

PRODUCT DATA SHEET

ART-M620

Polycarboxylate Slump Retention Admixture

Description

ART-M620 is a proprietary polycarboxylate-based slump retention admixture. It is characterized by its low admixture rate, extended slump retention, and excellent compatibility with a variety of cements and supplementary materials. This product fulfills diverse engineering requirements and significantly enhances various performance metrics of concrete, thereby improving its workability. ART-M620 is non-toxic, non-corrosive, non-flammable, and non-explosive, posing no risk of corrosion to reinforcement bars and no harm to human health. In comparison to leading commercial polycarboxylate slump retention admixture, ART-M620 offers superior technical performance and cost-efficiency.

Main benefits/Characteristics

- Low dosage: Recommended dosage is 0.05%-0.1% by solid mass.
- Prolonged slump retention: In ready-mix concrete, the slump slightly increases after 2 hours and remains unchanged after 4 hours at higher dosages, which is extremely beneficial for long-distance transportation and pumping operations of commercial concrete. This ensures concrete workability without affecting its normal setting.
- Excellent workability: Concrete formulated with polycarboxylate-based high-performance water reducers maintains high slump without significant segregation or bleeding, and presents a uniform appearance. This is highly beneficial for producing high-fluidity concrete, self-leveling concrete, and self-compacting concrete. When used in high-strength concrete, it ensures good workability and cohesion, making the concrete easy to mix and pour.

- Low entrainment: The air content in concrete is less than 3%, and the micro air void content is increased, enhancing the concrete's compactness, strength, and resistance to corrosion while maintaining durability.
- Broad compatibility: It can be co-used with various additives to enhance effectiveness and is compatible with different types of cement and mixtures, resolving compatibility issues encountered with other types of water reducers.
- High rate of strength gain: Exhibits a high strength gain rate, improving shrinkage properties and reducing the rate of carbonation in concrete. Compressive strength ratios of 155%-170% can be achieved within 3-7 days, and up to 155%-165% after 28 days, outperforming similar products.
- Reduced concrete shrinkage: Significantly reduces concrete shrinkage, greatly enhancing concrete stability and durability.
- Product stability: No precipitation at low temperatures.
- Eco-friendly product: Non-toxic and harmless, promoting sustainable development.

Applications

Cement-based construction material, especially in Bridge Engineering

Ordinary commercial concrete

Pumped concrete

Self-compacting concrete

Large volume concrete

Physical and chemical indicators

Items	Performance
Appearance	Colorless transparent liquid
Solid content/%	45±1
pH	6±1
density/g/cm ³	1.08±0.02
Alkali content (as Na ₂ O)	≤1.0%
Chloride content	≤0.01%

Recommended Dosage

0.05% to 0.1% 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.