品鸿生物科技
Pinhon Biotechnology

Technical Data Sheet

PINHONBIO® Hydroxypropyl Beta Cyclodextrin

General powder grade | Version 1.0 | 23 Oct 2026

1 Product identity

INCI name	HYDROXYPROPYL CYCLODEXTRIN
CAS / EC number	128446-35-5 / 420-920-1
Synonyms / standard	Hydroxypropyl betadex; HP-β-CD; HPBCD / CP 2025

2 Quality specification

Test item	Specification
Hydroxypropoxy content	19.6–26.3%
Chemical identification	A purple ring forms at the interface of the two liquids.
Infrared identification	IR spectrum matches the reference substance.
Appearance	White or almost white amorphous or crystalline powder.
Solubility	Highly soluble in water or propylene glycol; freely soluble in methanol or ethanol; practically insoluble in acetone or chloroform.
pH	5.0–7.5
Clarity of solution	Clear and colourless
Chloride	≤0.05%
Conductivity (20 °C)	≤200 µS/cm
Propylene oxide	≤0.0001% (≤1 ppm)
Water	≤6.0%
Residue on ignition	≤0.2%
Heavy metals	≤10 ppm
Betadex	≤0.5%
1,2-Propylene glycol	≤0.5%
Any other single impurity	≤0.1%
Total other impurities	≤1.0%, excluding betadex and 1,2-propylene glycol
Total aerobic microbial count	≤1,000 CFU/g
Total combined yeasts and moulds	≤100 CFU/g
Escherichia coli	Absent
Salmonella	Absent

3 Technical description

Hydroxypropyl beta cyclodextrin is a hydroxypropyl ether derivative of beta cyclodextrin. Its ring-shaped structure can form inclusion complexes with compatible guest molecules, supporting solubilization and stabilization in suitable formulations.

The hydroxypropoxy-content range describes the attached substituent groups. It is not a product-purity percentage or the proportion of a separately added ingredient. Molecular weight varies with substitution; a single fixed molecular weight is not assigned to this grade.

Specification basis: Chinese Pharmacopoeia 2025 (CP 2025), as stated in the supplied PINHONBIO COA. Identification, pH, clarity, conductivity and microbial testing refer to their prescribed test preparations and procedures.

4 Applications and formulation guidance

Functions include inclusion complex formation, solubility enhancement and stabilization of compatible active ingredients or fragrances. Potential applications include cosmetic formulations and pharmaceutical excipient development, subject to the requirements of the intended finished product.

Add gradually to the aqueous phase with stirring and allow complete dissolution before assessing clarity. The suitable host-to-guest ratio depends on the guest molecule, solvent system, concentration, pH and temperature. Confirm complexation, stability and ingredient availability in the actual formulation.

Solvents named in the specification describe analytical solubility characteristics; they are not a recommendation to use methanol or chloroform in a finished product. Select a formulation-compatible processing medium.

5 Packaging storage and shelf life

Pack sizes	15 kg, 1 kg, 0.5 kg, 100 g or 20 g per bag.
Storage	Store protected from light in a sealed container, in a cool, dry, well-ventilated place. Protect from moisture and excessive heat.
Shelf life	36 months in original unopened packaging under the recommended storage conditions.
Handling	Minimize dust formation. Use suitable eye protection and gloves during bulk handling. Refer to the SDS.
Transport	Non-dangerous goods. Not regulated under IATA, IMDG and US DOT for the supplied powder.

6 Supplier and references

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

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Quality limits and shelf life: supplied PINHONBIO CP 2025 COA. This is a standing product specification; batch results are issued separately.

Technical reference: Roquette, KLEPTOSE HPB hydroxypropylbetadex product information (complexation and solubility). https://www.roquette.com/health-pharma/pharmaceutical-product-catalog/kleptose-hpb-oral-hydroxypropylbetadex

Identity reference: Sigma-Aldrich H107, CAS 128446-35-5. https://b2b.sigmaaldrich.com/US/en/product/sigma/h107