



Kem Diol S

INCI name: *Phenoxyethanol,
Caprylyl glycol,
Sorbic acid*

Appearance: Clear colourless to pale yellow liquid

Description

Kem Diol S is a liquid preservative system based on the widely accepted cosmetic preservatives phenoxyethanol & sorbic acid, boosted by the multifunctional ingredient caprylyl glycol.

This combination provides broad spectrum protection with enhanced activity against fungi to a variety of cosmetics with pH 3-6. The presence of caprylyl glycol adds emollient properties, improves the tolerability on skin and enhances the sensoriality of formulations.

This combination represents a gentle alternative with proved efficacy in cosmetic preservation, allowing formulations with a reduced content of traditional preservatives.

Kem Diol S represents a versatile efficient preservative system that meets the most stringent demands of the modern cosmetic market for safety, efficacy and global acceptance.

Antimicrobial activity

Kem Diol S is a broad spectrum preservative blend in which the antibacterial activity of phenoxyethanol and the antifungal effect of sorbic acid is enhanced by caprylyl glycol.

Caprylyl glycol is a C8 linear diol that increases the action of preservatives as promotes their penetration into the microbial cell, destabilizes the cell membrane destroying the microorganisms. Therefore caprylyl glycol boosts the performance of phenoxyethanol & sorbic acid, reduces the amount of preservative needed improving the safety of preservation.

Properties and stability

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

With mild colour & odour, it is stable and active in the pH range 3-6 and well compatible with cosmetic raw materials. May tolerate short working temperature up to 80°C.

Applications

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

- *Hair care:* shampoos, gels, lotions, conditioners, mousse, colourants.
- *Face & eye care:* serums, tonics, gels, lotions, creams, cleansers, masks, wipes.
- *Make-up:* foundations, eyeshadows, eyeliners, mascaras, lipsticks, lip glosses, powders, wipes.
- *Body, foot & hand care:* gels, lotions, creams, exfoliants, oils, wipes.
- *Shaving products:* shaving creams, aftershave, lotions, creams.
- *Sun care:* sunscreens, suntans, aftersuns, gels, milks, creams, oils, sprays, roll ons.
- *Bath products:* shower gels, bubble baths, handcleaners, intimate, oils, powders, wipes.
- *Baby care:* shampoos, bath products, lotions, creams, pastes, oils, powders, wipes.
- *Raw materials:* surfactants, aqueous active ingredients.

Use levels

Kem Diol S can be used at 0.5-1.2% with no additional preservatives.



Regulatory approval

The components of *Kem Diol S* have excellent safety & toxicological profiles, are largely used and globally approved in cosmetics. The blend is permitted in *EU, USA, Latin America, Japan, China & ASEAN* countries and up to 1.83% in all personal care categories without restrictions.

Technical support

Our microbiological laboratory supports the selection of the most adequate preservation. Challenge tests can be offered to determine the optimal level of preservative in customer's formulations. For further information, documentation and sample please contact us.

Highlights

- ✓ Broad spectrum preservation with high efficacy against fungi.
- ✓ Based on largely used and non-questioned ingredients.
- ✓ Reduced content of traditional preservatives.
- ✓ Efficient preservation based on preservative booster.
- ✓ Gentle on skin with emollient effect.
- ✓ Mild colour & nearby odourless liquid.
- ✓ Versatile system for many cosmetic applications.
- ✓ Globally approved with no restrictions.