Technical Data Sheet

N-Prolyl Palmitoyl Tripeptide-56 Acetate Cosmetic Suspension | 0.2% NPT-56 in Glycerin Suspension with Linatural MBS-4

Product Code FL-NPT56-GLYC-MBS4-LC-001-TDS

Current published version — subject to change.

This document is the current web-published revision. Specifications, classifications, and recommendations may be revised without notice as additional batch and analytical data become available. **For any shipment, the authoritative document is the revision packaged with your batch — refer to that version for the values that apply to the lot you receive.**

Product Overview

Product Name	N-Prolyl Palmitoyl Tripeptide-56 Acetate Cosmetic Suspension | 0.2% NPT-56 in Glycerin Suspension with Linatural MBS-4
Product Code / SKU	FL-NPT56-GLYC-MBS4-LC-001-TDS
Document Revision	0.1
Effective Date	May 20, 2026
Manufacturer	Formulate Labs, Inc. 1645 Headland Dr. Fenton, MO 63026
Quality Contact	quality@formulate.co *Lot issues, complaints, contamination concerns, out-of-spec materials, COA discrepancies.*
Regulatory Contact	regulatory@formulate.co *INCI, allergens, IFRA, Prop 65, vegan/natural claims, compliance documents, formulation-use questions.*
Adverse Effects Reporting	safety@formulatelabs.ai
Emergency Phone Number	888-999-2260

This material is N-Prolyl Palmitoyl Tripeptide-56 Acetate (NPT-56) at 0.2% dosed into a 35% Glycerin / Water carrier preserved with Linatural MBS-4 at 2.00%. It is designed for cosmetic formulators (hair-care formats and skincare formats both supported) who want a neutral humectant carrier with a selectable preservation system to match the ingredient deck of the finished product.

Recommended Cosmetic INCI Declaration

Water, Glycerin, Propanediol, Ethylhexylglycerin, N-Prolyl Palmitoyl Tripeptide-56 Acetate, Benzoic Acid

INCI ordering follows descending weight per FDA / EU cosmetic labeling convention; ingredients below 1% may appear in any order in the final label per local regulations. The process-integrated preservation system is disclosed in the SDS for industrial safety and formulation review. Finished-product manufacturers and brand owners remain responsible for final ingredient labeling determinations in each sale jurisdiction.

Composition / Information on Ingredients

Ingredient / Chemical Name	CAS #	Function	% by Weight
Glycerin	56-81-5	Humectant carrier; cosmetic raw material	35.000%
Propanediol	504-63-2	Process-integrated preservation solvent / humectant component of Linatural MBS-4	1.700%
Ethylhexylglycerin	70445-33-9	Process-integrated preservation booster / skin-conditioning component of Linatural MBS-4	0.200%
Benzoic Acid	65-85-0	Process-integrated preservative acid component of Linatural MBS-4	0.100%

Ingredient / Chemical Name	CAS #	Function	% by Weight
Water	7732-18-5	Solvent (balance)	62.800%
N-Prolyl Palmitoyl Tripeptide-56 Acetate	1899049-18-3	Active biomimetic acetylated peptide; cosmetic raw material	0.200%

Preservation System

Component	CAS #	% of Blend	% in Finished Suspension
Propanediol	504-63-2	85.0%	1.700%
Ethylhexylglycerin	70445-33-9	10.0%	0.200%
Benzoic Acid	65-85-0	5.0%	0.100%

Linatural MBS-4 (supplied by Lincoln Manufacturing) is used at 2.00%. Plant-derived preservation system from Lincoln Manufacturing. Propanediol-based, naturally-acceptable.

