TECHNICAL DATA SHEET

FLOREY® polycarboxylate superplasticizer

Polycarboxylate Superplasticizer (Liquid) FRPC-18

High Sustained-Release Water-Reducing Admixture

Product Description

FRPC-18 is a new high sustained-release type polycarboxylate superplasticizer, which can significantly inhibit the slump loss of concrete. The product has relatively low water reduction rate and low slump loss performance, which can ensure the excellent workability of prepared concrete, high strength and excellent durability. It can be widely used in pumped concrete, superfluid self-compacting concrete, high-strength concrete and commercial concrete. FRPC-18 admixture meets ASTM C 494/C 494M requirements for Type D, water-reducing and retarding, and Type S specific performance admixtures.

Features

- Dosage flexibility for normal, and mid water reduction
- Good slump retention
- Produces cohesive and non-segregating concrete mixture
- High strength growth rate
- Providing good strength and durability
- Enhanced finishability and pumpability

Benefits

Providing economic benefits to the entire construction team through higher productivity and reduced variable cost

Performance Characteristics

The dosage flexibility of FLOREY FRPC-18 admixture allows it to be used as a normal, mid-range and high-range water reducer.

Rate of Hardening: FLOREY FRPC-18 admixture Is formulated to produce normal setting characteristics throughout its recommended dosage range. Setting time of concrete is influenced by the chemical and physical composition of the basic ingredients of the concrete, temperature of the concrete and ambient conditions. Trial mixtures should be made with actual job materials to determine the dosage required for a specified setting time and a given strength requirement.

Mixture Data: 360 kg/m3 of Type I cement; slump, 80-230 mm; non-air-entrained concrete; dosage rate adjusted to obtain 15-20% water reduction.

Product specification(Temperature: 25℃, Humidity: 50%)

Appearance: Colorless or light yellow liquid

pH Value: 4-5

Specific gravity: 1.09-1.10

Solid Content (Quick Drying Moisture Analyzer) / %: 50-60

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Setting Time

Mixture	**Initial**(h:min)	**Difference**(h:min)
Plain	4:05	-
Conventional Superplasticizer	5:35	+1:30
FLOREY FRPC-18	6:15	+2:10

Compressive Strength

Mixture	**3Day(**MPa)	**28Days(**MPa)
Plain	18	32
Conventional Superplasticizer	28	48
FLOREY FRPC-18 a	30	52

Slump Retention (mm)

Mixture	Initial （0min)	30(min)	60(min)
Plain	90	10	0
Conventional Superplasticizer	180	160	100
FLOREY FRPC-18	185	210	215

Applications

Recommended for use in:

- Concrete where high flowability, high-early and ultimate strengths and increased durability are needed
- self-compacting concrete
- Concrete where normal, mid-range, or high-range water-reduction is desired
- self-leveling concrete
- Concrete where normal setting times are required
- Concrete for fast track construction
- Pervious Concrete
- Self-consolidating grout

Storage and Handling

Storage Temperature: FLOREY FRPC-18 admixture FRPC-18 should be stored in 10℃-40℃ temperature environment, without direct sunshine, without getting wet in the rain and leaking water, without mixing impurities, without evaporation of water. If FLOREY FRPC-18 admixture freezes, thaw at 10°C or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: FLOREY FRPC-18 admixture has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact us regarding suitability for use and dosage recommendations if the shelf life has been exceeded.

Guidelines for Use

Dosage: The common dosage is 0.25%-0.75% (based on the total amount of cementitious materials). The best dosage shall be determined by test according to the engineering materials and characteristics. The dosage range is applicable to most normal and mid concrete mixtures using typical concrete ingredients. However, variations in job conditions and concrete materials, such as silica fume, may require dosages outside the recommended range.

Mixing: Generally, FLOREY FRPC-18 admixture needs to be used together with water reducing type polycarboxylate superplasticizer. It can be added to the mixing water during use, or added to the concrete mixer at the same time as the mixing water. It is recommended to add it to concrete and other materials after compounding. Before use, users

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determine the use method and conditions of the product through their own test and compounding technology.

Packaging

FLOREY FRPC-18 admixture is liquid and is packed in 1000kg IBC tank or 200Kg plastic drum.

Related Documents

Safety Data Sheets: Polycarboxylate superplasticizer FLOREY FRPC-18 admixture.

Additional Information

For additional information on FLOREY FRPC-18 admixture or its use in developing concrete mixes with special performance characteristics, contact us. Henan Fuluorui New Materials Co.,Ltd is one of the few technology-based companies working on chemical adjuvant materials for concrete, It has strong R&D capabilities, excellent professionalism, fully automated production lines, rich application experience, and excellent reputation for the R&D, production and application of concrete admixtures and raw materials. There are nearly1700 concrete admixture manufacturers in China that have technical cooperation with our company. Fuluorui has successfully provided ODM and OEM services for customers in North America, Europe, the Middle East, Asia and other markets.

Product Notes

Corrosivity–Non-Chloride,Non-Corrosive: FLOREY FRPC-18 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of FLOREY FRPC-18 admixture.

Compatibility: FLOREY FRPC-18 admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

Do not use FRPC-18 admixture with admixtures containing beta-naphthalene-sulfonate. Erratic behaviors in slump, slump flow, and pumpability may be experienced.

For directions on the proper evaluation of FLOREY FRPC-18 admixture in specific applications, contact us.

Limited Warranty Notice

FLOREY warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life.

The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

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