



# Poly Suga<sup>®</sup>Quat

Naturally-derived Conditioning Surfactants



## Greener, Milder and Silkier

Naturally-derived,  
EO-free, 1,4-Dioxane-free  
with low irritation



# Silkier for Better Performance



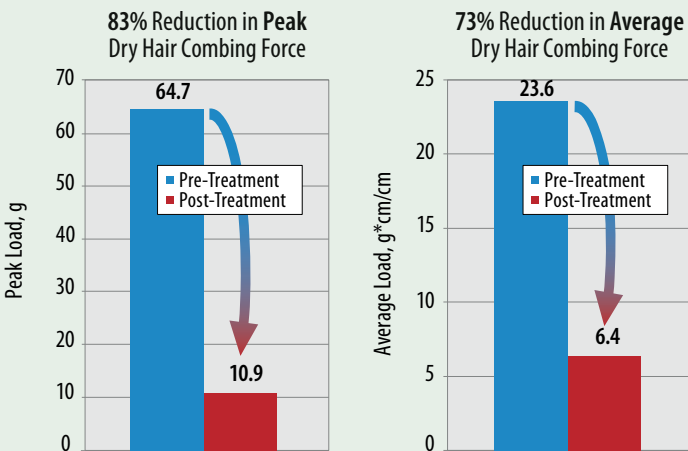
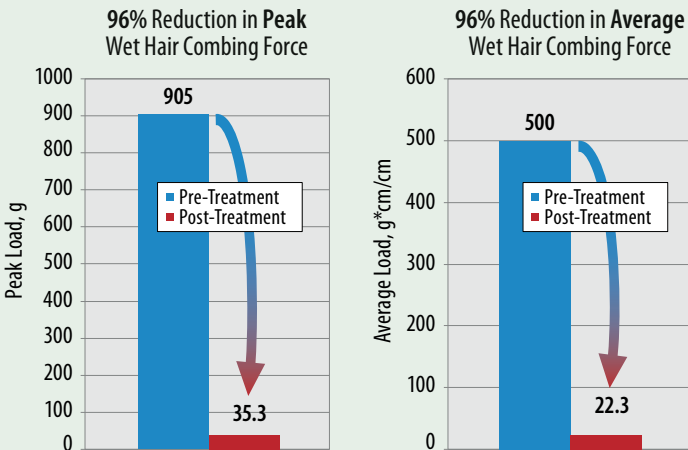
## COMBABILITY TESTING

Poly Suga®Quat S1210P was tested in a formulation on lightly bleached brown hair to determine the effect on combability under both wet and dry hair conditions.

**Test Formulation:**

Poly Suga®Quat S1210P	6.00
GMS SE/AS	2.50
Cetearyl Alcohol	5.00
Water, preservative	qs to 100.00

**Results:** The formulation demonstrated excellent conditioning of lightly bleached brown hair, with an **96%** reduction in both peak and average wet combing force. There is also an **83%** reduction in peak dry combing force and a **73%** reduction in average dry combing force.

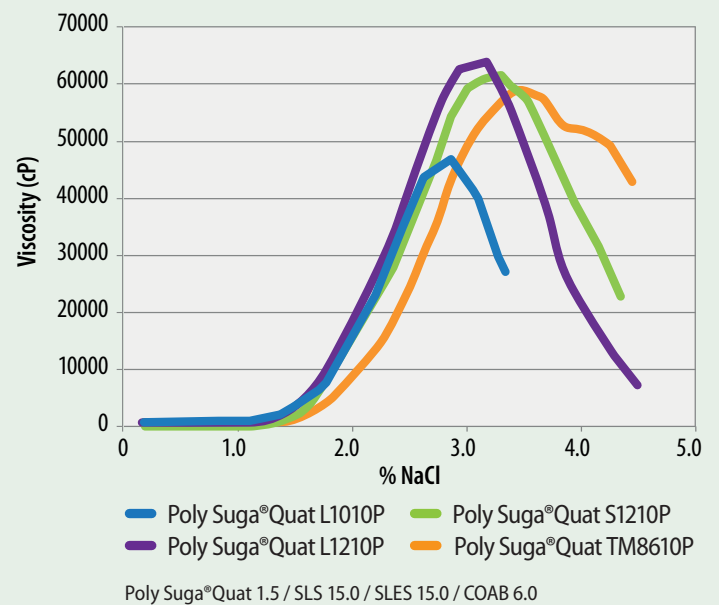


## TYPICAL PROPERTIES

	L-1010P	L-1210P	S-1210P	TM-8610P
Appearance	Clear	Clear	Clear	Clear
pH (10% aqueous)	7.0	7.0	7.0	7.0
Solids, %	30.0	30.0	30.0	30.0
Viscosity, cP	100	500	500	100
Color, Gardner	1	2	2	1
<b>Ross-Miles Foam Height, mm (1% active solution, 25°C, DI water)</b>				
Immediate	165	170	145	180
1 minute	155	160	135	160
5 minute	145	155	130	155
<b>Draves Wetting, sec.</b>				
	5.6	10.6	18.8	3.6

## VISCOSITY DEVELOPMENT

Excellent viscosity development is achieved with the addition of salt.



