



## Specifications and Characteristics

INCI	Pentylene Glycol
CAS REG. N°	5343-92-0
APPEARANCE	clear, 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	<b>derived-natural, 100% renewable carbon</b> Made from non-food part of sugar cane (bagasse)
NATURAL ORIGIN INDEX	<b>1 (ISO 16128)</b>
CHEMICAL STRUCTURE	<chem>HOCH2CH2CH2CH2CH2OH</chem>

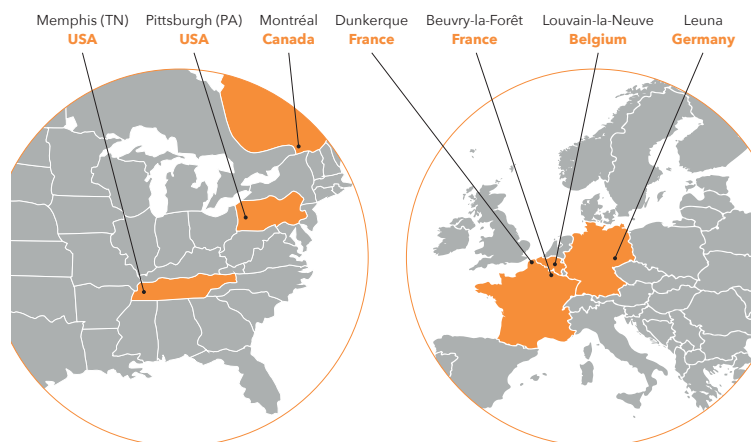


## MINASOLVE® is an affiliate of MINAFIN® Group

Created in 2004, The Minafin® Group is an expert in Health Chemistry, Green Chemistry and Challenging Chemistry. 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, PENNAKEM, PRESSURE CHEMICAL and MINASCENT.

**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**



**300**  
M€ SALES

**1050**  
EMPLOYEES

**150**  
SCIENTISTS

**7**  
PRODUCTION SITES

**MINAFIN®**  
GROUP

2023.12. V8.1

# Aleen 5

FROM BIOMASS TO COSMETIC

## Biosourced odourless Pentylene Glycol

✓ **Emollient**

✓ **Moisturizer**

✓ **Solubilizer**

✓ **Anti-microbial**

✓ **Extraction solvent**



COSMOS  
APPROVED



NATRUE  
APPROVED

**MINASOLVE®**  
BIO-INGREDIENTS FOR YOUR APPLICATIONS

**green  
solving  
attitude.**

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## 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** manufacturing process utilizes a back integrated raw material supply chain ensuring **full traceability** in accordance with the principles of "green chemistry".

### A-Leen 5 is produced as follow :



**A-Leen 5** is made by **upcycling sugar cane bagasse**, a renewable waste byproduct that does not compete with food resources.

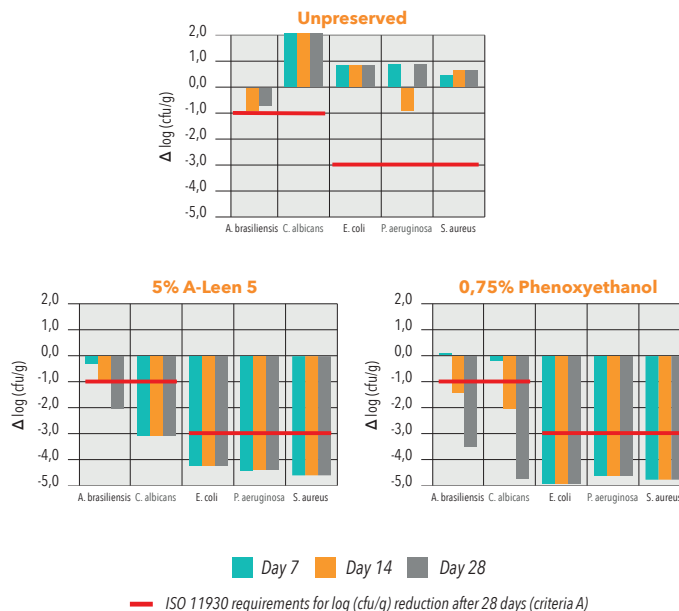
**A-Leen 5** has been recognized as a **Silver Green Ingredient Award** winner during In-Cosmetics Global 2014.

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

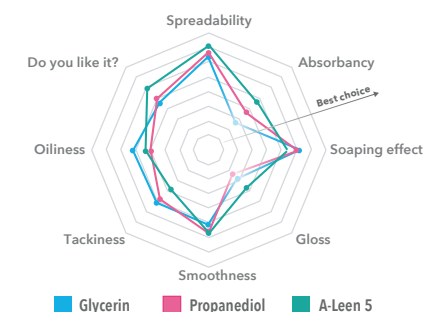
Raw material suppliers:

<sup>(1)</sup> Jungbunzlauer <sup>(2)</sup> Minasolve <sup>(3)</sup> BASF <sup>(4)</sup> Caesar & Loretz <sup>(5)</sup> Sanabio <sup>(6)</sup> BTSa

## Multifunctional ingredient

### Sensory profile

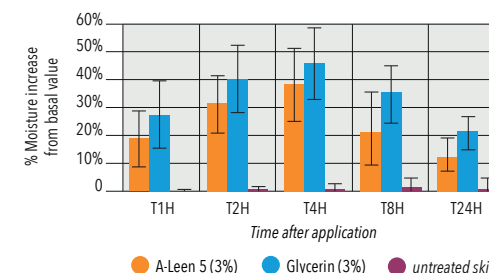
Tested at 3 % in an O/W emulsion, by 23 volunteers



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

### Skin Moisturizer

Corneometry study over 24 hours - 12 volunteers

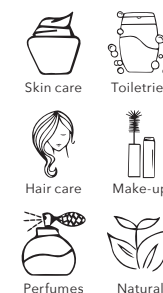


**A-Leen 5** has a long-lasting moisturizing effect similar to glycerin

## 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. Buyers are advised to make their own studies on the usefulness of any product for a particular application or purpose. Recommended usage information is only provided as indication, and should not be considered as recommendations to use the products in violation of any patents, intellectual property rights, laws, or regulations relating, but not limited to, manufacture, composition, product design or end usage.

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BIO-INGREDIENTS FOR YOUR APPLICATIONS

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