## Typical Properties

Appearance	Amber/Straw Liquid
Specific Gravity (20 °C)	1.06
Alkali Content (eq.Na <sub>2</sub> O)	1.00 %
Chloride Content	Nil
Air Entrainment	1.0 %
Freezing Point	0 °C

## Product Advantages

- ADVA<sup>®</sup> 655 is especially suitable for producing high consistence concrete, with excellent rheology and consistence retention properties.
- Using suitable mix designs ADVA<sup>®</sup> 655 can be used to achieve extended consistence life over normal superplasticisers, even with difficult cements.
- High consistence concrete can be obtained by in-corporating ADVA<sup>®</sup> 655 into a concrete design for a S2 consistence and/or low water/cement ratio.
- Minimal impact on the setting time.
- Suitable for use in mix designs containing fly ash, ggbs or silica fume.
- ADVA<sup>®</sup> 655 can be used to achieve high range water reduction, leading to considerable increases in compressive strength; impermeability and durability are correspondingly improved.

## Compatibility

### With Cements:

ADVA<sup>®</sup>655 can be used with most types of Portland cements. It is also effective in concrete containing fly ash or ground granulated blastfurnace slag.

For use with special cements we recommend contacting GCP Applied Technologies.

### With Other Admixtures:

ADVA<sup>®</sup>655 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.

## Effects of Overdosing

The effect of overdosing ADVA<sup>®</sup>655 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 sulphate resisting cement or cement replacement materials.

In any situation where an overdose is suspected, careful inspection of the concrete in its plastic state should be conducted. Pay 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 the ADVA<sup>®</sup>655 should be introduced into the mixer by means of automatic dispensing equipment. Equipment or advice on dispensing can be obtained from GCP.

## Health and Safety

In line with general chemical handling precautions avoid contact with skin or eyes and protective gloves/goggles should be worn.

Read the product label and Safety Data Sheet (SDS) before use. Users must comply with all risk and safety phrases. SDS's can be obtained from [gcpat.com](http://gcpat.com).

## Addition Rates

Range	500 ml – 1300 ml per 100 kg cement
	0.50 % – 1.30 % (v/w) by wt. of cement

As a guide to trials an addition rate of 0.40 – 0.70 % volume by weight of cement is suggested.

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

As with most products of this type, the magnitude of the effect obtained with ADVA<sup>®</sup>655 is governed by the quantity of product used, w/c ratio, and the specific nature of the concrete and constituent materials. It is therefore necessary 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.

## Method of Use

ADVA<sup>®</sup>655 is supplied ready for use.

When producing high consistence concrete or concrete of low w/c ratio it is recommended that ADVA<sup>®</sup>655 be added in its supplied form with part of the batching water, after the addition of the cementitious component. After the addition of the admixture, a further mixing cycle of at least two minutes is suggested to enable ADVA<sup>®</sup>655 to efficiently disperse the mix components.

## Packaging

ADVA<sup>®</sup>655 is supplied in both 15 and 205 non-returnable drums and 1,000 litre totes.

Alternatively, bulk deliveries can be arranged.

## Storage

ADVA<sup>®</sup>655 should if possible be stored away from extremes of temperature and then protected from frost. If the product does become frozen, it should be carefully mixed after thawing out to restore it to its normal state. The product should be kept out of direct sunlight in shaded storage at all times.

### Storage Life in Manufacturer 's Drums:

12 months from the date of manufacture.

### Storage Life in Bulk Storage:

12 months from the date of delivery.

## Technical Service

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

[gcpat.uk](http://gcpat.uk) | United Kingdom customer service: +44 (0) 1480 478421

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