

TECHNICAL DATA SHEET

Calcium Lignosulfonate Construction Grade

Lignin-Based Water Reducer and Set Retarder for Concrete, Mortar and Construction Chemicals

Product Code	GAC-CaLS-Construction	Product Type	Calcium Lignosulfonate / Water Reducer / Set Retarder
CAS No.	8061-52-7	Physical Form	Light brown powder
Version	V2.1 May 2026	Primary Markets	Ready-Mix Concrete - Precast - Pavers - Masonry Mortars

Primary Role Water reducer and retarder	Performance Focus Workability and pumpability	Best Fit Concrete, mortar, precast, pavers	Supply Support TDS, SDS, COA and samples
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1. Product Overview

Calcium Lignosulfonate Construction Grade is a light brown lignin-based powder used as a conventional water reducer and set retarder in concrete and cementitious materials.

It improves workability, pumpability, cohesion and formulation consistency in ready-mix concrete, precast elements, pavers and masonry mortars. Pre-testing is recommended for all admixture combinations and cement systems.

2. Key Performance Functions

- **Water Reduction:** reduces water demand up to approximately 12% depending on cement system and dosage.
- **Workability Improvement:** improves flow, pumpability and cohesion in concrete mixtures.
- **Set Retardation:** extends initial setting time when longer open time is needed.
- **Segregation Control:** improves cohesion and limits segregation after proper mix design.
- **Construction Chemical Compatibility:** suitable for trial use in blended admixture systems.

3. Main Specifications

Parameter	Specification
Form	Powder
Appearance	Light brown powder
Bulk Density	Approx. 0.8 g/cm ³
Moisture Content	<= 5%
pH (5% solution)	4 - 6
Recommended Dosage	0.8% - 2.0% by weight of cement
Typical Applications	Ready-mix concrete, precast, pavers, masonry mortars
Shelf Life	12 months from date of manufacture

Note: The above values are typical technical data for reference. Final agreed specification and COA shall prevail.

4. Recommended Application Areas

Application Area	Typical Use	Customer Value
Ready-Mix Concrete	Water reducer and mild retarder for concrete mixtures.	Improves workability, flow and practical placement control.
Precast Concrete	Admixture component for precast elements after trial validation.	Supports mixture consistency and surface quality.
Pavers & Blocks	Binder/dispersing support for dry or semi-dry cementitious mixes.	Improves cohesion and reduces segregation.
Masonry Mortars	Workability aid for mortar and grout mixes.	Improves open time and application consistency.
Construction Chemical Blends	Raw material for compound admixture development.	Provides lignosulfonate performance in blended systems after compatibility testing.

5. Suggested Usage Guidance

Application	Typical Starting Dosage / Use	Technical Note
Concrete / mortar	0.8% - 2.0% by weight of cement	Higher dosages may retard set beyond specified limits.
Mix design	Pre-test required	Confirm with local cement, aggregate and admixture system.
Admixture combinations	Compatibility test required	May cause unwanted effects with some admixture combinations.
Storage use	Use original sealed package	Avoid moisture absorption and caking before production use.

Dosage and application method should be verified by laboratory or pilot testing. Performance depends on formulation type, raw materials, process conditions, temperature, moisture, mixing time and target technical results.

6. Packaging, Storage & Handling

Packaging <ul style="list-style-type: none"> • 25 kg woven bags / kraft bags with inner PE liner. • 500 kg, 600 kg or 1,000 kg jumbo bags available on request. • Palletized, neutral or customized packing can be discussed. 	Storage & Handling <ul style="list-style-type: none"> • Store in a cool, dry and ventilated warehouse. • Keep away from moisture, rain, direct sunlight and strong oxidizing materials. • Recommended shelf life: 12 months under original sealed packaging.
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Please refer to the corresponding Safety Data Sheet before use. Product suitability for regulated applications must be confirmed separately according to local laws and customer requirements.

7. Documents & Technical Support

- TDS, SDS/MSDS, COA and agreed specification support.
- Sample arrangement and product grade recommendation.
- Packing photos, loading information and export document support.
- Application discussion and grade selection support for industrial buyers.

8. Inquiry Information

For quotation, sample request or technical document support

Please provide application, required quantity, destination port, packaging preference and target technical requirement.

Website: www.lignincorp.com | **Email:** info@greenagrochem.com

Disclaimer

The information in this Technical Data Sheet is provided for reference and general guidance only. It does not constitute a legally binding specification or warranty. Customers should conduct their own tests to determine product suitability for their intended application. Final commercial specification shall be subject to agreed contract, product grade and COA.