

PRODUCTNAME

Adi-Con® AE 100

Air Entraining Admixture for Concrete

MANUFACTURER

Gemite® Products Inc.

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FEATURES

- Reduced permeability - increased water tightness
- Reduced segregation and bleeding
- Improved plasticity and workability
- Increased resistance to damage from freeze/thaw cycles
- Increased resistance to scaling from deicing salts
- Ready to Use
- Compatible with concrete containing other admixtures - water-reducers, high-range water-reducers, accelerators and retarders
- Greatly improved stability of air-entrainment
- Improved air-void system in hardened concrete
- Improved ability to entrain and retain air in low-slump concrete; concrete containing high-carbon content fly ash; concrete containing large amounts of fine materials; concrete using high-alkali cements; high-temperature concrete; and concrete with extended mixing times

PRODUCT DESCRIPTION

Basic Use

Adi-Con AE 100 air-entraining admixture provides concrete with extra protection by creating ultra stable air bubbles that are strong, small and closely spaced - a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired. Even when used at a lower dosage rate than standard air-entraining admixtures, *Adi-Con AE 100* meets the requirements of ASTM C 260, AASHTO M 154, CRD-C 13 and other Federal and State specifications. The entrainment of optimum air content in concrete results in the following improvements in concrete quality: Concrete durability research has established that the best protection for concrete from the adverse effects of freeze/thaw cycles and deicing salts results from:

- proper air content in the hardened concrete;
- a suitable air-void system in terms of bubble size and spacing;
- adequate concrete strength, as summing the use of sound aggregates and proper mixing, placing, handling and curing techniques

The use of *Adi-Con AE 100* air-entraining admixture with Gemite Products Inc. water-reducing, set-controlling admixtures forms a desirable combination for producing the highest



quality, normal or light weight concrete. Heavy weight concrete normally does not contain entrained air.

NOTE: As stated in ACI 212 and other publications, when two or more admixtures are used, they must be added to the mix separately (through dispensers or manually) and must not be mixed with each other prior to adding to the concrete mix.

For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. When using light weight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

Composition and Materials

Adi-Con AE 100 is an aqueous solution of sulfonated fatty acids.

Health and Safety

Adi-Con AE 100 is a slightly alkaline material. May be harmful if swallowed. Avoid contact with eyes and prolonged contact with skin. If contact occurs, flush immediately with water. Seek medical advice if irritation occurs. Harmful if digested. Keep product out of reach of children. FOR INDUSTRIAL USE ONLY. Consult MSDS for additional information. Wash thoroughly after handling. Do not take internally.

Limitations

When unusually low or high amounts of an air-entraining admixture are required to achieve normal ranges of air content or if the required amount of air-entraining admixture necessary to achieve required levels of air content is observed to change significantly under given conditions, the reason should be investigated. In such cases, it is especially important to determine: (a) that a proper amount of air is contained in the fresh concrete at the point of placement; and (b) that a suitable air-void system (spacing factor) is being obtained in the hardened concrete.

Dosage

For non-admixture concrete, use 40 ml plus per 100 kg of cementitious material. For concrete with water-reducing admixture, use 30 ml plus per 100 kg of cementitious material. The concrete mixes containing micro-silica, (silica fume) require a higher dosage of the admixture, approximately 30%, for a given air content when compared with mixes without micro-silica (silica fume).

The quantity of *Adi-Con AE 100* required to obtain a specified air content is influenced by the following factors:

- Concrete and ambient temperature
- Cement type
- Mineral additives
- Quality of aggregate
- Sand particle distribution
- Concrete slump
- Mixing equipment

Gemite Products Inc.
June 1999

Please contact Gemite Technical Service for further information.

Storage and Transportation

Adi-Con AE 100 is a non-hazardous, non-regulated product. Keep from freezing during transportation and storage.

Packaging

Adi-Con AE 100 is packaged in 205 L (55 USG) drums and 20 L (5.3 USG) plastic pails.

TECHNICAL DATA

Physical State	liquid
Specific gravity (25°C)	1.0 g/cm ³
Solids by weight	10.5%
pH	9.5
Colour	Brown
Specification compliance	Meets all requirements of ASTM C260

DIRECTIONS FOR USE

Add *Adi-Con AE 100* admixture to the concrete mixing a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount.

Measure the air content of the trial mix and either increase or decrease the quantity of *Adi-Con AE 100* admixture to obtain the desired air content in the production mix. Check the air content of the first batch and make further adjustments if needed. Due to possible changes in the factors that affect the dosage rate of *Adi-Con AE 100*, frequent checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air in the mix at the point of placement.

AVAILABILITY AND COST

Adi-Con AE 100 is available world wide. Contact Gemite Products Inc. for the name of the nearest Representative/Distributor and current pricing information.

WARRANTY

A limited twelve (12) month Material Replacement Warranty is available. For details, contact Gemite's head office.

TECHNICAL SERVICE

For technical advice on suitability of *Adi-Con AE 100* for specific application, specification assistance and application advice, contact Technical Service: USA (888) 443-6483 or Canada (905) 672-2020.

Short Specification

The [mortar] [concrete] air-entraining admixture will be *Adi-Con AE 100*, as manufactured by Gemite Products Inc., [USA 888-443-6483] [Canada 905-672-2020]. It will satisfy the following requirements:

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