

SSE ESAFLOR® EC 3

Chemical description

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Cationic guar gum

INCI name

Guar Hydroxypropyltrimonium Chloride

CAS number

65497-29-2

EINECS/ELINCS number

Not applicable (polymer)

Main use

ESAFLOR® EC 3 is a cationic polymer obtained by quaternisation of guar gum, specifically designed for cosmetics and personal care applications.

Typical values

Appearance at 20°C:	powder
Colour:	light yellow
pH (1% aqueous dispersion):	9-11
Viscosity (cPs): (1% solution, Brookfield RVT, 20 °C, 20 after 2h)	3000-4500 O rpm, at pH 6,
Moisture:	10% max
Cationic substitution:	standard
Nitrogen content (%):	1.3-1.7
Total microbial count (CFU/g):	500 max

Product properties

ESAFLOR® EC 3 is a boron cross-linked cationic guar derivative that provides dual benefits of conditioning and thickening. The high molecular weight fully water soluble structure creates viscosity both in aqueous and surfactant based solutions. The cationic charge of ESAFLOR® EC 3 interacts with keratin providing a conditioning effect on hair and skin and reducing the negative effects of soaps and surfactants.

Though cationic, ESAFLOR® EC 3 is compatible with most anionic and amphoteric surfactants.

ESAFLOR® EC 3 is soluble in water at room temperature (pH adjusted to 5.5-6.0), partially soluble in aqueous methanol or ethanol solutions and insoluble in paraffin oil, petroleum ether, chloroform and ethyl ether.

ESAFLOR® EC 3 has been assessed as compliant to the standard COSMOS (use in hair products only).

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Applications

ESAFLOR® EC 3 can be used in a wide variety in hair and skin care applications:

- Shampoos and conditioners: used as conditioning agent in 2-in-1 formulations at 0.2-0.5 %, it conveys excellent detangling properties and enhanced hair feel.
- \bullet Shaving gels and foams: it improves foam stability and the lubrication of creams at inclusion levels above 0.25 %
- Cream rinses: it gives good conditioning effects at concentrations of 0.5 2 %; at 0.25 % a good silky effect is obtained.
- Liquid soaps and body washes: it conveys a soft, luxurious afterfeel.

ESAFLOR® EC 3 shows a good dispersibility in water. Add ESAFLOR® EC 3 to well-agitated water at room temperature and mix until dispersed. Viscosity develops when pH is adjusted to ~5.5 or less. Continue stirring for 15-20 minutes to ensure complete hydration of the polymer, then add the remaining ingredients. To avoid any possible incompatibility between cationic guar derivatives and the surfactant system, the following order of addition is recommended: add ESAFLOR® EC 3 into water; adjust pH to ~5.5; add amphoteric or nonionic surfactants and, once homogeneous, add anionic surfactants; add the remaining ingredients of the formulation

Storage and handling

ESAFLOR® EC 3 should be stored in the originally sealed containers. In order to maintain the performance of the product, store in a cool and dry place.

Shelf life: 24 months

<u>Packaging</u>

25 kg net weight paper bags. Alternative package sizes may be available upon request.

Material safety

Product safety data and handling information can be found on the relevant Safety Data Sheet, which is available upon request. It is recommended that the Safety Data Sheets are examined before using the product.

This information and our technical recommendations, if any, both verbal and in writing, are given to the best of our knowledge, without any express or implied warranty, e.g., regarding their fitness for a specific purpose. Each user of our products is the sole responsible for assessing and ensuring compliance with all legal regulations including intellectual property laws and necessary certifications and authorizations with respect to the user, combination and processing of our products. Our technical recommendations do not release the user from the obligation to check its validity and to test our products as to their suitability and fitness for the intended processes and uses. The application, use and processing of both our products and the products manufactured by the user (on the basis of our technical recommendations, if any) are beyond our control and, therefore, the user is the sole responsible for them. Detailed information and instructions on handling the products and cautions to be observed in the use of them are available in our relevant Safety Data Sheet.



Regulatory information

The Technical Data Sheet is not a official declaration of compliance nor specification. Any specific information has to be released separately and nominally to each customer upon request.