

## BIOPOLYSAN<sup>®</sup> 120

### Plant Derived Multifunctional Preservative for Cosmetic Products

#### Benefits:

- Formulated with natural coconut or palm kernel oil derived esters
- Antimicrobial** properties - C12 lauric esters
  - Excellent inhibition against Gram-positive bacteria and some fungi
  - Effectiveness against Gram-negative bacteria varies on product and concentration - synergistic with most organic acids and alcohols
- A skin conditioning emollient and humectant with **luxurious skin feel, no after tackiness and very low odor**
- Excellent solvent or carrier for fragrances or active ingredients - other botanicals, essential oils, other actives
- Water-soluble** medium chain fatty acid esters - cold process capable
- Non-volatile

**For Formulators**, its **patented** liquid crystal delivery system<sup>1</sup> provides lauric esters - which are the otherwise insoluble ingredients of coconut or palm kernel oil - in an easy, ready to use, water soluble form. These esters, in nature, protect everything from the coconut palm to **healthy human skin**.

**INCI Name:** Propylene Glycol (and) Propylene Glycol Laurate

**Directions for Use:** Recommended use levels and concentration depend upon the application and type of product. Biopolysan<sup>®</sup> 120 is **unique** and can be added to the oil and/or water phase.

For use as a preservative: 1.5% - 3.0% wt/wt%

Other personal care applications: up to 25% wt/wt%

**About Copperhead Chemical Company<sup>®</sup>:** Copperhead is a leading manufacturer of active pharmaceutical ingredients and specialty chemicals located in Tamaqua, PA USA. Copperhead is dedicated to quality and operates in accordance with Good Manufacturing Practice regulations enforced by the U.S. FDA. Contact information is as follows:

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<sup>1</sup> Methods and compositions for novel liquid crystal delivery systems. U.S. Patent Number: 8,546,593.