



Esaflo[®] ZERO-XB

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

ESAFLO[®] ZERO-XB is a cationic polymer obtained by quaternisation of guar gum, specifically designed for personal care applications.

Typical values

Appearance at 20 °C:	powder
Colour:	slight yellow
pH (1% aqueous dispersion):	9-11
Viscosity (cPs): (1% solution, Brookfield RVT, 20 °C, 20 rpm, after 2h)	1000-3000
Moisture:	12% max
Cationic Substitution:	standard
Total microbial count (CFU/g):	500 max

Product properties

ESAFLO[®] ZERO-XB is cationic conditioner, produced through ESAFLO[®] ZERO-X technology, a patented and sustainable process that allows saving water, reducing CO₂ emission, energy and raw material consumption at the same time.

ESAFLO[®] ZERO-XB 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 ESAFLO[®] ZERO-XB interacts with keratin providing a conditioning effect on hair and skin.

Though cationic, ESAFLO[®] ZERO-XB is compatible with most anionic and amphoteric surfactants.

ESAFLO[®] ZERO-XB is soluble in water at room temperature, partially soluble in aqueous methanol or ethanol solutions and insoluble in paraffin oil, petroleum ether, chloroform and ethyl ether.

Applications

ESAFLO[®] ZERO-XB 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 0.1-0.3%, it conveys excellent detangling properties and enhanced hair feel.
- 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. It can help in reducing negative effects generally linked to harsh soaps and surfactants. ESAFLO[®] ZERO-XB is easy to use: add ESAFLO[®] ZERO-XB to well-agitated water at room temperature and mix until dispersed. Viscosity develops when pH is adjusted to ~6 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 ESAFLO[®] ZERO-XB into water; adjust pH to ~6; add amphoteric or non-ionic surfactants and, once homogeneous, add anionic surfactants; add the remaining ingredients of the formulation.

Storage and handling

ESAFLO[®] ZERO-XB 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

Packaging

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.

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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.