

BULLETIN VC-877

Liquid Germall™ Plus

Preservative for the Cosmetics Industry

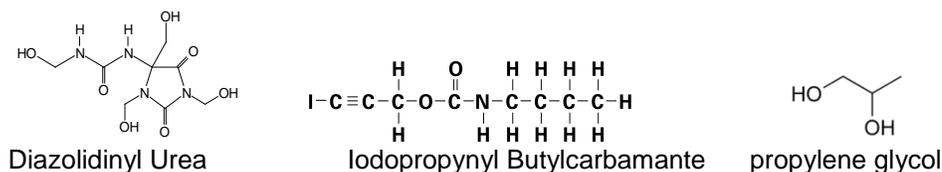
Product Description

Liquid Germall Plus preservative is a patented synergistic combination of Germall II preservative (Diazolidinyl Urea) and Iodopropynyl Butylcarbamate (IPBC) in propylene glycol. Liquid Germall Plus is highly effective, broad spectrum preservative for emulsions and aqueous formulations. The synergism between Diazolidinyl urea and IPBC reduced the total active preservative level necessary for complete, broad-spectrum preservation.

Liquid Germall Plus has no known chemical inactivators, is compatible with virtually all cosmetic ingredients including complex ingredients such as proteins and surfactants. As a result, Liquid Germall Plus can be incorporated into a variety of leave-on and rinse-off cosmetic and personal care formulations for broad preservation.

Liquid Germall Plus preservative provides effective and reliable antimicrobial preservation for even the most complex formulations over a broad pH range of 3 – 8.

Formula



Suggested Applications

Liquid Germall plus minimizes the preservative content in many formulations and can effectively preserve cationic, anionic and nonionic water soluble formulations, as well as water-in-oil and oil-in water emulsions for both leave-on and rinse off applications. Its broad antimicrobial activity makes it also a very good choice for wetwipe systems.

Dosage and Processing

Liquid Germall Plus preservative has been found to preserve cosmetic and personal care formulations at levels as low as 0.06%. Recommended use levels range from 0.1% - 0.5%. For complex formulations a higher level of Liquid Germall Plus is recommended for proper preservation.

Liquid Germall Plus should be added to the water phase or to the emulsified portion of the formulation at a temperature of ≤50 °C, during the cool down stage of processing, it should be easy to incorporate into formulations.

Product Properties

Microbiological Profile

The components of Liquid Germall Plus preservative exhibit a synergistic preservative effect. This synergism makes Liquid Germall Plus a highly effective, broad spectrum preservative at low use levels. It inhibits the growth of Gram-negative, Gram positive bacteria, yeast and molds, and troublesome house organisms. In general no additional preservatives are needed to be added to the final formulation, reducing the total amount of preservatives necessary for proper preservation.

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. The staff of Ashland's microbiological laboratories will be pleased to give customers the appropriate support.

Technical Data	Appearance:	Clear liquid
	Odour:	characteristic, mild
	Color (APHA)	50 maximum
	Specific Gravity	1.15 – 1.25
	Solubility (g/100 g solvent):	Miscible in water; methanol < 0.1g; ethanol <0.1g; propylene glycol miscible; butylenes glycol 0.3g; glycerine Miscible

Regulatory Profile: IPBC

USA: Approved in all applications with the exception of aerosols.

Europe: For rinse-off products, a maximum of 0.02% is allowed. For leave-on products a maximum of 0.01% is allowed, except in deodorants/antiperspirants where the maximum is 0.0075%. Not allowed for use in body lotions and body creams. Not allowed for use in oral hygiene and lip care products. Not to be used in children <3 years except in bath products/shower gels and shampoos. If used in products other than bath products, shower gels, or shampoos, the following warning is required on the package: Not to be used for children under three years of age.

Japan: IPBC is approved at 0.02% in all cosmetics. Not to be used in aerosol products.

Maximum recommended use level of 0.5% Liquid Germall Plus in a finished formulation results in 0.002% IPBC concentration.

Storage

Liquid Germall Plus is a clear viscous liquid it should be stored in its sealed, original container in a cool, dry location.

INCI-Nomenclature

57-55-6	Propylene Glycol
78491-02-8	Diazolidinyl Urea
55406-53-6	Iodopropynyl Butylcarbamate

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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