

BioPlex® Cetylsil® S-PF

Ingredient Information

INCI Name: Cetyl Triethylmonium Dimethicone PEG-8 Succinate
 CAS# 229327-93-9
 EINECS# Polymer Exempt
 Japan Code# 520396 & 500061
 Japan Nomenclature: Highly Polymerized Methyl Polysiloxane (1) & Alkyl Triethylammonium Chloride

Specifications

Appearance	Clear Liquid
Color	Clear to Pale Yellow (6 Max)
pH (1% in DW)	4.0 - 7.0
Solids	28 - 32%

Recommended use levels 0.50 – 5.00%

Attributes

- Cationic – substantive to hair and skin
- Thermal Protection
- Excellent wet combing characteristics
- Significant reduction in irritation
- Superb conditioning without reducing foam

Applications

- Skin care
- Hair care
- Color cosmetics
- Bath products
- Baby products

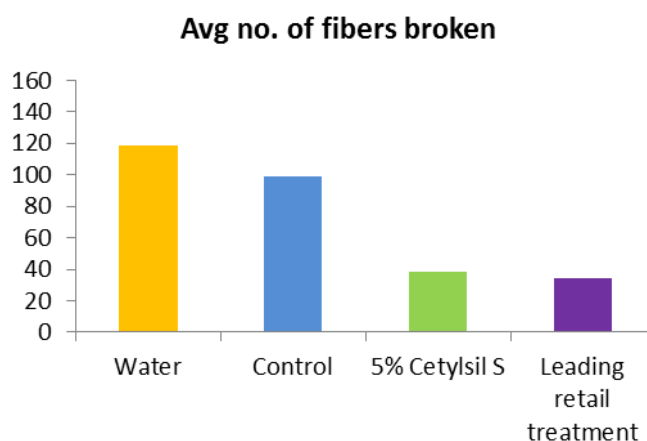
BioPlex® Cetylsil® S-PF is the paraben free version of our unique ingredient, **BioPlex® Cetylsil® S**, which combines the quaternary conditioning properties of Cetrimonium Chloride with a carboxylated silicone. **BioPlex® Cetylsil® S-PF** is supplied as a water soluble aqueous solution which allows a formulator to incorporate this ingredient into various systems with ease.

For hair care systems, **BioPlex® Cetylsil® S-PF** can be readily added to provide thermal protection, excellent wet combability, enhanced manageability and superior conditioning.

In skin care creams and lotions, the addition of **BioPlex® Cetylsil® S-PF** will improve spreadability and cushion while contributing softness and moisturization to the skin. Traditionally, cationic surfactants have limited application in skin care. However, **BioPlex® Cetylsil® S-PF** can be used in skin care to provide the silky feel of cationics without increasing the irritation potential.

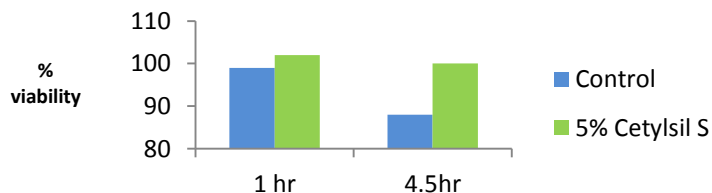
Thermal Protection

A study was *conducted by Kamath Consulting Inc.* to measure the breakage protection provided by products used in protecting hair from thermal damage during flat ironing at 450°F. The results clearly show that the test product with 5% **BioPlex® Cetylsil® S** measures up to the benchmark of a well-known leave-in heat protection treatment. **BioPlex® Cetylsil® S** provides good protection against thermal damage after 20 passes of flat ironing at 450°F.



Irritation Potential

An EpiDermal study was *conducted by Consumer Product Testing Co.* to evaluate irritancy potential. The results indicate that the control shampoo which is an SLS/Betaine system has more irritation potential than the same shampoo containing 5% BioPlex® CetylSil® S.

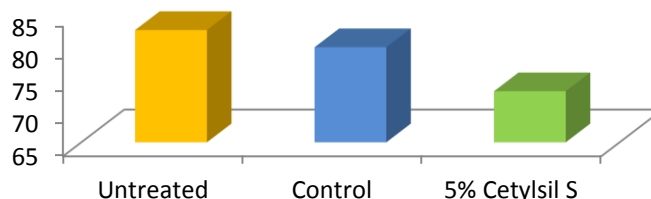


BioPlex® CetylSil® S yields a reduced irritation profile of the surfactant system which makes this ingredient excellent for sensitive skin applications. In addition, clear surfactant systems can be maintained without an impact on the characteristics of the foam or lathering properties.

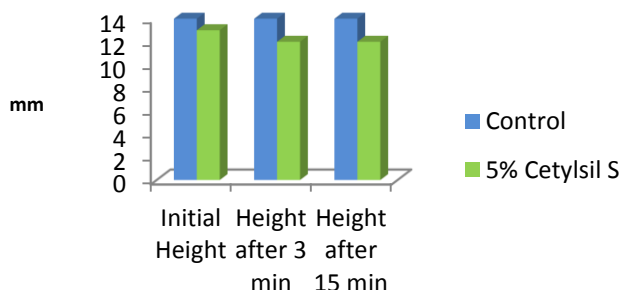
Wet Combing

Wet combing experiments *conducted by TRI Princeton* were performed to evaluate wet manageability of a control shampoo containing no conditioning agent, the same shampoo containing 5% BioPlex® CetylSil® S, and an untreated tress. Results show that a beneficial effect in wet manageability for the shampoo containing 5% BioPlex® CetylSil® S is **significantly better** than the untreated and common control.

Wet combing force value (gms)



Foam Stability



A study was *conducted by TRI Princeton* to evaluate the formation and stability of foam in a surfactant system with the presence of BioPlex® CetylSil® S. The results show that **BioPlex® CetylSil® S does not suppress foam formation** and in the two systems studied, the control and the same shampoo containing 5% BioPlex® CetylSil® S, there is foam stability over the period observed. Furthermore, there is not much of a difference between the control and the shampoo containing 5% BioPlex® CetylSil® S.

Storage and Handling

Before handling please read the Safety Data Sheet and container label for safe use, physical and health hazard information. This material should not be exposed to freezing conditions.

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