

PRODUCT DATA SHEET

ART- PYH

Internal Curing Agents

Description

ART-PYH for concrete are admixtures added during the mixing process, containing water-absorbing and retaining components. They supply the water needed for hydration, enhancing concrete's strength and durability. These agents incorporate superabsorbent polymers that release moisture at appropriate times, maintaining adequate internal humidity. By compensating for internal water loss and increasing humidity, they effectively reduce autogenous shrinkage. This technology has proven effective in controlling cracking and improving structural durability.

Main benefits/Characteristics

- Contains super-absorbent resin for intelligent moisture regulation—stores and releases water on demand
- Maintains high internal humidity, markedly reducing autogenous shrinkage
- Enhances freeze and permeability resistance

Applications

- Mass concrete
- Low water-to-cement ratio concrete
- Concrete with a demand for shrinkage reduction
- Concrete with a need for enhanced crack resistance

Physical and chemical indicators

Items	Performance
Appearance	Gray powder
Chloride content	≤ 0.06
Alkali content / %	≤ 0.8
12 h plastic shrinkage ratio(%)	≤ 60
28-day shrinkage-rate ratio(%)	≤ 80
28-day crack resistance	No cracking
3-day compressive strength (MPa)	≥ 80
28-day compressive strength (MPa)	≥ 90

Application Case

- Mass concrete

In a mass-concrete dam where heat of hydration and thermal stress were critical, ART-PYH internal curing agent was added. The admixture redistributed internal moisture, eased temperature-stress buildup and sharply restrained temperature cracking. Placement remained straightforward and all site/QC targets were met.

- High-performance concrete

On the production floor for a low w/b ratio high-performance mix, ART-PYH internal curing agent markedly improved internal curing; testing confirmed enhanced micro-structure stability.

Usage Instructions

- Recommended dosage 1 % - 10 % of total cementitious material, adjusted to suit project specifications and technical requirements; dosage generally decreases as the water-to-binder ratio drops.
- Ambient conditions and changes in supplementary cementitious content can also cause the dosage to vary within this range.

Complies with the Following Standards

JC/T 2551-2019 “Superabsorbent polymer for internal curing of concrete”

Packaging

25kg bag 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 6 months. 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.