ARIT奥莱特

PRODUCT DATA SHEET

ART-M611C

Water Reducing Admixture

Description

ART-M611C is a newly developed EPEG-based water-reducing admixture. This product exhibits outstanding characteristics such as low dosage, high water reduction rate, minimal slump loss, and strong compatibility with cement and mineral admixtures. It significantly enhances concrete workability by comprehensively optimizing fluidity, cohesiveness, and water retention properties. Its unique molecular structure design endows concrete mixtures with excellent construction performance, demonstrating remarkable cohesion and segregation resistance during pumping and casting processes. This ensures that the product meets diverse engineering requirements under complex conditions. The product is non-toxic, non-corrosive, non-flammable, non-explosive, and non-rusting to steel, ensuring environmental safety and compliance with national standards. Compared to mainstream polycarboxylate superplasticizers on the market, this product achieves equivalent water reduction effects while significantly reducing dosage through optimized formulation and process technology. It effectively controls slump loss over time, delivering significantly improved performance. Comprehensive evaluations confirm that this product delivers substantially enhanced application efficiency, offering superior cost-effectiveness and market competitiveness compared to similar technologies.

Main benefits/Characteristics

- High water reduction rate with low dosage: The recommended dosage is 0.12%-0.2% (calculated on a solid basis), and the water reduction rate can be as high as 45%-50%, which

can be used to formulate high-strength and high-performance concrete.

- Small slump loss: The slump loss of ready-mixed concrete within 1 hour is less than 10 mm. Under higher dosage, the slump increases within 1 hour. This is extremely favorable for the long-distance transportation and pumping construction of commercial concrete. It ensures the workability of the concrete without affecting its normal setting.
- Good workability: The concrete prepared with polycarboxylate-based high-performance water-reducing admixture will not have obvious segregation and bleeding even at a high slump. The appearance color of the concrete is uniform. It is highly advantageous for preparing high-flowability concrete, self-leveling concrete, and self-compacting concrete. When used for preparing high-strength concrete, the concrete has good workability and cohesiveness, and is easy to mix and pour.
- Low air entraining performance: The air content in the concrete is less than 3%, with an increase in the content of micro-pores. Under the condition of maintaining good durability, the density of the concrete is improved, and the strength and resistance to erosion are enhanced.
- Extensive Compatibility: It can be compounded with a variety of admixture products to enhance effectiveness and exhibits excellent compatibility with different types of cement and blended materials, solving the compatibility issues between other types of water-reducing admixtures and cementitious materials.
- Higher long-term strength: It has a high strength gain rate, which improves the shrinkage performance and reduces the carbonation rate of concrete. The compressive strength ratio at 3-7 days is 155%-170%, and the strength ratio at 28 days can reach as high as 155%-165%, with performance indicators surpassing those of similar products.
- Low Concrete Shrinkage: It can significantly reduce concrete shrinkage, thereby notably enhancing the stability and durability of concrete.
- Good Product Stability: There is no precipitation or crystallization at low temperatures.
- Green and Environmentally Friendly Product: The product is non-toxic and harmless, making it a green and environmentally friendly product that is conducive to 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/%	50±1
pH	6±1
density/g/cm^3	1.08±0.02
Alkali content（as Na_2O）	≤1.0%
Chloride content	≤0.01%

Recommended Dosage

0.12% to 0.2% 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.