

BULLETIN VC-842

Optiphen™ HD

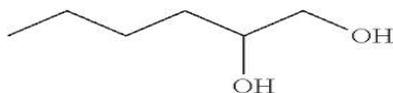
Preservative Booster for the Cosmetics Industry

Product Description

Optiphen HD preservative booster is a global multifunctional additive. The 1,2-Alkanediol can be combined with very low doses of preservatives to effectively preserve personal care formulations acting as preservative potentiator.

When used with other cosmetic ingredients it may work as an antimicrobial stabilizer. Based on 1,2-Hexanediol it can be used in a variety of cosmetic formulations. Optiphen HD is well known and liked in personal care applications due to its balanced way of boosting preservative activity and imparting emolliency while being active over a wide pH range (2-10). Optiphen HD is considered a very effective humectant.

Formula



Suggested Applications

Rinse-off-Cosmetics	Optiphen HD preservative booster is applicable for use in a variety of rinse off personal care preparations such as shampoos, conditioners etc.
Care-Products	Optiphen HD preservative booster is well suited for high quality care-cosmetics like creams, emulsions, lotions, wet wipes and gels. Due to its excellent dispensability Optiphen HD preservative can be used in O/W-emulsions as well as in W/O-emulsions.

Dosage and Processing

Optiphen HD preservative booster should be used in cosmetic products at concentrations from 0.5 to 3%. For the determination of the optimum dosage we recommend a preservation test, as the efficacy is highly influenced by the product-matrix. The staff of Ashland's microbiological laboratories will be pleased to give customers the appropriate support.

Optiphen HD preservative booster can be added at any phase of production. In emulsions diols should be added at the post-emulsification stage, to enhance their availability at the water/oil interface. Usually, no effect on colour or smell can be observed. Heating processes up to 80°C are tolerated well.

Optiphen HD usually has no impact on emulsion stability or gel structures in case of formulation issues contact Ashland's care team for further assistance.

Product Properties

Microbiological Profile

Optiphen HD preservative booster significantly increases the antimicrobial activity of preservatives, but normally it has little or no activity when used alone. It facilitates the penetration of the preservative into the microorganisms' cell membrane. In general diols are watersoluble as long as they have 6 or less carbons chain length, (**Optiphen HD** preservative booster). Their boosting activity peaks around 8 carbon chain length (**Optiphen OD** preservative booster).

Technical Data

Appearance:	colorless to pale yellow liquid
Odour:	characteristic, mild
pH-Value:	not applicable
Solubility:	At usual dosages no dispensability problems are to be expected in water based systems while using Optiphen™ HD preservative booster. Very good solubility in cosmetic solvents (e.g. Ceraphyl-types) can be observed. Further data can be submitted on request.

Stability

Optiphen HD preservative booster can be worked into finished products at temperatures between 10 °C and 80°C. pH-tolerance is given for acidic to alkaline environment (pH 2-10).

Labelling

For information regarding labelling of products and the Risk and Safety phrases or Hazard and Precautionary Statements of Optiphen HD preservative booster please seek specific advice from Ashland or refer to the separate Safety Data Sheet (SDS).

Storage

Storage is recommended in tightly closed original-containers at temperatures between 8°C and 25°C.

INCI-Nomenclature

6920-22-5 1,2-Hexanediol

Regulatory requirements governing the use, registration, and approval of preservatives around the world are continually changing and evolving.

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