

## Certificate of Analysis

**Product Name:** Polyferric Chloride Sulfate (PFCS)

### Product Information

- Product Number: PFCS-20251105-001
- Batch Number: PFCS-2025110501
- Brand: SIGALD
- CAS Number: N/A (Inorganic polymer mixture)
- MDL Number: N/A (No specific MDL for composite polymer)
- Formula:  $[\text{Fe}_2(\text{OH})_n \text{Cl}_m (\text{SO}_4)_{3-n-m/2}]_k$  ( $n=0.3-1.5$ ;  $m=0.2-0.8$ ;  $k=f(n,m)$ )
- Formula Weight: Variable (approx. 350-420 g/mol, based on polymerization degree)
- Quality Release Date: 05 NOV 2025

Test Item	Specification (Industrial Standard)	Result	Test Method
Appearance	Dark brown to reddish brown transparent liquid	Dark brown transparent liquid	Visual Inspection
Total Iron (as Fe)	≥ 12.0%	12.8%	Potassium Dichromate Titration
Reducible Substances (as $\text{Fe}^{2+}$ )	≤ 0.15%	0.04%	Potassium Permanganate Titration
Basicity	8.0-16.0%	12.5%	Acid-Base Titration
pH Value (1% Aqueous Solution, 25°C)	1.5-3.0	2.3	Digital pH Meter
Insoluble Matter in Water	≤ 0.5%	0.16%	Gravimetric Method
Chloride Content (as $\text{Cl}^-$ )	2.0-5.0%	3.8%	Silver Nitrate Titration
Sulfate Content (as $\text{SO}_4^{2-}$ )	4.0-8.0%	6.2%	Barium Sulfate Gravimetric Method
Lead (Pb)	≤ 0.0008%	0.0002%	Atomic Absorption Spectrometry (AAS)
Arsenic (As)	≤ 0.00015%	0.00006%	Atomic Fluorescence Spectrometry (AFS)
Chromium ( $\text{Cr}^{6+}$ )	≤ 0.0004%	0.0001%	Diphenylcarbazide Spectrophotometry
Mercury (Hg)	≤ 0.000008%	0.000002%	Atomic Fluorescence Spectrometry (AFS)
Cadmium (Cd)	≤ 0.00008%	0.00003%	Atomic Absorption Spectrometry (AAS)
Viscosity (25°C)	20-40 mPa·s	32 mPa·s	Rotational Viscometer
Density (25°C)	1.50-1.60 g/cm <sup>3</sup>	1.55 g/cm <sup>3</sup>	Hydrometer Method
Supplier Information	Confirmed	Confirmed	-
Registered Trademark	Confirmed	Confirmed	-

This batch of product has been tested in accordance with industrial standards for polyferric chloride sulfate and meets all specified requirements. It is qualified for use.

Issue Date: 05 NOV 2025