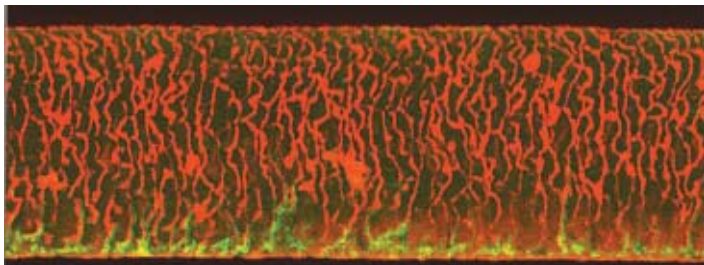


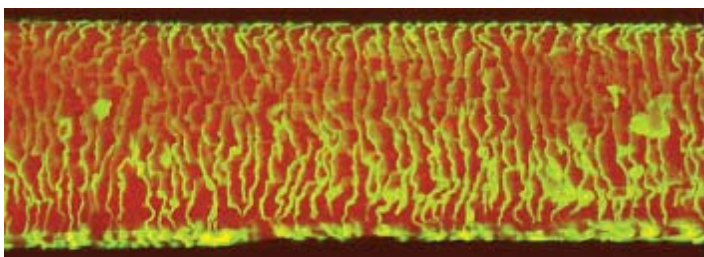
## **AquaCat<sup>®</sup> PF618 Paraben Free Clear Cationic Solution for Personal Care Applications**

AquaCat<sup>®</sup> PF618 paraben free clear cationic solution is recommended for use in a variety of hair and skin care applications. Exactly like its predecessor AquaCat<sup>®</sup> CG518 clear cationic solution, but now paraben free, its utility is best realized in clear, 2-in-1 shampoos, body washes, and liquid soap formulations. In 2-in-1 conditioning shampoo formulations, AquaCat<sup>®</sup> PF618 solution has been shown to provide excellent detangling benefits during wet combing, as well as enhancement of dry combing. In addition, AquaCat<sup>®</sup> PF618 solution does not build-up on the hair in day-to-day usage. In skin care products, it can provide the consumer perception of softer, smoother, and moisturized skin.

**Virgin hair treated with red cationic fluorescent probe. Red probe binds to negative edges of cuticle.**



**AquaCat<sup>®</sup> PF618 solution treated hair treated with green anionic fluorescent probe. Green probe binds to deposited AquaCat<sup>®</sup> PF618 solution.**



**No globules, AquaCat<sup>®</sup> PF618 solution adsorbs only at negative cuticle edges, creating a smooth feel.**

Recommended hair care application use levels are 0.2%-0.5% (dry polymer basis) and 2%-5% (wet basis). In skin care applications, such as body washes or liquid hand soaps, higher levels of AquaCat<sup>®</sup> PF618 solution (up to 1.0% dry basis) may be appropriate and can be incorporated with a retention of finished product clarity.

### **Strong Performance With “Cat-Like” Quickness**

- Paraben free
- Crystal clear finished products
- Excellent wet and dry hair feel
- No build up on hair
- Clean smooth skin feel
- Reduced batch cycle times
- No dissolving step
- No pH adjustment required
- No heating required

AquaCat<sup>®</sup> PF618 paraben free clear cationic solution is a low viscosity solution of high charge density cationic guar. Its liquid form greatly simplifies the manufacturing process. The low viscosity solution can be easily poured, pumped and metered. Batch cycle times can be significantly reduced as no pre-dissolving is required. Unlike conventional cationic guar, which are supplied as powders, no pre-dispersion or pH adjustment is required when using this product. No heating is required to use this product. Although its liquid form makes addition simple at virtually any process step, it is recommended that it is added when subsequent processing steps will not involve high batch pH (pH 8.0 or above). Typically, AquaCat<sup>®</sup> PF618 solution is added late in the process after finished product pH has been adjusted to neutral or below.

- Clear pale amber liquid
- 10% Solids solution
- 100 cps for easy handling
- pH 5.0 - 7.0

With AquaCat<sup>®</sup> PF618 clear cationic solution the headaches associated with dry powder handling disappear. You simply pump and go! Strong performance in conditioning and compatibility with “cat-like” quickness of an easy-to-use liquid...*it's clearly different!*

INCI Name: Guar hydroxypropyl trimonium chloride

## Hair Care



### Polymer Product Family

AquaCat® clear cationic solutions  
 Aqualon®, Blanose®, and Bondwell®  
 carboxymethylcellulose  
 Benecel® methylcellulose (MC) and  
 MC derivatives  
 Klucel® hydroxypropylcellulose  
 Natrosol® hydroxyethylcellulose  
 Natrosol® Plus 330CS and  
 Polysurf® 67CS hydrophobically modified  
 hydroxyethylcellulose  
 N-Hance® Cationic guar  
 N-Hance® HP guar  
 PrimaFlo® HP22 water-soluble

### Resin Product Family

Ender® S synthetic resin  
 Foral 85® synthetic resin  
 Staybelite® Ester 10 synthetic resin  
 Foral® AX synthetic resin  
 Pexalyn® 9085 stabilized rosin ester  
 Pexalyn® 9030 stabilized rosin ester  
 Staybelite® Ester 3 synthetic resin  
 Hercolyn® D methyl ester of  
 hydrogenated rosin

## Oral Care



### Function

Conditioner  
 Thickener, binder  
 Thickener, foam stabilizer  
 Film former  
 Thickener  
 Thickener, emulsifier  
 Conditioner  
 Thickener, film former  
 Fixative, film former

### Function

Tackifier  
 Tackifier  
 Tackifier  
 Tackifier  
 Tackifier  
 Tackifier  
 Tackifier  
 Fixative, carrier, and compatibilizer

## Skin Care



### INCI Name

Guar Hydroxypropyltrimonium Chloride  
 Cellulose Gum  
 Hydroxypropyl Methylcellulose  
 Hydroxypropylcellulose  
 Hydroxyethylcellulose  
 Cetyl Hydroxyethylcellulose  
 Guar Hydroxypropyltrimonium Chloride  
 Hydroxypropyl Guar  
 Hydroxypropylcellulose

### INCI Name

Glyceryl Hydrogenated Rosinate  
 Glyceryl Hydrogenated Rosinate  
 Glyceryl Hydrogenated Rosinate  
 Hydrogenated Rosin  
 Glyceryl rosinate or Glyceryl Abietate  
 Triethylene Glycol Rosinate  
 Triethylene Glycol Hydrogenated  
 Rosinate  
 Methyl Hydrogenated Rosinate or  
 Hydrogenated Methyl Abietate



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