



Neopenta-WG

Multifunctional Bio-Active for Advanced Skin Protection & Rejuvenation

Product Overview:

INCI Name: *Aspergillus Ferment* (and) *PEP5* (and) Sodium Benzoate (and) Potassium sorbate (and) Phenoxyethanol (and) Ethylhexylglycerin.

Form: Water-soluble liquid

Applications: Anti-Aging • Skin Hydration • Anti-Wrinkle • After-Sun Care

Product Concept:

Neopenta-WG is a multifunctional cosmetic active that unites bio-fermented nutrients with a targeted pentapeptide to support skin renewal, hydration, and youthful resilience. Designed for topical skincare, it enhances barrier strength, improves texture, and promotes visibly healthier-looking skin.

Neopenta-WG is a next-generation **bio-fermented cosmetic active** that synergistically combines nutrient-rich **Aspergillus Ferment** with the targeted skin-signalling action of **PEP5 (Pentapeptide)**.

This multifunctional complex is designed to support **skin renewal, hydration, barrier integrity, and visible anti-ageing performance**. The fermented matrix enhances bioavailability and skin affinity, while the pentapeptide delivers precise cellular communication to promote youthful skin behaviour.

Stabilised with a globally accepted **broad-spectrum preservation system**, the complex is suitable for modern cosmetic formulations intended for **daily topical application**.

Key Features & Benefits:

Feature	Benefit
Skin Regeneration & Renewal	Fermented bio-nutrients supply readily bioavailable amino acids, enzymes, and postbiotic compounds. Supports healthy skin turnover and improved surface smoothness
Collagen Support & Anti-Ageing	PEP5 functions as a signal peptide . Supports fibroblast activity and collagen-related skin



Feature	Benefit
Anti-Ageing & Anti-Wrinkle Action	processes. Helps minimise the appearance of fine lines and loss of firmness Stimulates collagen synthesis and inhibits collagen-degrading enzymes (MMPs) for firmer, smoother skin.
Deep Skin Hydration	Free amino acids and peptides improve moisture retention and strengthen the skin barrier.
Soothing & Calming Effect	Reduces redness, irritation, and UV-induced inflammation, ideal for sensitive and post-sun skin.
Brightening & Vitalizing	Revitalises dull skin, promoting a fresh, radiant complexion.
Collagen Support	PEP5 functions as a signal peptide . Supports fibroblast activity and collagen-related skin processes. Helps minimise the appearance of fine lines and loss of firmness

Key Active Components:

Aspergillus Ferment (**Primary Bio-Active**)

A bio-fermented ingredient rich in **amino acids, enzymes, peptides, and postbiotic metabolites**. Produced through controlled fermentation, it enhances **skin renewal, hydration, barrier integrity, and microbiome balance** while improving the bioavailability of actives in topical formulations.

Key skin benefits:

- Supports skin regeneration and smooth texture
- Enhances hydration and barrier strength
- Improves absorption and performance of actives
- Microbiome-friendly and suitable for sensitive skin



PEP5 (Pentapeptide-Targeted Signal Peptide Active)

A short-chain **Pentapeptide** designed to act as a **cell-signalling molecule**. PEP5 supports fibroblast activity and collagen-related skin functions, helping improve **firmness, elasticity, and the appearance of fine lines**.

Key skin benefits:

- Supports collagen synthesis pathways
- Helps reduce visible signs of ageing
- Improves skin firmness and resilience
- Enhances overall skin texture

⚙️ Mechanism of Action:

Aspergillus Ferment – Bio-Fermented Skin Activation

Action in Skin:

1. **Enhanced Penetration**
Fermentation reduces molecular size, allowing easier penetration into the stratum corneum.
2. **Cellular Nutrient Supply**
Bioavailable amino acids and peptides act as building blocks for skin repair and renewal.
3. **Barrier & Hydration Support**
Stimulates barrier-related processes, improving moisture retention and reducing transepidermal water loss (TEWL).
4. **Microbiome Modulation**
Post-biotic components help support a balanced skin microbiome, improving skin resilience and tolerance.

PEP5 (Pentapeptide) – Targeted Signal Peptide Activity

1. **Cell Signalling Activation**
Penetrates the epidermis and dermis, where it signals fibroblasts.
2. **Collagen-Related Pathway Support**
Stimulates pathways involved in collagen synthesis and the organisation of structural proteins.
3. **Skin Structure Reinforcement**
Helps maintain firmness, elasticity, and skin density over time.



4. Anti-Ageing Effect

Reduces the appearance of fine lines by supporting the skin's natural regenerative processes.

🔥 Cosmetic Applications

Product Type	Recommended Usage Level
Anti-Ageing Serums	0.2 – 2.0%
Hydrating Creams / Gels	0.2 – 2.0%
Anti-Wrinkle Eye Creams	2.0 – 3.0%
After-Sun Recovery Products	2.0 – 3.0%

🔬 Technical Data

Parameter	Specification
Appearance	Light yellow to pale brown liquid
Odor	Mild, herbal
Solubility	Water
pH (1% solution)	4.7 – 5.5
Active Components	Polyphenols, Free Amino Acids, Peptides.
Shelf Life	24 months (under recommended storage conditions)

🌸 Formulation Compatibility

- Compatible with emulsifiers, humectants, natural oils, UV filters, and most cosmetic actives.
- Suitable for cold and hot process (bellow 40°C) emulsions.
- Can be incorporated into both leave-on and rinse-off skincare formulations.

Packaging & Storage

- Available Pack Sizes: 1 kg / 5 kg / 25 kg HDPE containers.



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- Storage Conditions: Store in a cool, dry place (below 30°C), away from light and moisture.
 - Shelf Life: 18 months from date of manufacture (unopened).
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✓ Certifications & Claims

- Non-Irritant & Dermatologically Tested
- Paraben-Free, Silicone-Free, Mineral Oil-Free
- GMO-Free & Cruelty-Free
- Eco-friendly & Sustainable Source

