

ADVA[®] 151

High Range Water Reducer/Superplasticiser for General Purpose Ready Mix Applications

Product Description

ADVA[®]151 is a high performance liquid superplasticiser designed for the production of ready-mixed concrete.

The unique formulation of ADVA[®]151 is designed to be used in a wide range of ready mix concrete applications where high strength, high consistence and high durability are required. ADVA[®]151 is beneficial with improving concrete cohesion and is particularly suitable where the use of manufactured sands is preferred. ADVA[®]151 is based on next generation modified synthetic carboxylated polymers and offers concrete producers the advantages of the latest advances in concrete technology. ADVA[®]151 conforms to BS EN 934-2 and is manufactured under controlled conditions to give a consistent product.

Product Advantages

- ADVA[®] 151 is especially suitable for producing high consistence concrete, with excellent rheology.
- Dose efficient with water reductions from 10 to 30%.
- High consistence flowing concrete can be obtained by incorporating ADVA[®] 151 into a concrete design for a S2 consistence and/or low water/cement ratio.
- Minimal impact on the setting time at nominal dosages
- Improved concrete cohesion.
- Suitable for use in mix designs containing fly ash, ggbs or silica fume .
- ADVA[®] 151 can be used to achieve high range water reduction. Leads to considerable increases in compressive strength; impermeability and durability are correspondingly improved.

Typical Properties

Appearance	Brown Liquid
Specific Gravity (20 °C)	1.085
Alkali Content (eq.Na2O)	1.5%
Chloride Content	Nil
Air Entrainment	1.0 - 2.0% approx.
Freezing Point	0 °C

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.

As with most products of this type, the magnitude of the effect obtained with ADVA®151 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®151 is supplied ready for use.

When producing high consistence concrete or concrete of low w/c ratio it is recommended that ADVA®151 be added in its supplied form with part of the batching water, after the addition of the cementitious component. After the addition of admixture, a further mixing cycle of at least two minutes is suggested to enable ADVA®151 to efficiently disperse the mix components.

Compatibility

With Cements:

ADVA®151 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.

With Other Admixtures:

ADVA®151 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®151 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, setting time may also increase, especially if the overdosed concrete is subjected to low ambient temperatures, or if sulphate resisting or cement replacement materials are used.

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®151 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®151 is supplied in both 15 and 205 non-returnable drums and 1,000 litre totes.

Alternatively, bulk deliveries can be arranged.

Storage

If possible, ADVA®151 should be stored away from extreme temperatures 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

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GCP Applied Technologies Inc., 62 Whittemore Avenue, Cambridge, MA 02140 USA.

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

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Last Updated: 2021-02-05

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