

# DAREX<sup>®</sup> AE5G

Air-entrainer

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## Product Description

Darex AE5G is a liquid air-entraining 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 lightweight aggregates, where the density of fine aggregate/cement paste is normally required to be similar to that of the aggregates.

Darex AE5G is formulated from carefully selected raw material and is manufactured under controlled conditions to give a consistent product. It is a blend of anionic surfactants. Darex AE5G is a pale, straw coloured liquid intended for use as supplied. Darex AE5G does not contain chlorides as an intentional component and it is non-corrosive. Darex AE5G meets the specification requirements of chemical admixtures under ASTM C260.

One litre weighs approximately  $1.03\text{kg} \pm 0.02\text{kg}$ .

## Applications

Darex AE5G may be used whenever the purposeful entrainment of air is required by concrete specifications. It is particularly useful in mass concrete and in high-cement, low-slump paving mixes, which require efficient, effective air-entraining admixtures. Darex AE5G 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.

## Product Advantages

- Darex AE5G will entrain air into types of concrete, even those with highly angular crushed aggregates.
- It can be used with all types of lightweight aggregates to produce very low-density concrete mixes.
- Darex AE5G can be employed to entrain air in mixes containing high proportions of pulverised fuel ash.
- An aqueous solution of Darex AE5G can be performed to give a very stable foamed concrete.

## Effects of Overdosing

As with all air-entraining agents, Darex AE5G in any given mix will proportionately reduce compressive strengths as the level of entrained air is increased. Overdosing Darex AE5G will normally produce an increase in air content and workability, together with a loss in ultimate compressive strengths.

## Compatibility with Other Admixtures

Darex AE5G is compatible in concrete with all known accelerating admixtures, water-reducing admixtures and water-reducing retarders. Each admixture should be added separately to the mix, and not premixed with other admixtures.

## Addition Rates

The performance of Darex AE5G is best assessed after preliminary tests on site using the actual mix and the plant under consideration to determine the optimum dosage rates which will give the desired concrete properties.

For foamed concrete/mortar, a 5–7% solution of Darex AE5G is usually added via a foam tube. The quantity of Darex AE5G 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 lightweight aggregate concrete.

As a guide to trials, an addition rate of 200mL of Darex AE5G per 50kg cement should be evaluated.

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

## Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.

## Packaging

Darex AE5G is available in bulk, in 205L drums and in 1,000L totes. Darex AE5G contains no flammable ingredients. Darex AE5G should preferably be stored in sealed conventional containers protected from the elements.

## Health and Safety

See Darex AE5G Material Safety Data Sheet or consult GCP Applied Technologies.

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