

AIRALON® 3000

Air entraining admixture

DESCRIPTION

AIRALON® 3000 admixture is an aqueous complex mixture of organic acid salts. It is a specially formulated concrete air-entraining admixture that provides freeze-thaw resistance and enhances the finishability characteristics of concrete. AIRALON® 3000 admixture is manufactured under stringent controls, assuring quality and uniform, predictable performance.

One gallon weighs approximately 8.5 lbs (1.02 kg/L). AIRALON® 3000 complies to ASTM C260 *Standard Specifications for Air-Entraining Admixtures for Concrete*, and does not contain intentionally added chlorides.

ADVANTAGES

- Can be used in wide spectrum of mix designs
- Excellent rheological properties makes it particularly useful for longer transit times
- Uniform, predictable air entrainment
- Superior air stability minimizes air loss during placement
- Economical to use in concretes which are typically difficult to air entrain

FIELDS OF APPLICATION

- All Cement Types
- Precast Concrete
- Post Tensioned and Prestressed Concrete
- Ready Mix Concrete
- Concrete Exposed to Freeze Thaw
- Optimization of coarse sand particle size distribution

Method of Use

Dosage

- AIRALON® 3000 admixture addition rates will vary according to the specified level of air required. Addition rates are influenced by several variables including: specific mix design parameters, material properties of the cement, fly ash, coarse and fine aggregates, and the effects of other chemical admixtures.
- Other factors such as ambient and concrete temperature, mixing time and time of addition can also affect the required dosage rates.
- It is recommended that pre-job testing be conducted in order to assure the correct dosage rate of AIRALON® 3000 admixture is used. Typical AIRALON® 3000 admixture addition rates range from ½ to 3 fl oz/100 lbs (30 to 200 mL/100 kg) of cement.

Additional Usage Recommendations

- AIRALON® 3000 admixture is recommended for use in ready-mix, precast, prestress and other concrete product plants where the intentional entrainment of a specified level of air is required. *ACI 201 Guide to Durable Concrete* recommends all concrete which is exposed to any level of freezing and thawing or is subjected to the application of de-icing salts during the winter months should be air entrained.
- AIRALON® 3000 admixture has been found to be particularly effective in both high cement factor and low slump concrete mixes, which require a very efficient air-entraining admixture.
- AIRALON® 3000 admixture may also be used when a stable air void system is required over time.
- Concrete shall be air entrained concrete, containing 4% to 8% entrained air. The air contents in the concrete shall be determined by the pressure method (ASTM Designation C231), volumetric method (ASTM Designation C173) or gravimetric method (ASTM Designation C138). The air-entraining admixture shall be AIRALON® 3000, as manufactured by GCP Applied Technologies, or equal. The air-entraining admixture shall be added at the concrete mixer or batching plant in such quantities as to give the specified air contents.

Equipment

The information contained in this technical data sheet is given to the best of our knowledge and the result from extensive testing - which were conducted in order to remain as objective as possible. However, it cannot, in any case, be considered as a warranty involving our liability in case of misuse or any different use of our products, other than those from the "Application" paragraph of this technical data sheet. Some application tests should be carried out before using the product to ensure that the methods of use and conditions of application of the product are satisfactory. Our technical assistance is at the disposal of the users.

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- A complete line of automatic dispensing equipment is available. Accurate and simple, these dispensers are easily installed to discharge product into the water line, on the sand, or directly into the mixer.

Complimentary Products

- AIRALON® 3000 admixture is compatible with most admixtures as long as they are added separately to the concrete mix. In general, it is recommended that AIRALON® 3000 admixture be added to the concrete mix near the beginning of the batch sequence for optimum performance, preferably by “dribbling” on the sand. Different sequencing may be used if local testing shows better performance.
- Please see [Technical Bulletin TB-0110, Admixture Dispenser Discharge Line Location and Sequencing for Concrete Batching Operations](#) for further recommendations. Airalon® 3000 admixture should not come in contact with any other admixture before or during the batching process. AIRALON® 3000 admixture should not be added directly to heated water.
- Pretesting of the concrete mix should be performed before use, as conditions and materials change in order to assure compatibility, and to optimize dosage rates, addition times in the batch sequencing and concrete performance. Please consult your GCP Applied Technologies representative for guidance.

Performances

- AIRALON® 3000 disperses and generates millions of discrete semi-microscopic bubbles throughout the concrete via mixing mechanics. These air bubbles act much like flexible ball bearings, thereby increasing the plasticity and workability of the concrete. Surface bleeding, plastic shrinkage and aggregate segregation are also minimized.
- Through the purposeful entrainment of air, AIRALON® 3000 markedly increases the durability of concrete to severe exposures, particularly freeze-thaw cycling. It has also demonstrated a remarkable ability to impart resistance to the action of frost and de-icing salts as well as sulfate, sea and alkaline waters.

Process Component

- 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.

CHARACTERISTICS

Product Nature	Liquid
Color	Yellow
Shelf life	12 months
Cl ⁻ ions content	< 0,100 %
Specific gravity (25°C) in g/ml	1,007
pH (25°C)	9,50

PRECAUTIONS

- AIRALON® 3000 freezes at about 30 °F (-1 °C), but its air-entraining properties are completely restored by thawing and thorough mechanical agitation.

SAFETY

Prior to any use, please read carefully the Safety data Sheet.

PACKAGING

- Bulk
- 55 gallon drum
- 275 gallon tote