

AMINAT[®]-G

PRESERVATIVE AND ACTIVE ANTIMICROBIAL FOR COSMETICS

INCI Name: Glycerin and Ethyl Lauroyl Arginate HCl

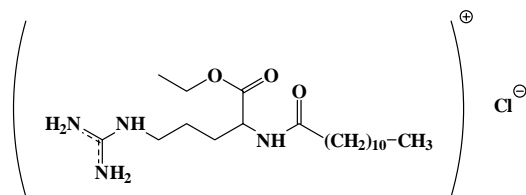
PRODUCT DESCRIPTION

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 and deodorants. Additionally, it can provide smoothness to skin and hair because of its cationic nature.

AMINAT-G is based on a 20% solution of N^α-Lauroyl-L-arginine ethyl ester monohydrochloride, hereinafter LAE[®], in glycerin. LAE[®] is a unique antimicrobial active ingredient with cationic surfactant properties derived from natural occurring substances, L-arginine and lauric acid.

Active ingredient: N^α-lauroyl-L-arginine, ethyl ester monohydrochloride (LAE[®]).

Chemical structure:



CAS number: 60372 - 77 - 2

AMINAT-G can be used in ECOCERT certified formulations, due to the natural sources of both LAE[®] and glycerin.

Appearance	Transparent to slightly opalescent liquid.
LAE [®] content	20.0 % ± 0.5%
pH at 20 °C (68°F) 1% solution	4 ± 1
Viscosity at 20°C (68°F) (Brookfield RV, sp n ^o 4, 20 rpm)	4000-6500 cps
Density at 20°C (68°F)	1.22 ± 0.02 g/cm ³
Solubility	Soluble in water and totally soluble in ethanol
pH stability	Stable between 3.0-7.0

Technical data provide further information about the product and are not subject to constant monitoring. Therefore, they are not binding.

SPECTRUM OF ACTIVITY

AMINAT-G has a broad spectrum of antimicrobial activity covering bacteria, moulds and yeasts, as shown Table I. The activity of **AMINAT-G** is not pH dependant. Additional MIC values for other microorganisms are available upon request.

Table I.

Gram + Bacteria	MIC* ppm
<i>Bacillus subtilis</i> ATCC 6633	16
<i>Staphylococcus aureus</i> ATCC 6538	16
<i>Micrococcus luteus</i> ATCC 9631	64
<i>Corynebacterium xerosis</i> CECT 4160	16
<i>Propionibacterium acnes</i> ATCC 11827	16
<i>Staphylococcus epidermis</i> ATCC 1798	16
<i>Streptococcus mutans</i> ATCC 25175	64

Gram - Bacteria	MIC* ppm
<i>Citrobacter freundii</i> ATCC 22636	256
<i>Enterobacter aerogenes</i> ATCC 13048	256
<i>Enterobacter faecalis</i> ATCC 27285	8
<i>Chronobacter sakazakii</i> ATCC 29544	160
<i>Escherichia coli</i> ATCC 8739	256
<i>Klebsiella pneumoniae</i> var <i>pneumoniae</i> ATCC 4352	128
<i>Proteus mirabilis</i> CECT 170	256
<i>Pseudomonas fluorescens</i> ATCC 13413	80
<i>Pseudomonas aeruginosa</i> ATCC 9027	256
<i>Serratia marcescens</i> ATCC 10759	256

Moulds/yeasts	MIC* ppm
<i>Aspergillus niger</i> ATCC 14604	128
<i>Aureobasidium pullulans</i> ATCC 9348	128
<i>Gliocladium virens</i> ATCC 4645	256
<i>Chaetomium globosum</i> ATCC 6205	16
<i>Penicillium chrysogenum</i> ATCC 9480	256
<i>Penicillium funiculosum</i> CECT 2914	64
<i>Candida albicans</i> ATCC 10231	32
<i>Rhodotorula rubra</i> CECT 1158	64
<i>Malassezia furfur</i> ATCC 14521	64
<i>Trycophyton mentagrophytes</i> ATCC 18748	128

* MIC: Minimum Inhibitory Concentration. Expressed as **AMINAT-G** concentration (20% active ingredient).

FORMULATION

AMINAT-G is easy to incorporate into personal care formulations as it is a liquid, which is soluble in water, solvents such as ethanol, benzyl alcohol or phenoxyethanol, or in fats and oils, thanks to its surfactant nature. This ingredient can be added into emulsions at any stage of the manufacturing process, added into the water phase, the oily phase, during the emulsification process or after cooling down.

AMINAT-G might lose activity in systems with high content of anionic surfactants or anionic thickeners, such as Carboxymethylcellulose, Xanthan Gum, Bentonite or Carbomer.

MAJOR POTENTIAL APPLICATIONS

- Preservative for skin care products.
- Active ingredient for antiseptic hand wash products.
- Active ingredient for non-spray deodorants and antiperspirants.
- Active ingredient for antidandruff hair care formulations.
- Active ingredient in oral care (mouthwash and toothpaste).*

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.

* Not authorised in the European Union at present moment

PACKAGING

AMINAT-G is available in 5 or 25 kg drums.

STORAGE AND SHELF LIFE

Keep containers tightly closed when not in use. Store in a dry cool place and avoid temperatures below 4°C (39°F) and above 30°C (86°F).

Under above mentioned conditions, shelf life of the product is of 18 months.

Safety Data Sheet can be supplied if required.

The information contained in this document cannot be taken as basis for guarantee or liability.

Technical data review: 18/10/2010