

# DAREX<sup>®</sup> AE4

Foaming Agent

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## Product Description

DAREX<sup>®</sup>AE4 is a liquid foaming agent for use in all types of mortar and concrete mixes. It is particularly designed for use in the production of foamed concrete and for use with synthetic and naturally occurring light-weight aggregates where the density of the fine aggregate/cement paste is normally required to be similar to that of the aggregate. DAREX<sup>®</sup>AE4 is formulated from carefully selected raw materials and is manufactured under controlled conditions to give consistent product. It is a blend of anionic surfactants.

## Avantages

- DAREX<sup>®</sup> AE4 will entrain air into all types of concrete even those with highly angular crushed aggregates.
- It can be used with all types of light weight aggregates to produce very low density concrete mixes.
- DAREX<sup>®</sup> AE4 can be employed to entrain air in mixes containing high proportions of pulverised fuel ash.
- An aqueous solution of DAREX<sup>®</sup> AE4 can be prefoamed to give a very stable foam for use in the production of foamed concrete.

## Typical Properties

|                      |                    |
|----------------------|--------------------|
| Appearance:          | Pale Yellow Liquid |
| Specific Gravity:    | 1.03 at 20 °C      |
| Chloride Content:    | Nil                |
| Solubility in Water: | Indefinite         |
| Freezing Point:      | Less than 0 °C     |

## Method Of Use

DAREX<sup>®</sup>AE4 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 or the aggregates. It should not be added directly to the cement or mortar. No extension of normal mixing time is necessary.

## Compatibility with Cements

DAREX<sup>®</sup>AE4 can be used with all types of Portland Cement including Sulphate Resisting Cements and cement replacement materials.

## Compatibility with other Admixtures

DAREX<sup>®</sup>AE4 should not be premixed with other admixtures. The performance of the material may be affected by the presence of other chemicals.

## Addition Rates

The performance of DAREX<sup>®</sup>AE4 is best assessed after preliminary tests on site using the actual mix and the plant under consideration to determine the optimum dosage rate which will give the desired concrete properties.

For foamed concrete/mortar a 5.0% - 7.0% solution of DAREX<sup>®</sup>AE4 is added usually via a foam tube. The quantity of foam added will determine the resultant density of the concrete/mortar produced.

Hence the volume of aqueous solution added is proportional to the concrete/mortar density required. Conventional mixing equipment can be used to produce foamed light-weight aggregate concretes.

As a guide to trials an addition levels of 200ml DAREX<sup>®</sup>AE4 per 50kg cement should be evaluated.

The air content of air entrained concrete should be regularly checked, and because of the absorptive nature of most light weight aggregates, a gravimetric determination is most suitable

## Effects of Overdosing

As with all foaming agents, they are air entraining agents. DAREX<sup>®</sup>AE4 in any given mix will proportionately reduce compressive strength as the level of entrained air is increased. Overdosing with DAREX<sup>®</sup>AE4 will normally produce an increase in air content and workability, together with a loss in ultimate compressive strength.

## 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<sup>®</sup>AE4 SDS (Safety Data Sheet) or consult GCP.

## Packaging

DAREX<sup>®</sup>AE4 is supplied in nominal 210 litre, non-returnable containers or in 1000 litre IBCS.

## Storage

DAREX<sup>®</sup>AE4 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:

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