

TECHNICAL DATA SHEET

## Sodium Lignosulfonate Retarder Powder Grade

Bio-Based Set Retarder and Mild Water Reducer for Concrete, Mortar and Gypsum Systems

<b>Product Code</b>	GAC-NaLS-Retarder	<b>Product Type</b>	Lignosulfonate / Set Retarder / Construction Admixture
<b>CAS No.</b>	8061-51-6	<b>Physical Form</b>	Brown water-soluble powder
<b>Version</b>	V2.1   May 2026	<b>Primary Markets</b>	Concrete - Mortar - Gypsum - Construction Chemicals

<b>Primary Role</b> Set retarder	<b>Performance Focus</b> Open time and workability	<b>Industrial Fit</b> Concrete, mortar and gypsum	<b>Supply Support</b> TDS, SDS, COA and samples
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### 1. Product Overview

Sodium Lignosulfonate Retarder Powder Grade is a lignin-derived set-retarding admixture for cementitious and gypsum-based systems. It provides extended workability, mild water reduction and processing control for ready-mix concrete, mortar, grout and gypsum products.

### 2. Key Performance Functions

- Set Retardation: delays initial and final setting time.
- Workability Retention: extends handling time in hot weather or long transit.
- Mild Water Reduction: can reduce water demand while maintaining flow.
- Broad Compatibility: suitable for many Portland cement and blended cement systems after testing.
- Bio-Based Additive: lignin-derived option for construction chemical formulations.

### 3. Main Specifications

Parameter	Specification
<b>Chemical Formula</b>	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub> S (monomeric approximation)
<b>Appearance</b>	Brown powder
<b>Solubility</b>	Completely soluble in water
<b>pH Value (10% aqueous solution)</b>	9.0 - 11.0
<b>Bulk Density</b>	0.4 - 0.6 g/cm <sup>3</sup>
<b>Moisture Content</b>	<= 10%
<b>Viscosity</b>	Depends on concentration

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
<b>Ready-Mix Concrete</b>	Retarding admixture for transportation and placement control.	Extends workability window and supports slump retention.
<b>Mass Concrete</b>	Set control for large pours and heat management.	Supports continuous pouring and temperature-related processing control.
<b>Mortar &amp; Grout</b>	Open-time and flow support for masonry mortar and grout.	Improves plasticity and working time.
<b>Gypsum Products</b>	Processing aid for plasters and wallboard systems.	Improves processing time and forming consistency.
<b>Admixture Blends</b>	Component in construction chemical formulations.	Compatible with selected superplasticizers after lab testing.

## 5. Suggested Usage Guidance

Application	Typical Starting Dosage / Use	Technical Note
Concrete / mortar	0.1% - 0.5% of cementitious material	Exact dosage depends on target retardation time and temperature.
Gypsum systems	Trial dosage required	Optimize by gypsum type and setting profile.
Admixture blends	Compatibility test required	Check performance with superplasticizers and accelerators.
Job site use	Trial mix required	Confirm cement, aggregate, ambient temperature and target strength.

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	Storage & Handling
<ul style="list-style-type: none"> <li>25 kg woven bags / kraft bags with inner PE liner.</li> <li>500 kg, 600 kg or 1,000 kg jumbo bags available on request.</li> <li>Palletized, neutral or customized packing can be discussed.</li> </ul>	<ul style="list-style-type: none"> <li>Store in a cool, dry and ventilated warehouse.</li> <li>Keep away from moisture, rain, direct sunlight and strong oxidizing materials.</li> <li>Recommended shelf life: 12 months under original sealed packaging.</li> </ul>

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.

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## 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.