

## Certificate of Analysis

**Product Name:** Poly Aluminum Ferric Chloride (PAFC)

### Product Information

- Product Number: PAFC-20260120-001
- Batch Number: PAFC-2026012001
- Brand: SIGALD
- CAS Number: N/A (Inorganic polymer mixture)
- MDL Number: N/A (No specific MDL for composite polymer)
- Formula:  $[Al_2(OH)_n Cl_{6-n}]_m \cdot [Fe_2(OH)_p Cl_{6-p}]_k$  (n=1-5; p=1-3; m,k=f(n,p))
- Formula Weight: Variable (approx. 200-350 g/mol, based on polymerization degree)
- Quality Release Date: 20 JAN 2026

| Test Item  | Specification<br>(Industrial Standard)         | Result                        | Test Method                            |
|--|--|-------------------------------|--|
| Appearance   | Dark brown to reddish brown transparent liquid | Dark brown transparent liquid | Visual Inspection                      |
| Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ) Content | ≥ 8.0%   | 9.2%                          | Complexometric Titration (EDTA Method) |
| Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> ) Content     | ≥ 3.0%   | 3.8%                          | Redox Titration                        |
| Basicity   | 50.0-80.0%                                     | 65.3%                         | Acid-Base Titration                    |
| pH Value (1% Aqueous Solution, 25°C)                     | 3.5-5.0  | 4.3                           | Digital pH Meter                       |
| Insoluble Matter in Water                                | ≤ 0.5%   | 0.12%                         | Gravimetric Method                     |
| Heavy Metals (Pb)  | ≤ 0.0005%                                      | 0.0001%                       | Atomic Absorption Spectrometry (AAS)   |
| Arsenic (As)   | ≤ 0.0001%                                      | 0.00004%                      | Atomic Fluorescence Spectrometry (AFS) |
| Chromium (Cr <sup>6+</sup> )                             | ≤ 0.0002%                                      | 0.00007%                      | Diphenylcarbazide Spectrophotometry    |
| Mercury (Hg)   | ≤ 0.000005%                                    | 0.000001%                     | Atomic Fluorescence Spectrometry (AFS) |
| Cadmium (Cd)   | ≤ 0.00005%                                     | 0.00002%                      | Atomic Absorption Spectrometry (AAS)   |
| Viscosity (25°C)   | 15-35 mPa·s                                    | 26 mPa·s                      | Rotational Viscometer                  |
| Density (25°C)   | 1.20-1.35 g/cm <sup>3</sup>                    | 1.28 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 poly aluminum ferric chloride and meets all specified requirements. It is qualified for use. Issue Date: 05 JUN 2026