

## AMINAT®-G

### PRESERVATIVE AND ACTIVE ANTIMICROBIAL FOR COSMETICS

INCI name: Glycerin and Ethyl Lauroyl Arginate HCl

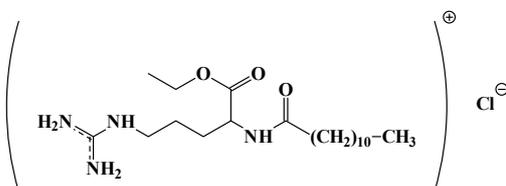
### CHARACTERISTICS

AMINAT®-G is based on a solution of LAE® (Ethyl Lauroyl Arginate HCl) in Glycerin.

AMINAT®-G is a multifunctional product that can be used by personal care formulators as a preservative in creams, lotions, body milks, hair conditioners and as an active compound in soaps, antidandruff shampoos, deodorants and oral care. Additionally, it can provide smoothness to skin and hair because of its cationic nature.

AMINAT®-G can be used in formulations certified ECOCERT, COSMOS and NATRUE. LAE® is a unique antimicrobial active ingredient with cationic surfactant properties derived from natural occurring substances, L-arginine and lauric acid. LAE® is a molecule developed and synthesized by Lamirsa Group.

Chemical structure of LAE®:



CAS number: 60372 - 77 - 2

### TECHNICAL DATA

#### Physical-chemical properties

Appearance	Transparent to slightly opalescent liquid
pH (1% in de-ionized water at 20°C / 68°F)	4 ± 1
Viscosity at 20°C (68°F) (Brookfield RV, sp n°4, 20 rpm)	4000-6500 mPa·s
Density at 20°C (68°F)	1.22 ± 0.02 g/ml
Solubility	Soluble in water and ethanol

## APPLICATIONS

### Preservative in hair and skin care products

Microbiological studies have shown that AMINAT®-G is an effective preservative in concentrations of 0.25-1% in all kinds of formulations without a large amount of anionic raw materials.

Type of formulation	Recommended dosage
Sunscreens	0.5-1%
Body milks	0.5-1%
Make-up removing milks and liquids	0.75-1%
Facial products	0.5-1%
Shampoos	0.25-0.75%
Hair conditioners	0.25-0.75%
Wet wipes	0.5-1%

Due to its cationic surfactant properties, LAE® provides additional smoothness to hair and skin and improves the skin natural defense against pathogens, besides an excellent formula preservation.

### Active ingredient in dermopurifying and deodorant applications

AMINAT®-G has shown an extraordinary activity against *Propionibacterium acnes* that plays a fundamental role in causing acne. In the same way, AMINAT®-G may be employed in non-spray deodorant formulations showing an excellent activity against odour-causing microorganisms, such as *C. Xerosis* and *S. epidermidis*.

Recommended dosage: from 0.5% to 4% of AMINAT®-G.

### Active ingredient in antidandruff formulations

AMINAT®-G can be used as an active ingredient in antidandruff shampoos and conditioners. *In vivo* tests demonstrate excellent activity, and AMINAT®-G could be a “green” substitute of zinc pyrithione.

Recommended dosage: from 1% to 4% of AMINAT®-G.

### Active ingredient in oral care products

AMINAT®-G is a very effective antibacterial in toothpaste and mouthwashes. It shows a remarkable anti-attachment effect for microbes on the tooth surface. The antimicrobial effect of LAE® is comparable to that of traditional preservatives such as chlorhexidine digluconate and triclosan.

Recommended dosage: from 0.75% up to 3.75% of AMINAT®-G (EU: only in mouthwashes up to 0.75% not to be used for children under 10 years of age).

AMINAT®-G is easy to incorporate into personal care formulations as it is a liquid. It may be added in the emulsion at any stage of the manufacturing process, in the aqueous phase, in the oil phase, during emulsification or after cooling.

AMINAT®-G can lose activity in systems with a high content of anionic surfactants or anionic thickeners such as carboxymethyl cellulose, xanthan gum, bentonite or carbomer. In formulations with a large amount of anionic raw materials it is recommended to use preservative-boosters like Na<sub>2</sub>EDTA and  $\delta$ -gluconolactone.

Specific maximum doses allowed for each particular application depending on countries are available upon request.

### ADVANTAGES

AMINAT®-G has a broad spectrum of antimicrobial activity covering bacteria, moulds and yeasts. The activity of AMINAT®-G is not pH dependent. MIC values for different microorganisms are available upon request.

LAE® combines a high antimicrobial efficacy with low toxicity, non-sensitizing and non-skin irritating features. Additionally, the molecule is rapidly metabolised in the human body by chemical and metabolic pathways, breaking the molecule into natural compounds which are common in the human diet. Therefore, LAE® offers an excellent toxicity profile which is confirmed by its approval as food preservative.

### PACKAGING

AMINAT®-G is available in 5, 25 and 1000 kg packaging.

### STORAGE AND SHELF LIFE

Store between 4-30°C (39-86°F). Avoid temperatures above 30°C (86°F). Keep containers tightly closed in a dry, cool place, protected from exposure to direct sunlight. Under such conditions, the shelf life of the product is 18 months.

The information contained in this bulletin cannot be taken as a basis of guarantee or liability. VEDEQSA is not responsible for the inappropriate use of this product. Technical data review: 14/06/2018.

