

ADVA[®] 655

High Range Water Reducer/Superplasticiser with Enhanced Consistence Retention Performance

Product Description

ADVA[®]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[®]655 will also provide extended slump retention properties. ADVA[®]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[®]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[®]655 conforms to BS EN 934-2 and is manufactured under controlled conditions to give a consistent product.

Product Advantages

- ADVA[®] 655 is especially suitable for producing high consistence concrete, with excellent rheology and consistence retention properties.
- Using suitable mix designs ADVA[®] 655 can be used to achieve extended consistence life over normal superplasticisers, even with difficult cements.
- High consistence concrete can be obtained by incorporating ADVA[®] 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[®] 655 can be used to achieve high range water reduction, leading to considerable increases in compressive strength; impermeability and durability are correspondingly improved.

Typical Properties

| | |
|--------------------------|--------------------|
| Appearance | Amber/Straw Liquid |
| Specific Gravity (20 °C) | 1.06 |
| Alkali Content (eq.Na2O) | 1.00 % |
| Chloride Content | Nil |
| Air Entrainment | 1.0 % |
| Freezing Point | 0 °C |

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®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®655 is supplied ready for use.

When producing high consistence concrete or concrete of low w/c ratio it is recommended that ADVA®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®655 to efficiently disperse the mix components.

Compatibility

With Cements:

ADVA®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®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®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®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.

Packaging

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

Alternatively, bulk deliveries can be arranged.

Storage

ADVA®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.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., 62 Whittemore Avenue, Cambridge, MA 02140 USA.

830-832 Fountains Court Birchwood Boulevard, Birchwood Warrington Cheshire WA3 7QZ.

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: 2021-02-05

gcpat.ae/solutions/products/adva-655