



Specifications and Characteristics

INCI	Pentylene Glycol
CAS REG. N°	5343-92-0
APPEARANCE	Colourless liquid
ODOUR	Odourless
PURITY	Min. 99.0 %
SOLUBILITY	Hydrophilic, readily soluble in water, alcohol, 1,2-alkanediols and Caprylic/ Capric Triglyceride
RECOMMENDED pH OF USE	3.0 ▶ 10.0
RECOMMENDED USE LEVEL	0.5 ▶ 5.0 %
REGULATORY STATUS	Globally approved
ORIGIN	derived-natural, 100% renewable carbon Made from non-food part of sugar cane (bagasse)
NATURAL ORIGIN INDEX	1 (ISO 16128)
CHEMICAL STRUCTURE	$\text{HO}-\text{CH}_2-\text{CH}(\text{OH})-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{OH}$

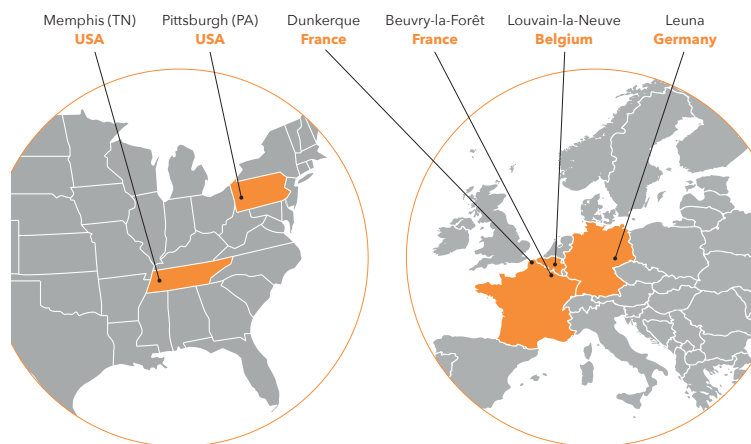


MINASOLVE® is an affiliate of MINAFIN® Group

Created in 2004, **The MINAFIN® Group**, specializes in fine chemistry for the life sciences and high tech industries. Activities include industrial subcontracting, development of chemical syntheses and industrial scale-up of custom-made processes as well as proprietary products with high added value for the pharmaceutical, cosmetics, agriculture and high-tech industries. Strong synergies exist between all business units: MINASOLVE, MINAKEM, MINAGRO, PENNAKEM, PRESSURE CHEMICALS, MINASCENT and EcoXtract.

Serving market leaders as well as emerging players we support our customers' efforts to improve the quality of life in the global community by:

- ▶ Improving our chemistry and operational excellence today
- ▶ Creating and innovating for tomorrow
- ▶ Driving our enterprises together to **go beyond expectations**



220
M€ SALES

888
EMPLOYEES

87
SCIENTISTS

6
PRODUCTION SITES

MINAFIN®
GROUP

2021.01. V6.2

Aleen®5

FROM BIOMASS TO COSMETIC

Biosourced odourless Pentylene Glycol

✓ **Anti-microbial**

✓ **Emollient**

✓ **Moisturizer**

✓ **Solubilizer**

✓ **Extraction solvent**



COSMOS
APPROVED



NATRUE
APPROVED

MINASOLVE®
BIO-INGREDIENTS FOR YOUR APPLICATIONS

**green
solving
attitude.**

WWW.MINASOLVE.COM



A-Leen 5 from MINASOLVE: SUSTAINABLE PENTYLENE GLYCOL

A-Leen 5 is the pioneering, sustainable, **COSMOS** and **NATRUE** approved version of the multifunctional ingredient Pentylene Glycol.

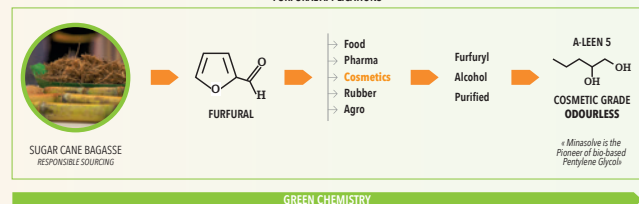
A-Leen 5 is produced from **sugarcane bagasse**, a renewable waste byproduct that does not compete with food resources.

A-Leen 5 manufacturing process utilizes a back integrated raw material supply chain ensuring **full traceability** in accordance with the principles of “**green chemistry**”.

