ARIT奥莱特

PRODUCT DATA SHEET

# ART-CSH

Early strength-enhancing nano seeds admixture

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## Description

ART-CSH early strength-enhancing nano seeds admixture is a new type of inorganic-organic nano-composite material. Compared with traditional inorganic salts and alcohol amine early strength agents, it has a more significant early strength effect and better compatibility with cementitious materials. It can induce cement hydration, reduce the activation energy of the cement hydration reaction, increase the rate of hydration reaction, promote the rapid development of strength during the hardening period, and significantly improve the early strength of concrete within 24 hours. It is a nano-calcium silicate hydrate dispersion liquid. It utilizes the high specific surface area of nano-calcium silicate hydrate to provide additional crystallization nucleation sites. Due to its consistent structure with the hydration product calcium silicate hydrate from cement, it can achieve perfect compatibility, thereby maximizing the promotion of cement hydration.

## Main benefits/Characteristics

- Excellent ultra-early strength performance, can significantly enhance strength within 24 hours
- Can significantly improve concrete strength under normal temperature, low temperature, or heat curing conditions.
- Enhances the durability of concrete, with no strength reduction in the later stages.
- Reduces demoulding time, accelerating the turnover speed of molds.
- Shortens or even eliminates the steam curing process, saving energy and reducing

consumption.

- Can be used in combination with alcohol amine and inorganic salt early strength agents to produce a synergistic effect.

## Applications

Subway shield tunnel segments

Precast pipe piles

Prefabricated construction

Low-temperature construction concrete

Precast concrete components

Commercial concrete

Engineering concrete

No-steam curing concrete

## Physical and chemical indicators

| Items | Performance |
|---|---|
| Appearance | Milky-white suspension |
| pH | 12±0.5 |
| density/g/cm$^3$ | 1.02±0.02 |
| Alkali content（as $Na_2O$） | ≤2.0% |
| Chloride content | None |
| Particle size distribution/nm | ≤300 |

## Recommended Dosage

0.1% to 2% weight of binder

As the water-to-binder ratio decreases, the dosage gradually decreases. In addition, environmental and raw material temperatures, as well as the proportion of mineral admixtures, can also cause the dosage to fluctuate within a certain range.

Pre-testing must be performed to determine the exact dosage rate

## Packaging

Ibc Tank/Liquid bag/Tank container

## Storage

Store in undamaged, original sealed packaging in dry conditions.

Protect product from direct sunlight

A minimum shelf life of 12 months under normal storage conditions. Shelf life may be greater than stated depends on storage conditions.

## LEGAL NOTES

It is prohibited to retain or disclose samples of the product without the company's permission.

In addition to the product quality itself, the actual performance also depends on other factors. If there are factors beyond our control, we cannot guarantee the performance of the product.

Users are requested to strictly follow the technical guidelines and product instructions for use. The company shall not be held liable for any consequences resulting from unauthorized changes to the product's usage without the company's authorization.