

Hydration Claims Need an NMF Anchor

Modern formulas need hydration stories that feel credible, lightweight, and easy to formulate across skin care, hair care, cleansing, makeup, sunscreen, and oral care formats.

- Targets dry, rough, dehydrated, or comfort-focused positioning
- Supports lightweight hydration without turning concepts into heavy creams

- Fits clear, water-based, and rinse-off product formats

- Gives brands a familiar Natural Moisturizing Factor story

Sodium PCA 50% Makes Hydration Practical

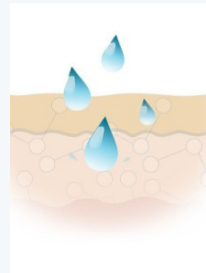
Sodium PCA 50% is a water-soluble, preservative-free humectant designed to help formulators add an NMF-type hydration story with simple liquid handling.

- INCI: SODIUM PCA, AQUA

- Clear to pale yellowish transparent liquid

- Gentle, non-irritating, and non-comedogenic

- Suitable for leave-on and rinse-off formulations



Lightweight Moisture for Many Concepts

The ingredient helps build a hydrated skin feel and moisture-binding story without forcing a rich or greasy product direction.

- Daily moisturizers: stronger hydration positioning

- Toners and gels: water-clear format fit

- Cleansers: less dry-feeling wash concepts

- Hair care: humectant and conditioning-support story

- Makeup bases: smoother, more comfortable skin feel

Easy Water-Phase Adoption

Sodium PCA 50% is designed for straightforward use in water-based systems, making it practical for R&D teams that need simple scale-up handling.

- Use level: 0.50%–2.00%
- Add into the water phase
- Avoid heat above 60°C
- Stable pH range: 3.50–9.00
- Soluble in water, glycols, and ethanol



Build a Stronger NMF System

Sodium PCA pairs well with Urea and Sodium Lactate for a more complete NMF-inspired moisturizing system that supports comfort-focused hydration positioning.

- Sodium PCA: NMF-type humectant story
- Urea: recommended co-formulation partner
- Sodium Lactate: recommended co-formulation partner
- Useful for toner, serum, gel, and moisturizer concepts



Proof for the NMF Hydration Story

Direct PCA and NMF research helps formulators frame Sodium PCA 50% as an evidence-backed humectant for barrier hydration positioning.

- Supports NMF-type humectant positioning by describing PCA as a hydrating agent in skin. Citation: E.J. Clar, C. Fourtanier.
- Supports barrier hydration relevance by identifying PCA as a measurable Natural Moisturizing Factor component linked with reduced hydration state. Citation: T. Sugawara et al.
- Supports stratum-corneum moisturizing logic by describing PCA and sodium-pyrrolidone carboxylate as stratum-corneum moisturizers. Citation: M.Y. Fujii et al.

Proof for Moisturizer System Design

Formula-level and ingredient-family studies support Sodium PCA's role in broader NMF-inspired moisturizing systems, especially when combined with related humectants.

- Supports co-formulation logic by evaluating topical PCA, urea, and sodium lactate in vivo for moisturizing product design. Citation: R. McCallion, A. Li Wan Po.
- Supports multi-ingredient cream positioning by evaluating a moisturizer containing Sodium PCA as part of an NMF component system with improved moisture-related outcomes. Citation: D.H. McDaniel et al.

One Humectant, Many Launch Concepts

Because Sodium PCA 50% works across clear, water-based, rinse-off, and conditioning systems, it can support multiple product briefs from one ingredient inventory.



NMF Hydration Toner with Sodium Lactate and Urea



Clear Moisture Gel for dehydrated or rough-feeling skin



Daily Barrier-Comfort Serum for moisture-binding positioning



Hydrating Cleanser or Liquid Soap for comfort after washing



Moisture Support Shampoo or Conditioner

Specs That Support Confident Formulation

The liquid format and clear specification profile help R&D teams evaluate Sodium PCA 50% quickly for water-phase personal care formulas.

Content: 48.0%–52.0%

pH, 10% water solution: 6.8–7.4

Transmittance, 1cm, 430nm: >96.0

Specific gravity: 1.260–1.270

Shelf life: 24 months from manufacturing or testing date

Choose Sodium PCA for Flexible Hydration

Sodium PCA 50% gives formulators a practical way to build credible, NMF-inspired hydration across many formats while keeping formulation handling simple.

- ✔ NMF-type ingredient story customers recognize
- ✔ Lightweight moisture booster for broad product formats
- ✔ Water-phase liquid handling for easy incorporation
- ✔ Gentle profile for wide cosmetic use
- ✔ Pairs with Urea and Sodium Lactate for stronger systems