



TECHNICAL DATA SHEET (TDS)

Sodium Gluconate for Construction

GREEN AGROCHEM Industrial Chemicals - Concrete Admixture Technical Document

Product Code	GAC-IC-TDS-Sodium-Gluconate-for-Construction	Revision Date	2026-05-02
CAS No.	527-07-1	Version	TDS-GAC-IC-2026
Product Type	Bio-based concrete retarder and water-reducing admixture	Document Type	Technical Data Sheet

1. Product Identification

Product Name	Sodium Gluconate for Construction
Trade / Technical Name	Concrete Admixture Sodium Gluconate for Construction
Product Code	GAC-IC-TDS-Sodium-Gluconate-for-Construction
CAS No.	527-07-1
Chemical Formula / Type	C ₆ H ₁₁ NaO ₇
Synonyms	Sodium D-gluconate; Gluconic acid sodium salt; Sodium salt of gluconic acid
HS Code	Not specified
Supplier	GREEN AGROCHEM CO., LIMITED
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2. Product Description

Sodium Gluconate is a highly effective, bio-based concrete retarder and water-reducing admixture. Produced through the fermentation of glucose, it is the sodium salt of gluconic acid and appears as a highly water-soluble white to tan crystalline powder. It is stable under common processing conditions and is widely used where controlled cement hydration, extended setting time and good concrete workability are required.

3. Main Specifications

Parameter	Specification
Appearance	White or yellow crystalline powder
Purity	98% min
Reducing Substances	0.5% max
Sulfate	0.05% max
Chloride	0.07% max
Heavy Metals	0.002% max
Lead (Pb)	0.0002% max
Arsenic (As)	0.0002% max
pH Value	6.5 - 7.8
Loss on Drying	0.5% max

4. Key Features and Industrial Performance

- Superior Retarding Effect: Helps avoid premature cement hydration and extends the setting/retarding time of concrete, especially for mass concrete pours, high-temperature work and long transport distance.
- Workability and Flow: Improves concrete workability while helping prevent aggregate segregation and water bleeding.
- Strength and Adhesion Support: Supports improved hardened concrete performance, including compressive/tensile strength and adhesion to steel reinforcement when used in properly designed mixes.
- Long-Term Durability: Helps improve anti-seepage, anti-freezing and anti-carbonization performance through better mix control.
- Safe and Non-Corrosive: Non-flammable under normal handling and non-corrosive to internal steel reinforcement.
- Additional Industrial Use: Can also be used as a chelating and processing chemical in electroplating, film manufacturing, metal surface cleaning and commercial water treatment.

5. Applications

- Concrete set retarder and hydration control aid.
- Water-reducing admixture component for ready-mix, precast and mass concrete.

- Chelating/processing aid for selected industrial applications.

6. Application and Usage Guidelines

- Use according to formulation design, cement type, temperature and target setting time.
- Laboratory trial mix is recommended before field application.

7. Packaging

- 25kg woven bags, kraft bags or jumbo bags with inner liner.
- Customized packaging can be supplied according to customer requirements.

8. Storage and Shelf Life

- Store in a cool, dry and ventilated warehouse.
- Keep packaging sealed and protect from moisture, contamination and direct sunlight.

Shelf Life	12 months under recommended storage conditions.
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9. Handling and Safety Note

- Avoid dust generation and unnecessary inhalation of powder during handling.
- Wear safety glasses, gloves and dust mask where dusty conditions occur.
- This TDS is for technical guidance only. Refer to the corresponding SDS/MSDS for full safety, transport and disposal information.

10. Disclaimer

The information in this Technical Data Sheet is based on available product data and is provided for reference to support product selection and application testing. It does not constitute a warranty or a final specification for every application. Users should conduct their own trials and confirm compliance with local regulations and project requirements before use.

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