TECHNICAL DATA SHEET

FLOREY® Sodium Gluconate

Sodium Gluconate (Powder)

Set-Retarding Water-Reducing Admixture

Product Description

Sodium gluconate (C6H11NaO7, molecular weight 218.14) is a kind of sodium polyhydroxy carboxylic acid, white or light yellow crystalline granule or powder, easily soluble in water, slightly soluble in alcohol and insoluble in ether. The product has good effect of retardation and light efficiency water reduction, and is widely used in construction, washing, food and medicine industry. Sodium gluconate meets ASTM C 494/C 494M requirements for Type B, water-reducing, and Type D, water-reducing and retarding, admixtures.

Applications

Sodium gluconate is an efficient set retarder and a good plasticiser & water reducer for concrete, cement, mortar and gypsum.

As it acts as a corrosion inhibitor it helps to protect iron bars used in concrete from corrosion.

It is especially suitable for high strength concrete for railway, haven, traffic, bridge and electric power and so on.

It is suitable for the preparation of high strength, high durability, self-compacting, steel fiber and self-leveling concrete.

Features

As cement and concrete setting retarder.

As water reducing agent.

Reduce the slump loss.

It is suitable for formulating concrete for hydraulic, marine, port, culvert, tunnel, bridge, road and other projects.

It is suitable for various mortars.

Benefits

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

Performance Characteristics

Rate of Hardening: Sodium gluconate is formulated to delay the setting time of concrete 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.

Product specification

Item	Index
Smell	Null
Solid content (%)	≥99.0

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Whiteness	⩾80
Drying loss (%)	⩽0.5
Reducing substances (C3H12O6) (%)	⩽0.5
Chloride (Cl-) (%)	⩽0.07
Heavy metal (Pb) (mg/kg)	⩽10
pH (10% solution)	6.5-7.8
Sulfate (%)	⩽0.05
Arsenic salt (As) (mg/kg)	⩽2
Surface	White or light yellow, crystal or powder
Solution	Colourless or light yellow, near clarification

Guidelines for Use

Sodium gluconate is a white or light yellow crystal or powder, easily soluble in water, slightly soluble in ethanol and insoluble in ether. It is typically used in the following three ways:

1. Concrete set retarding and water reduction: As a set retarder and water reducer for concrete, sodium gluconate delays the setting time and improves workability, and is widely used in concrete for construction, railway, haven, traffic, bridge and electric power projects.

2. Washing steel surface: With excellent chelating ability for iron ions, sodium gluconate is used as a component of acid pickling and rust-removing cleaning agents for steel surfaces, cleaning the surface while providing a corrosion-inhibiting effect.

3. Water quality stabilization and glass bottle cleaning: As a chelating agent and scale inhibitor, sodium gluconate is used for industrial circulating water treatment; it is also a good component of professional cleaning agents for glass bottles.

Product Notes

Corrosivity - Non-Chloride, Non-Corrosive: Sodium gluconate will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or of galvanized steel floor and roof systems. As it acts as a corrosion inhibitor it helps to protect iron bars used in concrete from corrosion.

Compatibility: Sodium gluconate 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.

For directions on the proper evaluation of sodium gluconate in specific applications, contact us.

Storage and Handling

Storage Temperature: Products should be stored in 0℃-40℃ temperature environment, without direct sunshine, without getting wet in the rain and leaking water, without mixing impurities, without evaporation of water.

Shelf Life: Sodium gluconate 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.

Packaging

This product is 25kg bag and 1000kg ton bag.

Related Documents

Material Safety Data Sheets: Sodium gluconate.

Additional Information

For additional information on Sodium gluconate or its use in developing concrete mixes with special performance

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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 nearly 1700 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.

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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