

## PRODUCT DATA SHEET

# ART-VR

## Viscosity Reducer

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### Description

ART-VR is a water-based polymer viscosity reducer that can decrease plastic viscosity and yield stress, significantly improving the fluidity and workability of cement paste. When used in combination with water reducers, it can greatly enhance the pumpability and self-compacting performance of concrete.

### Main benefits/Characteristics

- **Excellent Viscosity Reduction:** Significantly lowers paste viscosity, decreases friction between paste and pump-line, and boosts concrete flowability to suit a wide range of placing conditions.
- **Superior Workability:** Enhances concrete workability with no evident segregation or bleeding; the mix is highly homogeneous, producing a uniform, color-consistent finish after casting.
- **Effective Air Control:** Maintains tiny, evenly distributed and stable air bubbles, safeguarding concrete placement properties, strength and long-term durability.

### Applications

- High-strength concrete (C60 and above)
- Precast-element concrete
- High-volume supplementary-cementitious-material concrete systems
- Ultra-high-performance concrete (UHPC)

## Physical and chemical indicators

Items	Performance
Appearance	Colorless transparent liquid
Solid content/%	$40.0 \pm 1.0$
pH	$6.5 \pm 1$
Alkali Content (as Na <sub>2</sub> O)	$\leq 5.0\%$
Density/g/cm <sup>3</sup>	$1.05 \pm 0.02$
Chloride Content	$\leq 0.1\%$

## Application Case

- Wind-turbine tower components

A wind energy company was fabricating C100 tower components, requiring low viscosity and minimal air bubbles in the concrete. After using our ART-VR viscosity reducer, the construction performance and appearance quality of the concrete were significantly improved.

## Usage Instructions

- The recommended effective solids content is 0.05 %–0.10 % 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

T/CECS 10157-2021

ASTM C494 TYPE S

EN934-2

## Packaging

IBC tank/liquid bag/tank truck

## Storage

- It should be stored in a cool, dry place, avoiding direct sunlight.
- Under unopened and properly stored conditions, the shelf life is two years.

## **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.