

## TECHNICAL DATA SHEET

# Ferrochrome Lignosulfonate

Ferrochrome lignosulfonate deflocculant and fluid loss control additive for water-based mud systems

Product Code	GAC-IC-FCLS	Product Type	Iron-chromium lignosulfonate / drilling mud thinner / deflocculant
CAS No.	8075-74-9	Physical Form	Yellow-brown to brown water-soluble powder
Version	V1.0   May 2026	Primary Markets	Oilfield Drilling - Water-Based Mud - Saltwater Mud - High-Temperature Systems

<b>Primary Role</b> Drilling fluid thinner	<b>Performance Focus</b> Rheology and filtration control	<b>Best Fit</b> Water-based drilling mud systems	<b>Supply Support</b> TDS, MSDS, COA and samples
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### 1. Product Overview

Ferrochrome Lignosulfonate is an iron-chromium lignosulfonate complex used as a deflocculant, thinner, temperature stabilizer and fluid loss control additive in water-based drilling fluids. It is designed to control rheology at elevated temperatures and in systems affected by salts, calcium, gypsum or other contaminants.

This grade is suitable for fresh-water, salt-water, gypsum, lime and high-contamination mud systems subject to laboratory and field validation.

### 2. Key Performance Functions

- **Deflocculation:** Reduces viscosity and gel strength in water-based drilling mud systems.
- **Temperature Stability:** Supports rheology control at elevated drilling temperatures.
- **Contaminant Tolerance:** Functions in salt, calcium, gypsum and lime mud systems after formulation testing.
- **Fluid Loss Support:** Provides secondary filtration control in mud formulations.
- **Broad Compatibility:** Mixes well in many water-based mud systems subject to compatibility testing.

### 3. Main Specifications

Parameter	Specification
Appearance	Yellow-brown powder
Dry Matter	>= 95%
Water-Insoluble Matter	<= 2.0%
Sulfate	<= 3.0%
Lignosulfonate Content	55 - 60% typical
Density	Approx. 0.532 g/cm <sup>3</sup>
Moisture	<= 8.0%
Total Iron (Fe)	<= 4.0%
Total Chromium (Cr)	<= 4.0%

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 <= 20 mPa.s; viscosity reduction rate >= 85%
Salt-water mud - normal temperature	Apparent viscosity <= 25 mPa.s; viscosity reduction rate >= 70%
Fresh-water mud - high temperature	Apparent viscosity <= 30 mPa.s; viscosity reduction rate >= 65%
Salt-water mud - high temperature	Apparent viscosity <= 45 mPa.s; viscosity reduction rate >= 55%

### 5. Recommended Application Areas

Application Area	Typical Use	Customer Value
Fresh-Water Mud Salt-Water Mud	Deflocculant and rheology stabilizer. Viscosity and fluid loss support in saline systems.	Improves mud flow and solids control. Supports drilling performance in brine and salt contamination.
High-Temperature Wells Gypsum / Lime Mud Systems	Thinner and temperature stabilizer. Use in high-calcium or contaminated mud after pilot testing.	Supports rheology control under heat stress. Provides operational flexibility for complex mud systems.

### 6. Suggested Usage Guidance

Application	Typical Starting Dosage / Use	Technical Note
Fresh-water mud	0.5 - 1.5% typical starting range	Adjust according to viscosity, gel strength and filtration target.
Salt / gypsum / lime systems High-temperature applications	1.0 - 2.0% typical starting range Hot-roll test required	Run pilot testing before field application. Confirm stability after aging and contamination exposure.

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.*