PEA Palmitoylethanolamide Specification Sheet

Public technical specification for buyer documentation review

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Field	Specification / note
Ingredient name	PEA (Palmitoylethanolamide) — PEAptimize™
Synonyms	Palmitoylethanolamide; PEA; palmidrol; N-(2-hydroxyethyl)hexadecanamide; N-palmitoylethanolamine
CAS number	544-31-0
Machine-readable identifiers	InChIKey HXYVTAGFYLMHSO-UHFFFAOYSA-N · PubChem CID 4671
Molecular formula	C 18 H 37 NO 2
Molecular weight	299.49 g/mol
Assay / purity	99% minimum by HPLC, stated on the Certificate of Analysis for each lot. The particle-size grade is specified separately per order and does not change the assay specification.
Particle-size grades	Supplied as standard (non-micronized), micronized and ultra-micronized grades. Particle size distribution (D 10 /D 50 /D 90) is measured per lot and reported on the Certificate of Analysis, with the method stated. Grades are not interchangeable: the same assay at a different particle size behaves differently in blending, capsule filling and dissolution testing.
Source / production route	Organic synthesis — amidation of palmitic acid with ethanolamine, followed by purification and crystallisation. PEA is an endogenous fatty acid amide also present in foods; commercial material is synthesised, not extracted. The origin of the palmitic acid feedstock (vegetable-derived, e.g. palm or other vegetable oil) is stated on the specification sheet, together with sustainability documentation where required.
Appearance	White to off-white crystalline or waxy powder
Solubility	Practically insoluble in water; soluble in ethanol, DMSO and warm lipid systems. Wetting behaviour, dispersion and dissolution medium should be confirmed for the intended dosage form.
Powder properties	Bulk and tapped density, angle of repose, loss on drying and sieve analysis available per lot on request — these are the parameters that govern capsule weight consistency and tablet compaction for a low-density amide.
Typical applications	Capsules, tablets, sachets, stick packs, chewables and softgel or lipid-matrix formats for B2B nutraceutical manufacturing
Documentation	Certificate of Analysis, specification sheet, identity confirmation, heavy metals, microbiological testing, residual solvents, allergen statement, GMO statement, particle size data, bulk density data, feedstock origin statement and stability data
Stability / storage	Store in tightly closed containers in a cool, dry place away from direct heat and light. Melting behaviour should be considered when the material is exposed to heat during granulation, tableting or lipid-phase processing.
Regulatory note	Permitted use, notification status and labelling requirements for palmitoylethanolamide differ by jurisdiction. Buyers are responsible for confirming the regulatory position in each market of sale before launch.
Quality system	ISO 22000:2018, FSSC 22000, HACCP and GMP (certificates provided on request)
Supplier	Nutrition BioTech, 1601 W. Mission Blvd, Suite 103 (DL#29), Pomona, CA 91766, United States

Public disclosure note: This public sheet is prepared from the current NaturalBestBio product-page specification block. It is not a batch-specific Certificate of Analysis. Lot-specific COA and supporting records are available for qualified buyer review when appropriate.