

BULLETIN VC-872A (Supersedes VC-872)

Optiphen™ DP preservative

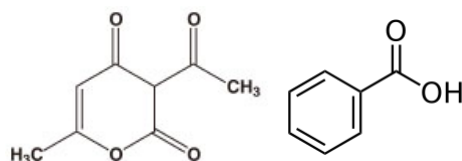
Preservative for the Cosmetics Industry

Product Description

Demand for preservatives without alcohol, paraben, isothiazolones halogens and formaldehyde, particularly within lower pH systems, is increasing. Cost-efficient progressive preservatives that represent an alternative to traditional preservative systems and follow natural ingredient trends are frequently requested. Ashland now offers **Optiphen P technology platform** to address these demands.

Optiphen DP preservative is the first preservative launched in this family. It provides comprehensive antimicrobial protection in aqueous and emulsion-type personal care formulations and incorporates an optimized delivery system to maximize the actives efficacy usually without interfering or destabilizing cosmetic formulations, such as emulsions. The preservative can be used in cosmetic formulations conforming to ecolabels such as Bra Miljöval (Good environmental choice), Nordic Ecolabelling (Swan) and EU Ecolabel (Flower) 2014/893/EC.

Formula of actives



Dehydroacetic acid (and) Benzoic acid

Suggested Applications

Rinse-off-Cosmetics	Optiphen DP preservative has proven to be an effective preserving system for rinse-off-products like shampoos, shower-gels, foam-baths and more. These products generally have a slightly acidic pH, which is a necessary condition for a safe use, as explained above.
Care-Products	Optiphen DP preservative is well suited for high-quality care-cosmetics like creams, emulsions, lotions and gels, if they conform to the necessary pH-conditions. Optiphen DP preservative can be used in O/W-emulsions as well as in W/O-emulsions.
Wet- Wipes	Ashland also recommends Optiphen DP preservative for use in wet wipe-systems. It is important to control the acidic pH-value after the wipe is produced. This helps to eliminate any possible influence of the base sheet.

Dosage and Processing

Optiphen DP preservative can be added at any phase of production when worked into products at ambient temperature. Short-termheating processes during the production process of up to 80°C will usually be tolerated well. In non-emulsion systems, due to the limited water solubility, premixing with the glycolic or emulsifier phase of the product is recommended. Apply intensive stirring especially in aqueous products with low contents of emulsifiers, to achieve a uniform dispersal of the active ingredients. Optiphen DP preservative should be used in cosmetic products at concentrations in the range 0.3% to 2.0%.

Lower pH provides better the performance due to the contained organic acids. A pH of 6.0 should not be exceeded or additional booster components like chelators or Optiphen™ OD preservative booster should be added.

For the determination of the optimum dosage we recommend a preservation test, as the efficacy of this preservative is highly influenced by the product matrix. Ashland's microbiological laboratory team is available to provide customers with the appropriate support required.

Product Properties

Microbiological Profile

The combination of actives in Optiphen™ DP preservative predominantly shows a microbiostatic spectrum of activity against gram-positive and gram-negative bacteria. However, at the usual use-levels growth of fungi and yeast will be inhibited as well.

Technical Data

Appearance:	yellow solution
Odor:	characteristic
pH-Value:	not applicable, glycol-based solution
Density:	1.186 - 1.211 g/ml
Solubility:	no dispensability problems are to be expected in cosmetic products while using Optiphen DP preservative at usual dosages.

Stability

Optiphen DP preservative can be worked into finished products at temperatures between 10°C and 80°C. pH-tolerance is given for acidic environment and is also required for good effectiveness. Strong oxidizing agents, strong acids and alkalis lead to decomposition of the active ingredients.

Storage

Storage is recommended in tightly closed original-containers at temperatures between 5°C and 25°C.

INCI-Nomenclature

108-32-7	Propylene Carbonate
65-85-0	Benzoic Acid
520-45-6	Dehydroacetic Acid
504-63-2	Propanediol

Details regarding handling, toxicity and labelling are available in the Safety Data Sheet (SDS).

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

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Rev 3-2016

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