BACK INTEGRATED RAW MATERIALS – FULL TRACEABILITY

« Pennakem, our US sister company is active in renewable chemistry since the 1940's »

FURFURAL APPLICATIONS



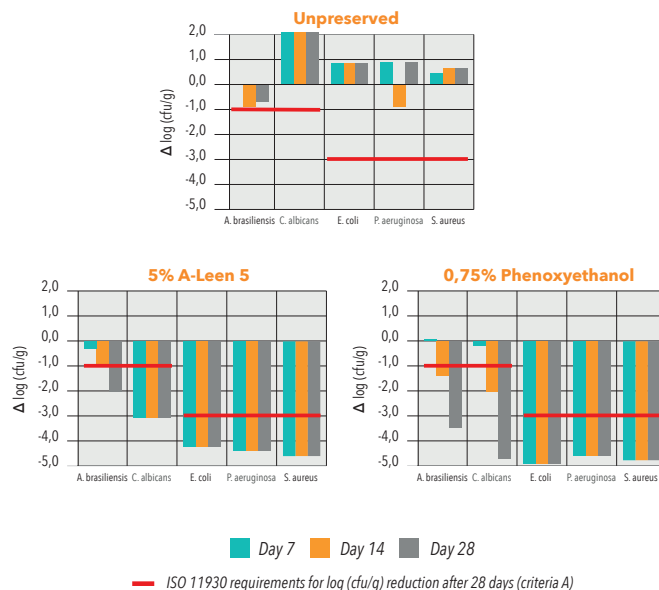
A-Leen 5 has been recognized as a **Silver Green Ingredient Award** winner during In-Cosmetics Global 2014.

A-Leen 5 exhibits a **broad-spectrum antimicrobial activity** against yeasts, molds and bacteria. As a non-ionic ingredient, its anti-microbial effect is largely pH-independent.

A-Leen 5 brings multiple properties to the final product: it is an effective **skin humectant** with **emollient properties**, making it a versatile skin-conditioning agent in various cosmetic formulations.

Antimicrobial activity

Challenge test results (ISO 11930) in O/W emulsion, pH 5.5



A-Leen 5 can be an alternative to Phenoxyethanol (CT: criteria A for 5% A-Leen 5, criteria B for 0.75% Phenoxyethanol)

Phase	Raw material	INCI name	%
A	Water	Aqua	ad 100.00
	Xanthan Gum ⁽¹⁾	Xanthan Gum	0.50
	A-Leen 5 ⁽²⁾ or Phenoxyethanol	Pentylene Glycol or Phenoxyethanol	5.00 0.75
B	Emulgade PL 68/50 ⁽³⁾	Cetearyl Glucoside (and) Cetearyl Alcohol	5.00
	Shea Butter ⁽⁴⁾	Butyrospermum Parkii (Shea) Butter	3.00
	Jojoba Oil ⁽⁴⁾	Simmondsia Chinensis (Jojoba) Oil	3.00
	Hazelnut Oil ⁽⁵⁾	Corylus Avellana (Hazel) Seed Oil	3.00
C	Bioxan T70 ⁽⁶⁾	Tocopherol	0.10
D	Citric Acid (50%)	Citric Acid (and) Aqua	ad pH 5.5

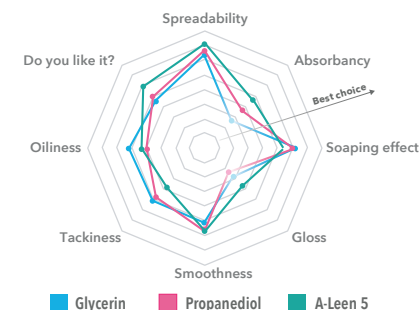
Raw material suppliers:

⁽¹⁾ Jungbunzlauer ⁽²⁾ Minasolve ⁽³⁾ BASF ⁽⁴⁾ Caesar & Loretz ⁽⁵⁾ Sanabio ⁽⁶⁾ BTS

Multifunctional ingredient

Sensory profile

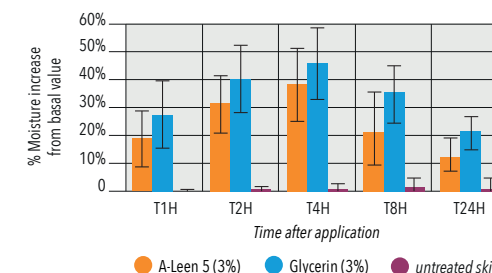
Tested at 3 % in an O/W emulsion, by 23 volunteers



Superior skin conditioning and in-use properties for **A-Leen 5**

Skin Moisturizer

Clinical study over 24 hours - 12 volunteers

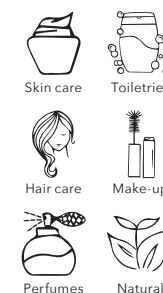


A-Leen 5 has a long-lasting moisturizing effect similar to glycerin

Applications

A-Leen 5 is an easy to handle liquid. It can be added directly to the water phase, but can also be mixed with vegetal oils. For optimum efficacy of preservation, it should be added to emulsions at the post-emulsification stage.

A-Leen 5 can act as a solubilizer and as a solvent for extraction; it also helps to hydrate gelling agents such as Xanthan Gum. In this case early addition is recommended.



HIGH
pH

The given information is accurate to the best of our knowledge. Customers are advised to perform their own studies on the usefulness of any ingredient for a particular application. Any recommended usage information is only provided as indication, and should not be considered as recommendation to violate of any laws, patents, or official regulations dealing with manufacture, composition, local procedures, product design, or end usage.

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BIO-INGREDIENTS FOR YOUR APPLICATIONS

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