

PRODUCT DATA SHEET

ART-AE

Air Entraining Agent

Description

ART-AE is a nonionic liquid air-entraining agent independently developed by ARIT, with proprietary intellectual property rights. It is used in the compounding of concrete admixtures. It has a slight water-reducing effect, while significantly increasing the air content of the concrete mixture with minimal air loss, enhancing the fluidity of the concrete mixture, and has no adverse effects on the later strength of the concrete mixture.

Main benefits/Characteristics

- **Excellent Air Entraining Performance:** Substantially increases the air content of fresh concrete; dosage can be fine-tuned for different applications to meet specific requirements.
- **Fine, Uniform and Stable Air Bubbles:** The entrained air voids are tiny, evenly distributed and remain stable.
- **Minimal Air Loss:** Self-assembly of the air-entraining molecules reinforces bubble thickness and toughness, markedly improving air retention; dosage variations within a wide range have no adverse effect on later-age strength.
- **Outstanding Compatibility:** Highly compatible with most commercial superplasticizers, cements, supplementary cementitious materials and various aggregate types.

Applications

- Pumped Concrete

- Freeze-Resistant Concrete
- Ordinary Ready Mixed Concrete

Physical and chemical indicators

Items	Performance
Appearance	transparent viscous liquid
Solid Content/%	24±1
pH	8±0.5
Alkali Content (As Na ₂ O)	≤ 5.0%

Application Case

- C30 Underwater Piles

In a high-speed railway project, the construction of C30 underwater piles required a concrete air content of 2%–4%. After adding ART-AE air-entraining agent, the initial air content was 3.9%, and the air content before pile pouring was 3.5%.

Usage Instructions

- The recommended effective solids content is 0.0005 % - 0.005 % of the total cementitious materials; the exact dosage must be predetermined through trial tests according to the raw materials, job-site conditions, construction codes, and technical requirements.
- Any change in materials or environmental conditions may also cause the dosage to vary within a certain range, so new tests are required to re-establish the optimum dosage.

Complies with the Following Standards

GB/T 8076-2008

ASTM C494 TYPE S

EN934-2

Packaging

IBC Tank or Flexitank for customer demand

Storage

- It should be stored in a cool and dry place, avoiding direct sunlight, and kept in a

dedicated warehouse or a fixed location.

- The effective storage period is 1 year. It can still be used after being tested and verified to be qualified if it exceeds the time limit.

Precautions

- When changing the type of cement or using newly delivered cement, a compatibility test should be conducted.
- Do not use in combination with naphthalene-based admixtures. When using in combination with other admixtures, compatibility tests should be performed.
- Strictly follow the construction specifications during application.
- The product information is only used to describe the product's characteristics and functions, and it is not a guarantee. Users are also required to carefully test the product's functions and its suitability. The functions and suitability of the product must be verified through testing conducted by qualified professionals.

Legal Notes

- Retaining or disclosing product samples without the company's explicit permission is strictly prohibited.
- In addition to the product quality itself, the actual performance also depends on other uncontrollable factors. If there are uncontrollable factors, company cannot guarantee the performance of the product.
- Users are requested to strictly follow the technical guidance and product instructions for use. The company shall not be liable for any consequences resulting from unauthorized changes to the product usage method without the company's authorization.