



## PRODUCT DATA

### ECOPOL-13S CATIONIC GUAR Substantive Natural Polymer for Hair and Skin Care

**CTFA Nomenclature:** Guar Hydroxypropyltrimonium Chloride

**ECOPOL-13S** is a cationic (quaternary) guar gum polymer that provides the dual benefits of conditioning and thickening properties for hair and skin care products. This polymer is derived from renewable vegetable source and has high molecular weight. The moderately substituted cationic charged polymer is substantive to anionic surfaces such as skin and hair.

<b>Specifications:</b>	<b>Degree of substitution -----0.11-0.14</b>
	<b>Viscosity, 1% (2h)-----3000 - 4000</b>
	<b>Moisture (%)-----6-10</b>
	<b>Odor-----Pass</b>
	<b>pH, 1% as is-----5.0-7.5</b>
	<b>Particle Size %, min. through</b>
	<b>U.S. Mesh 100-----100</b>
	<b>U.S. Mesh 200-----80</b>
	<b>Staphylococcus Aureus-----Negative</b>
	<b>Pseudomonas Aeruginosa-----Negative</b>
	<b>Salmonella-----Negative</b>
	<b>E. Coli-----Negative</b>
	<b>Plate Count -----500 max</b>

**Application:** ECOPOL-13S is an ideal polymer for conditioning shampoos, cream rinse conditioners, lotions, creams and other personal care products. The cationic charge provides substantivity to hair and skin. The cationic polymer provides excellent conditioning properties and also acts as the primary viscosifier of a shampoo.

**Shampoos:** ECOPOL-13S is compatible with most anionic surfactants used in hair



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care. A use level of 0.25-0.5% is recommended, based on the weight of the final formulation. Alternatively it can be used as a primary viscosifier. A use level of 1.0-1.5% is recommended.

**Liquid Soap:** ECOPOL-13S can provide a soft and luxurious after feel to the skin when used in liquid soaps at a level of 0.5% or less.

**Lotions:** ECOPOL-13S can easily be added to the water phase of hand, body, and facial emulsions, which will provide the substantivity. Recommended use levels are 0.5% or less.

**Shaving Creams:** Addition of ECOPOL-13S to aerosol shaving creams will give better foam stability, lather, skin lubrication, skin softening properties, and after feel. Use levels of 0.2% or more are recommended.

**Solution Preparation:** ECOPOL-13S is easily dispersible. Disperse the polymer into a container of cold water under good agitation. Once the polymer is fully dispersed full viscosity will develop in 60 minutes without adjusting the solution pH.

**Storage:** Product should be stored in a cool, dry place.

**Product Safety:** The polymer is chemically modified natural polysaccharide and is listed in the CTFA Cosmetic Ingredient Dictionary. Please read and understand the Material Safety Data Sheet (MSDS) before using this product.

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