# DAREX® AE3

Air Entraining Agent

## Product Description

DAREX®AE3 is a liquid air entraining agent for use in the production of air entrained concretes and cementitious compositions. DAREX®AE3 is formulated from carefully selected raw materials and is manufactured under controlled conditions to give a consistent product. It is based on the salt of an ether sulphate and meets the requirements of ASTM C-260 for air entraining admixtures.

## Avantages

- Improves resistance to freeze/thaw conditions.
- Resistance to the disruptive action of de-icing salts and other liquids is improved.
- Cohesion of mixtures liable to segregation is improved.
- Bleeding of excessive mixing water is reduced.
- Entrained air is not readily lost from plastic concrete mixes on standing and prolonged mixing does not normally cause excessive over-entrainment of air.
- DAREX® AE3 is particularly suitable for use in conjunction with concretes containing selected pulverised fuel ash.

## Typical Properties

| | |
|---|---|
| Appearance: | Clear Liquid |
| Specific Gravity: | 1.01 at 20 °C |
| Alkali Content: | 1.61% as $Na_2O$ |
| Sulphate Content: | 0.70% as $SO_3$ |
| Air Entrainment: | See “Addition Rate” |
| Chloride Content: | Nil |
| Freezing Point: | -2 °C |

## Method Of Use

DAREX®AE3 is supplied ready for use. It should be added to concrete mixes or mortar mixes during the mixing process at the same time as the water.

## Compatibility with Cements

DAREX®AE3 can be used with all types of Portland Cement including Sulphate Resisting Cements. It is suitable for use with blended cements containing ground granulated blast furnace slag. In addition, it can be used in concretes containing selected pulverised fuel ash.

## Compatibility with other Admixtures

DAREX®AE3 should not be premixed with other admixtures. The performance of the material may be affected by the presence of other chemicals and we would recommend that admixtures be added separately into the mix.

## Addition Rates

Range: 0.06% - 0.4% by weight of cement

The performance of DAREX®AE3 is dependent on the characteristic of the concrete or mortar mix concerned, together with the degree of air entrainment required.

Factors which can affect this are:

- Nature and grading of the aggregates, particularly fine aggregates
- Cement content and type of cement used
- Water/cement ratio
- Workability of the mixture
- Temperature
- Type and efficiency of mixing equipment

Normal good site control gives excellent consistency of results.

It is essential that the final assessment of dosage should be made after the site trials.

As a guide to these trials, an addition rate of 60ml – 90ml DAREX®AE3 per 100kg cement is recommended. For semi-dry mixes 280ml – 400ml DAREX®AE3 per 100kg cement is recommended. Where DAREX®AE3 is used in concretes containing pulverised fuel ash, the dosage rate could exceed the range quoted above.

For advice and assistance with your trials we recommend you consult our technical department.

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## Effects of Overdosing

Overdosing with DAREX®AE3 will normally produce an increase in air content and workability.

## Dispensing

It is preferable that liquid admixtures for concrete be introduced into a mixer by means of automatic dispensing equipment, details of which are available upon request.

## Health and Safety

For further information see the DAREX®AE3 SDS (Safety Data Sheet) or consult GCP.

## Packaging

DAREX®AE3 is supplied in 210 litre free, non-returnable containers.

Alternatively, 1000 litre IBCs or bulk deliveries are also available.

## Storage

DAREX®AE3 should be stored in original containers or suitable closed tanks, preferably out of direct sunlight and protected from extremes of temperature.

### 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

The Technical Service Department of GCP Applied Technologies is available to assist you in the correct and best use of our products. These resources and advice are at your disposal entirely without obligation. Please contact:

GCP Applied Technologies
Emirates Chemicals LLC
Festival Tower, Suite 1701
Dubai Festival City
P.O. Box 5006
Dubai, United Arab Emirates
Email: meinfo@grace.com

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



Last Updated: 2025-05-15
gcpat.ae/solutions/products/darex-ae3-0