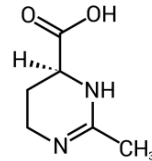


# Ectoin for Multi-Stress Skin Care

Ectoin (Ectoin, from Bio-fermentation) gives formulators one premium ingredient story for hydration, comfort, barrier support, and environmental stress positioning.

- High-purity, water-soluble Ectoin
- Produced by bio-fermentation
- Recommended use level: 2.0%
- Designed for creams, lotions, masks, and water-phase systems



**Ectoin**  
 $C_6H_{10}N_2O_2$



# The Need: Gentle Daily Protection

Modern skin care must address daily stress without making formulas feel complex or aggressive. Ectoin fits products targeting dryness, roughness, irritation, heat, UV exposure, pollution, and weakened barrier appearance.

- Consumers want gentle performance

- Daily stress stories are expanding

- Barrier comfort remains a core need

- One ingredient can support multiple positioning angles

# One Ingredient, Multiple Product Stories

Ectoin helps brand teams build a broad but coherent claim-building narrative across moisturization, anti-aging, anti-irritation, environmental stress care, and barrier support.

Moisturizing and  
comfort care

Premium anti-aging  
hydration concepts

Urban and  
environmental stress  
positioning

Sensitive-skin and  
recovery-oriented  
formulas

Barrier-support product storytelling

# Commercial Benefits Customers Can Use

For formulators and product developers, Ectoin turns technical performance into sellable product value: comfort, hydration, resilience, and a premium bio-fermentation origin story.

- ✓ Supports multi-benefit skin protection positioning
- ✓ Helps build hydration and comfort value
- ✓ Offers premium anti-aging concept support
- ✓ Supports urban stress and daytime care stories

## Easy Integration for R&D Teams

Ectoin is practical for laboratory and production use because it dissolves in water, goes into the water phase, and tolerates common cosmetic processing conditions.

- Use range: 0.50% - 2.00%

- Recommended dosage: 2.00%

- Stable in pH 1.00 - 9.00

- Heat tolerant; avoid heat above 80C

- INCI Name: Ectoin

# Evidence for Hydration and Aging Claims

A randomized, vehicle-controlled clinical trial reported that 2% topical ectoin improved skin hydration, elasticity, and skin surface structure versus vehicle.

- 2% topical ectoin study aligns with the recommended use level
- Hydration improvement supports moisturizing claims
- Elasticity data supports premium anti-aging positioning
- Skin surface structure supports smoother-looking skin concepts

# Barrier Comfort and Anti-Irritation Support

Source research supports Ectoin positioning around barrier-related comfort, TEWL-based skin barrier function, moisturization, and anti-irritation product concepts.

- Ectoine-containing cream improved signs of mild-to-moderate atopic dermatitis
- Topical use improved TEWL-based barrier function and moisturization
- Ectoine protected cell membranes from surfactant damage
- Systematic review supports impaired-barrier symptom improvement

# Environmental Stress Storytelling

Ectoin also supports formulas positioned for urban exposure, light-related stress, and heat-stress care when used as part of a broader daytime or protection system.

- Research directions include pollution markers
- Source data includes UVB and UVA/visible light support areas
- IR and heat stress research supports thermal-stress positioning
- Combined sunscreen systems support biological photoprotection adjunct concepts



# Concepts Ready for Product Development

Ectoin can be used as the hero ingredient in multiple product formats, helping teams convert one raw material into a complete family of customer-relevant concepts.

- Barrier Comfort Moisturizer: dry or easily stressed skin
- Anti-Aging Hydration Lotion: hydration, elasticity, surface structure
- Soothing Recovery Mask: post-stress comfort and roughness care
- Scalp Comfort Care: dryness, redness, itching, flaking, discomfort
- Photoprotection Support Formula: daytime care with UV filter systems

# Market-Proven Positioning Range

The source lists Ectoin use across moisturizer, sunscreen, makeup, sensitive-skin, and skin-rescue examples, showing how flexible the ingredient story can be across product categories.

- Moisturizer and skin-rescue positioning
- Sunscreen and daytime protection concepts
- Makeup format example
- Sensitive-skin moisturizer example
- Broad fit for premium formulation stories

