# TECHNICAL DATA SHEET

## Chrome Lignosulfonate

High-temperature drilling mud thinner and fluid loss control agent for water-based drilling fluids

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|---|---|---|---|
| **Product Code** | GAC-IC-CLS | **Product Type** | Chromium lignosulfonate / drilling mud thinner / fluid loss control agent |
| **CAS No.** | 9066-50-6 / product mixture | **Physical Form** | Brown to dark brown water-soluble powder |
| **Version** | V1.0 \| May 2026 | **Primary Markets** | Oilfield Drilling - Deep Wells - Saltwater Mud - Water-Based Mud Systems |

| Primary Role | Performance Focus | Best Fit | Supply Support |
|---|---|---|---|
| Drilling fluid thinner | Rheology and filtration control | Water-based drilling mud systems | TDS, MSDS, COA and samples |

### 1. Product Overview

Chrome Lignosulfonate is a chromium-complexed lignosulfonate additive used in water-based drilling fluids as a thinner, deflocculant and secondary fluid loss control agent. It helps control rheology, reduce gel strength and improve mud stability in fresh-water and salt-water mud systems.

This grade is designed for deep well drilling and difficult formations where high-temperature tolerance, electrolyte resistance and compatibility with common drilling fluid additives are required.

### 2. Key Performance Functions

- **Rheology Control:** Reduces apparent viscosity and gel strength in water-based drilling mud systems.
- **Fluid Loss Support:** Provides secondary filtration control and supports stable mud performance.
- **High-Temperature Performance:** Designed for drilling environments where heat and contaminants may destabilize mud rheology.
- **Salt / Electrolyte Tolerance:** Supports mud performance in salt-water and contaminated systems after laboratory validation.
- **Compatibility:** Can be used with common drilling mud additives subject to formulation testing.

### 3. Main Specifications

| Parameter | Specification |
|---|---|
| **Appearance** | Brown to dark brown powder |
| **Moisture** | <= 8.5% |
| **Water-Insoluble Matter** | <= 2.5% |
| **Calcium Sulfate (CaSO4)** | <= 3.0% |
| **Total Chromium (Cr)** | 3.6 - 4.2% typical |
| **Chromium Complex** | Typical complexed chromium grade; agreed specification / COA shall prevail |
| **Solubility** | Soluble / dispersible in water-based drilling fluid systems |

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

### 4. Drilling Mud Performance Reference

| Test / System | Typical Reference Result |
|---|---|
| **Fresh-water mud - normal temperature** | Apparent viscosity <= 30 mPa.s; viscosity reduction rate >= 85% |
| **Salt-water mud - normal temperature** | Apparent viscosity <= 30 mPa.s; viscosity reduction rate >= 65% |
| **Fresh-water mud - high temperature** | Apparent viscosity <= 40 mPa.s; viscosity reduction rate >= 60% |
| **Salt-water mud - high temperature** | Apparent viscosity <= 45 mPa.s; viscosity reduction rate >= 60% |

### 5. Recommended Application Areas

| Application Area | Typical Use | Customer Value |
|---|---|---|
| **Fresh-Water Drilling Mud** | Thinning and deflocculation for water-based mud systems. | Improves viscosity control and drilling fluid handling. |
| **Salt-Water Drilling Mud** | Rheology control in salt-contaminated or brine-based systems. | Supports mud stability under electrolyte stress. |
| **Deep Well Drilling** | High-temperature mud conditioning and gel strength reduction. | Improves operation stability in complex formations. |
| **Fluid Loss Control Support** | Secondary filtration control in formulated mud systems. | Helps maintain target mud performance with other additives. |

### 6. Suggested Usage Guidance

| Application | Typical Starting Dosage / Use | Technical Note |
|---|---|---|
| **Fresh-water mud** | 0.5 - 1.5% typical starting range | Optimize by mud type, temperature, solids and contamination level. |
| **Salt-water mud** | 1.0 - 2.0% typical starting range | Pilot testing recommended before field application. |
| **High-temperature drilling** | Laboratory hot-roll / aging test required | Confirm rheology, filtration and compatibility before use. |

*Dosage and application method should be verified by laboratory or pilot testing. Performance depends on mud type, solids content, salinity, pH, temperature, contamination level, mixing time and target technical results.*

## 7. Packaging, Storage & Handling

- **Packaging:** 25 kg woven bags / kraft bags with inner PE liner; 500 kg, 600 kg or 1,000 kg jumbo bags available on request.
- **Storage:** Store in a cool, dry and ventilated warehouse. Keep away from moisture, rain, direct sunlight and strong oxidizing materials.
- **Shelf Life:** Recommended 12 months under original sealed packaging. Confirm suitability before use after extended storage.
- **Handling:** Avoid dust generation. Use suitable eye protection, gloves and respiratory protection where dust may form.

## 8. 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.

## 9. 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.*