Key Technical Attributes

Format	Aqueous cosmetic raw material
Appearance	Clear, colorless aqueous solution. Lot-to-lot color variation is expected to be minimal at this peptide loading.
Odor	Mild characteristic; no added fragrance
Preservation	Linatural MBS-4 (supplied by Lincoln Manufacturing) is used at 2.00%. Plant-derived preservation system from Lincoln Manufacturing. Propanediol-based, naturally-acceptable.
Target pH	4.5-5.1 at 25 °C (anticipated)
Solubility / Compatibility	Water-miscible / water-compatible
Recommended Use Level	Dilute into the finished formula at 0.05-0.5% of the lab concentrate for an in-formula peptide level of approximately 0.000175-0.00175%. Use levels are guidance only; finished-formula safety, preservation efficacy, and stability remain the responsibility of the brand.
Processing	Add during cool-down at <= 40 °C, ideally as a final aqueous addition. Avoid high shear once incorporated and avoid sustained heat after addition. Maintain finished-formula pH between approximately 4.0 and 6.0 (per supplier guidance for N-Prolyl Palmitoyl Tripeptide-56 Acetate) to keep the peptide stable; avoid strong oxidisers, sulfuric or phosphoric acids, acetic anhydride, and prolonged direct-light exposure in the same phase.
Storage	Store tightly closed in opaque containers protected from light (N-Prolyl Palmitoyl Tripeptide-56 Acetate is light-sensitive per supplier guidance). Refrigerate (2-8 °C) for maximum shelf life. Minimize headspace once a container is opened.
Shelf Life	Anticipated unopened, refrigerated: 18-24 months. Anticipated unopened, controlled room temperature: 12-18 months. Open or in-use containers require site-specific microbial controls. Ranges represent the current published target and may be refined by future stability data.

Formulation Guidance

• Best suited to water-based cosmetic hair-care systems (scalp serums, leave-on hair tonics, density-positioned conditioners) and the water phase of cosmetic emulsions; also acceptable in rinse-off hair-care products.

• Maintain finished-product pH in the acidic range (approximately 4.0-6.0 per supplier guidance for N-Prolyl Palmitoyl Tripeptide-56 Acetate). The preservation system targets the lower end of that range.

• Avoid prolonged exposure above 45 °C after addition; sustained heat can hydrolyze the peptide and reduce in-formula activity.

• Avoid contact with strong oxidisers, sulfuric or phosphoric acids, acetic anhydride, prolonged exposure to direct light, and sustained exposure to pH > 7.0.

• Final formulations must be independently stability tested, micro tested, and challenge tested. Preservation efficacy in the finished product is the brand's responsibility regardless of the preservation system in this raw material.

Marketing / Claims Guidance

Appropriate cosmetic-positioning language may include hydrating, conditioning, biomimetic peptide, supports the appearance of fuller-looking hair, supports a healthy-looking scalp, and helps maintain the look of hair density (per published cosmetic in-vitro and panel work for the peptide and the Matrixyl Morphomics blend). **Avoid hair-loss drug language** ('treats hair loss', 'stops hair loss', 'regrows hair', 'treats alopecia', 'hair-regrowth treatment'); these are drug claims and are forbidden on cosmetic products in every market we ship into. **Avoid mechanism / pharmacological language** ('5-alpha-reductase inhibitor', 'blocks DHT', 'DHT modulation', 'follicle activator') even when the supplier brochure references those mechanisms in cosmetic in-vitro studies. **Avoid disease, wound-healing, or therapeutic claims** for the finished product unless the product is regulated and substantiated for such use. Structure-function language must be qualified appropriately and must not imply medical benefit.

Regulatory Notes

• **Current published version — subject to change.** This document represents the current web revision. Specifications may be revised as additional batch and analytical data become available; the document packaged with each shipment is the authoritative version for the specific lot received.

• Recommended cosmetic INCI declaration is the descending-weight string listed above.

• SDS composition disclosure is provided for industrial safety, formulation review, and regional compliance assessment.

• No fragrance is intentionally added.

• **Not certified organic, kosher, halal, COSMOS, vegan, or non-GMO unless separately accompanied by a third-party certificate.** Suitability assessments based on the ingredient deck and supplier information are not equivalent to certifications.

• Component supplier data has been used in good faith; supplier-issued documents take precedence over individual statements above where a discrepancy exists.

• Finished-product manufacturers remain responsible for final product safety, claims, label compliance, regional restrictions, and preservative efficacy.