



Kem Diol

INCI name: *Phenoxyethanol,
Caprylyl glycol*

Appearance: Clear colourless liquid

Description

Kem Diol is a liquid preservative system based on the widely accepted cosmetic preservative Phenoxyethanol and Caprylyl glycol, a multifunctional ingredient with humectant, wetting agent, viscosity regulator and antimicrobial properties.

This optimized combination provides broad spectrum protection against bacteria, yeasts and moulds to a variety of cosmetics without pH restrictions.

Due to the increasing concerns with conventional preservatives in recent years, there is a growing need of alternative in cosmetic preservation. Kem Diol represents a versatile system without controversial ingredients, which meets the more stringent demands of today's market for safety, efficacy and global approval.

Antimicrobial activity

Kem Diol is a broad spectrum preservative blend in which the antimicrobial activity of Phenoxyethanol is enhanced by the boosting effect of Caprylyl glycol.

Caprylyl glycol is a C8 linear diol that increase the effectiveness of Phenoxyethanol as favours the penetration into the microbial cell and reduces the amount of preservative needed. The overall process destabilize the cell membrane and destroy microorganisms. Therefore Caprylyl glycol boosts the performance of Phenoxyethanol and help to decrease the amount of preservative needed improving the preservation safety.

Properties and stability

Kem Diol is very soluble in alcohol, glycerin and glycols, soluble in water to approx. 1% and slightly soluble in oils.

With a low odour profile, it is stable and active in the pH range 3-8 and well compatible with cosmetic raw materials. May tolerate working temperature up to 80°C.

Applications

Kem Diol is used for the preservation of a variety of aqueous systems, emulsions and anhydrous systems and improve the skin feel of cosmetics. Typical applications include:

- *Hair care:* shampoos, gels, lotions, conditioners, mousses.
- *Face and body care:* lotions, creams, serums, oils, sticks, wipes.
- *Make-up:* foundations, mascaras, sticks, powders, wipes.
- *Sun products:* sunscreens, suntans, aftersuns.
- *Bath products:* shower gels, bubble baths, handcleaners, intimate, wipes.
- *Baby care:* shampoos, bath products, lotions, creams, pastes, oils, powders, wipes.
- *Raw materials:* surfactants, vegetal extracts.

Use levels

Kem Diol can be used at 0.5-1.5%, alone or to reduce the amount of traditional preservatives

Regulatory approval

The components of Kem Diol have excellent safety/toxicological profiles and are worldwide approved, the blend is permitted in *EU*, *USA* and *Japan* up to 1.78% in all personal care categories without restrictions.

Technical support

Our microbiological laboratory supports the selection of the most adequate preservation. Challenge testing is offered to determine the optimal level of preservative in customer's formulations.

For further information, documentation and sample please contact us.