

PRODUCT DATA SHEET

ART-M22

Polycarboxylate Slump Retention Admixture

Description

ART-M22 is a slump-retaining polycarboxylate superplasticizer independently developed by ARIT. It significantly enhances concrete flowability, reduces water consumption, and improves both the strength and durability of concrete. Leveraging controllable free-radical polymerization technology, ART-M22 successfully grafts various slow-release groups onto the polycarboxylate superplasticizer's molecular structure. By adjusting the ratio of acid to ester, active ingredients can be released in a controlled manner. This innovative slow-release technology extends concrete's workability, ensuring a stable release even under extreme weather conditions. Furthermore, the product remains effective in high-temperature environments, enabling long-distance transportation and construction operations.

Main benefits/Characteristics

- **Slump retention and water-reducing effect:** Maintains flowability for 2 – 3 hours under a certain water reduction rate, with a maximum water reduction rate up to 40%.
- **Wide compatibility:** Compatible with other dispersants, retarders, air-entraining agents, early-strength agents, and various other additives. It also exhibits excellent compatibility with different types of cement and admixtures.
- **Superior release performance:** Features an outstanding slow-release profile, low sensitivity, and excellent plasticizing and dispersing capabilities.
- **Good concrete workability:** Significantly lowers the yield stress of concrete, greatly reduces shrinkage, and enhances the cohesiveness and water retention of concrete.

- Low air-entraining properties:** Possesses good bubble-regulating ability by reducing large bubbles into smaller ones.
- High strength development:** Exhibits a high rate of strength gain, improves shrinkage performance, and lowers concrete carbonation.
- Minimal concrete shrinkage:** Significantly reduces concrete shrinkage, noticeably improving the stability and durability of concrete.
- Good product stability:** Maintains a uniform color when stored at low temperatures, with no layering, flocculation, or sedimentation.
- Eco-friendly:** Non-toxic and harmless, making it a green, environmentally friendly product conducive to sustainable development.

Applications

High-performance concrete, precast concrete, and prestressed concrete requiring specific operational time

Large-scale construction projects, such as high-rise buildings, bridges, and tunnels

Concrete projects needing extended flowability

Physical and chemical indicators

Property	Indicator
Appearance	Brown or wine-red liquid
Solid content/%	49.5 ± 0.5
pH	6.0±1
Alkali content (as Na ₂ O)	≤1.0%
Chloride content	None

Recommended Dosage

0.2% to 2% weight of binder

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

Packaging

Drums or flowbins for customer demand

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.