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## Liquid Germall® Plus

**INCI: Propylene Glycol (and) Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate**

### DESCRIPTION

Liquid Germall Plus is a patented combination of 39.60% Diazolidinyl Urea (DU), 0.40% Iodopropynyl Butylcarbamate (IPBC) and 60% Propylene Glycol. It is a broad spectrum, non-paraben antimicrobial with enhanced efficacy at low levels. It is effective against Gram-negative and Gram-positive bacteria, yeasts, and molds. It is compatible with virtually all cosmetic ingredients, including proteins and surfactants. It is approved for use in both leave-on and rinse-off applications. Liquid Germall Plus should not be used in oral, lipcare, or aerosolized products. Ready-to-use in emulsions and solutions; recommended use level range is 0.1% - 0.5%.

### HANDLING AND STORAGE

Germall Plus is a clear viscous liquid with a characteristically mild odor. It should be stored in its original airtight container in a cool, dry location. **Please refer to the Material Safety Data Sheet (MSDS) and follow all safety precautions when handling this product.** Keep this and all preservatives out of reach of children.

### FORMULATING WITH LIQUID GERMALL PLUS

Liquid Germall Plus is heat sensitive and should be added to the water phase or to the emulsified portion of the formulation at a temperature of 122°F (50°C) or below, during the cool down stage. Adding Liquid Germall Plus above 122°F (50°C) could result in compromising the preservative system in your product.

Liquid Germall Plus is effective over a broad pH range from 3-8. It is soluble in cationic, anionic and nonionic water-soluble formulations, as well as in the emulsified portion of water-in-oil or oil-in-water emulsions.

Liquid Germall Plus has been found effective at use levels between 0.1% – 0.5%. However, every cosmetic formulation should have a preservative system custom made to match its needs and should be tested to ensure proper preservation.

### TOXICOLOGY DATA & REGULATORY INFORMATION

One of the components in the blend, Iodopropynyl Butylcarbamate, (IPBC) is readily absorbed by the skin and it should not be used in oral and lipcare products. There are also inhalation issues with IPBC, a component of Liquid Germall Plus and thus, it should not be used in products intended to be aerosolized.

Excerpt from the US Cosmetic Ingredient Review (CIR) 1998 Study concluded IPBC was Safe with Qualifications:

*"Final Report on the Safety Assessment of Iodopropynyl Butylcarbamate (IPBC) In this study the Expert Panel concluded that IPBC is safe as a cosmetic ingredient at concentrations <0.1%, but that it should not be used in products intended to be aerosolized."*

Excerpt from the EU's Cosmetic Directive based on the Scientific Committee on Cosmetic Products and Non-food Products (SCCNFP) opinion on IPBC dated 29 February 2000:

*"Whereas:*

*In the concentrations in which it is normally used as a preservative in cosmetic products, 3-iodo-2-propynyl butylcarbamate is not likely to have harmful effects on human health. Therefore, it should be removed from the list in Part 2 of Annex VI and entered in the list in Part 1 of Annex VI.*

*Substance: 3-Iodo-2-propynylbutylcarbamate*

*Maximum authorized concentration: 0.05 %*

*Limitations and requirements:*

- 1. Not to be used for oral hygiene and lipcare products*
- 2. If the concentration in products intended to remain on the skin exceeds 0,02 % add the phrase: Contains iodine*

*Conditions of use and warnings which must be printed on the label:*

*Contains iodine*

*"The SCCNFP is of the opinion that 3-Iodo-2-propynyl-butylcarbamate (IPBC) is safe for use in cosmetic products as a preservative at a maximum concentration of 0.05 %. The SCCNFP proposes the following further restrictions or conditions for its use in cosmetic products: the substance should not be used in oral hygiene and lip products. Leave-on products, containing more than 0.02 % of 3-Iodo-2-propynyl-butylcarbamate (IPBC), must be labelled 'Contains Iodine'."*

As a frame of reference, Liquid Germall Plus contains:

60% Propylene Glycol  
39.6% Diazolidinyl Urea  
0.4% Iodopropynyl Butylcarbamate  
100% Total

Used at the maximum recommended usage rate of 0.5% in your formulation, Liquid Germall Plus would contribute:

0.3% Propylene Glycol  
0.198% Diazolidinyl Urea  
0.002% Iodopropynyl Butylcarbamate  
0.5% Total

**LIMITED WARRANTY – PLEASE READ CAREFULLY**

The information contained herein is offered in good faith based on Lotioncrafter's research and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information shall not be used in substitution for customers' tests to insure that Lotioncrafter's products are fully satisfactory for your specific applications. Our warranty is that the product will meet its current sales specifications. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.