品鸿生物科技
Pinhon Biotechnology

Technical Data Sheet

PINHONBIO® Piroctone Olamine

General powder grade | Purity ≥99% (HPLC) | Version 1.0 | 22 Oct 2026

1 Product identity

INCI / CAS / EC	PIROCTONE OLAMINE / 68890-66-4 / 272-574-2
Chemical identity	Piroctone monoethanolamine salt (1:1)
Formula / molecular weight	$C_{16}H_{30}N_2O_3$ / approximately 298.43 g/mol

2 Quality specification

Test item	Specification
Purity (HPLC)	≥99.0%
Appearance	White crystalline powder
Odour	Characteristic odour
Solubility	Water (0.10 g + 10 mL): insoluble Methanol (1.00 g + 10 mL): soluble
pH (1% in water, 20 °C)	8.50–10.00
Melting point	132.0–136.0 °C
Loss on drying	≤0.30%
Ash	≤0.20%
Particle size distribution D(0.5)	30–50 µm
Specific absorbance E 1% (1 cm) at 317 nm	204–236, expressed on dried substance
Ethanolamine	20.0–21.0%
Nitrosamine content	≤50 ppb
Ethyl acetate	≤500 ppm
Arsenic (As)	≤2.0 ppm
Lead (Pb)	≤2.0 ppm
Mercury (Hg)	≤1.0 ppm
Cadmium (Cd)	≤1.0 ppm
Total plate count	≤1,000 CFU/g
Yeasts and moulds	≤100 CFU/g
Diarrheogenic Escherichia coli	Not detected in 1 g
Salmonella	Not detected in 1 g

3 Technical notes

Piroctone olamine is the 1:1 salt of piroctone and monoethanolamine. The ethanolamine specification describes the salt constituent; it is not a declaration of separately added free ethanolamine.

The pH specification applies to the 1% aqueous preparation at 20 °C. Because the material has limited water solubility, this preparation may be a dispersion rather than a clear solution. Use a consistent sample-preparation procedure.

Solubility limits above describe the specified quality-control tests. Methanol is an analytical test solvent, not a recommended cosmetic formulation vehicle. Improved dissolution is possible in suitable surfactant systems and alcohol/water mixtures.

4 Applications and formulation guidance

Piroctone olamine is an anti-dandruff ingredient for shampoos and other scalp-care formulations. It also provides antimicrobial functionality in suitable personal-care systems.

Pre-dissolve or disperse in a compatible part of the formulation, then mix until uniform. Select the solvent or surfactant system for the target concentration and final pH. Check clarity, precipitation and stability after dilution and during storage.

Protect the ingredient and finished formula from prolonged strong light. Avoid unnecessary heating. Select the use level according to the intended function, product type and destination-market requirements, and confirm efficacy and compatibility in the finished formulation.

5 Packaging storage and shelf life

Packaging	Supply in tightly closed, compatible containers that protect the powder from moisture and contamination.
Storage	Store at room temperature in a cool, dry, well-ventilated place. Keep tightly closed and protect from strong light, heat and moisture.
Shelf life	36 months in original unopened packaging when stored as recommended.
Handling	Avoid breathing dust and contact with skin or eyes. Wear suitable gloves and eye/face protection. Refer to the SDS.
Transport	Not regulated as dangerous goods under IATA and IMDG for the supplied powder.

6 Supplier and reference information

Shaanxi Pinhon Biotechnology Co., Ltd. | Manufacturer & Supplier

Room 704, Unit 2, Building 1, I-Duhui, No. 11 Tangyan South Road, Yanta District, Xi'an, Shaanxi, China

Albert Zhao | +86 173 0298 1616 | info@pinhoningredients.com | pinhoningredients.com

Specification basis: current PINHONBIO enterprise COA specification. This is a general product standard; batch-specific results are provided in the corresponding COA.

Technical reference: Clariant, Octopirox product brochure, 2018; general solubility, formulation and storage information. https://www.clariant.com/-/media/Files/Solutions/Products/Brochures/O/17/Clariant-Brochure-Octopirox-2018-EN.pdf

Safety reference: TCI, Piroctone Olamine P2178; Fisher Scientific, Piroctone olamine SDS, revised 20 Dec 2025. https://www.tcichemicals.com/GB/en/p/P2178