

DAREX[®] AEA[®]

Air-entraining admixture

Product Description

DAREX[®]AEA[®] admixture is an aqueous solution of a complex mixture of organic acid salts. Darex AEA is specially formulated for use as an air-entraining admixture for concrete and is manufactured under rigid control which provides uniform, predictable performance. It is supplied ready-to-use and does not require premixing with water. One litre weighs approximately 1.02kg ± 0.02kg.

Darex AEA meets the requirements of the following specifications for chemical admixtures for concrete: ASTM C260; AS1478 and AASHTO M154.

Applications

Darex AEA is used in ready-mix, block and concrete products plants. It is also used on the job with jobsite mixers, highway pavers and wherever concrete is mixed and there is a need for purposeful air entrainment. Because Darex AEA imparts workability to the mix, it is particularly effective with slag, lightweight, or manufactured aggregates which tend to produce harsh concrete. It also makes possible the use of natural sand deficient in fines.

Air-Entraining Action

Air is entrained by the development of a semi-microscopic bubble system — introduced into the mix by agitation and stabilised by Darex AEA — in the mortar phase of the concrete.

- **Workability is Improved**
Millions of tiny air bubbles entrained with Darex AEA act as flexible ball bearings, lubricating and plasticising the concrete mix. This permits a reduction in mixing water with no loss in slump. Placeability is improved, bleeding and segregation are minimised.
- **Durability is Increased**
Darex AEA concrete is extremely durable, particularly when subjected to freezing and thawing. It has resistance to frost and deicing salts, as well as to sulfate, sea and alkaline waters.

Compatibility with Other Admixtures

Darex AEA is compatible in concrete with all known accelerating admixtures, water-reducing admixtures and water-reducing retarders. By combining the separate effects of air entrainment with the dispersion of a water-reducing admixture, the water requirement of concrete may be reduced with proportional increases in strength and improvement in durability. Each admixture should be added separately to the mix.

Mix Water Reduction

Entrained air will increase the volume of the concrete making it necessary to adjust the mix proportions to maintain the cement factor and yield. This may be accomplished by a reduction in water requirement and aggregate content.

Dispensing Equipment

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



Addition Rates

There is no standard addition rate for Darex AEA. The amount to be used will depend upon the amount of air required under job conditions, usually in the range of 3 to 6%. Typical factors which might influence the amount of air entrained are: temperature, cement, sand gradation, and use of extra fine materials such as fly ash. Typical Darex AEA addition rates range from 50 to 100mL / m³ of cementitious material. Higher addition rates can be used for various projects. Addition rates as high as 300 to 500mL / m³ of cementitious material can be considered. Lab and field trials are recommended to determine performance required.

The air-entraining efficiency of Darex AEA becomes even greater when used with water-reducing and set-retarding agents. This may allow a reduction of up to two-thirds in the amount of Darex AEA required for the specified air content.

Packaging

Darex AEA is available in bulk, and 205L drums. Darex AEA contains no flammable ingredients. It freezes at about -1 °C, but its air-entraining properties are completely restored by thawing and thorough agitation.

Health and Safety

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

gcpat.my | For technical information: asia.enq@gcpat.com

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.

Darex and AEA are trademarks, 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 2017 GCP Applied Technologies, Inc. All rights reserved.

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA

GCP Applied Technologies (Malaysia) Sdn. Bhd, 7 Lorong CJ 1/1A, Off Jalan Balakong, 43200 Cheras Jaya, Kuala Lumpur, Malaysia

This document is only current as of the last updated date stated below and is valid only for use in Malaysia. 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.my. 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: 2022-11-24

gcpat.my/solutions/products/darex-aea-0