## ANTIMICROBIAL ACTIVITY

### ZONE INHIBITION STUDY

Samples of Poly Suga®Quat S1210P in 2.0%, 1.0% and 0.5% concentrations were evaluated for gross antimicrobial activity against several test organisms. Combined results of the assays are:

Organism	Score	Summary
<i>Pseudomonas aeruginosa</i> (Gram negative bacteria)	1	Excellent
<i>Candida albicans</i> (yeast)	3	Good
<i>Aspergillus niger</i> (mold)	4	Moderate

Poly Suga®Quat S1210P demonstrated antimicrobial activity against all three of the test organisms employed.

# The Natural Choice for Greener, Milder and Silkier Formulations

## Conditioner (Silicone-Free)

No. 1017

Silicone free, natural based conditioner that hydrates your scalp and tames your fly-aways without leaving behind a greasy build up.

INGREDIENT / INCI	%
1 Water	qs to 100.00
2 <b>Poly Suga®Quat S1210P</b> / Polyquaternium-81	6.50
3 Sensomer™ 10M Polymer / Polyquaternium-10	0.10
4 Lanette® O / Cetearyl Alcohol	5.50
5 Green Tea / Fragrance	0.20
6 Glydant Plus® / DMDM Hydantoin (and) Iodopropynyl Butylcarbamate	0.30

White Opaque Liquid, pH: 6.0, Viscosity: 30,000 cP

- Heat water to 65°C. While heating, add 2, 3. At 65°C, add 4 and mix until completely melted. Homogenize and cool below 55°C. Add remaining ingredients.

## Antibacterial Hand Soap (Higher Viscosity)

No. 4017

Hand soap removes germs while leaving hands soft and moisturized. Rinses away easily, safe for children and ideal for repeated use.

INGREDIENT / INCI	%
1 Water	qs to 100.00
2 Jaguar® HP-105 / Hydroxypropyl Guar	0.70
3 Jaguar® C162 / Hydroxypropyl Guar (and) Hydroxypropyl Guar Hydroxypropyltrimonium Chloride	0.50
4 Citric Acid, 50%	0.10
5 Glycerin	2.00
6 <b>Cola®Teric COAB</b> / Cocamidopropyl Betaine	12.00
7 <b>Poly Suga®Quat L1010P</b> / Polyquaternium-78	4.00
8 Plantaren® 2000N UP / Decyl Glucoside	8.00
9 White Lily / Fragrance	0.10
10 Preservative	qs
11 StepanQuat® 50 NF / Benzalkonium Chloride	0.25

Clear liquid, pH 5.0 – 5.5, Viscosity: 8,000 – 10,000 cP

- Slowly add ingredients 2-3 to 1 with strong mixing to evenly disperse. Once completely dispersed, reduce to moderate mixing and add ingredient 4 to pH 3.5 – 4.5. Mix for at least 30 minutes. Add remaining ingredients in order with adequate mixing between additions. Adjust pH to 5.0 – 5.5 with citric acid.

## STORAGE AND HANDLING

Poly Suga®Quat products should be stored in sealed containers at temperatures not exceeding 120°F (49°C). Shelf life is 24 months from date of manufacture. Poly Suga®Quat products are shipped in poly 55-gal drums, net weight 450 lbs (204.1 kg). Safety Data Sheet may be downloaded at [www.colonialchem.com](http://www.colonialchem.com).

Poly Suga®Quat series are covered under patent # 7,507,399

## High-Fragrance 2-in-1 Shampoo

No. 1025

DEA-free ingredients, for a high efficiency, economy 2-in-1 shampoo that cleans while conditioning ingredients smooth fly-away hairs.

INGREDIENT / INCI	%
1 Water	qs to 100.00
2 Jaguar® C-162 / Hydroxypropyl Guar (and) Hydroxypropyl Guar Hydroxypropyltrimonium Chloride	0.10
3 <b>Cola®Det DEF-26</b> / Sodium Lauryl Sulfate (and) Sodium Laureth Sulfate (and) Cocamidopropyl Hydroxysultaine and Lauramide MIPA	30.00
4 <b>Poly Suga®Quat S1210P</b> / Polyquaternium-81	2.00
5 <b>Cola®Det DEF-35</b> / Sodium Lauryl Sulfate (and) Glycol Distearate (and) Lauramide MIPA (and) Cocamidopropyl Betaine (and) Disodium Cocamido MIPA Sulfosuccinate	2.50
6 Fragrance	2.50
7 Preservative	qs

Opaque Liquid, pH 6.0, Viscosity: 8,000 – 10,000 cP

- Combine ingredients 1-2. Adjust pH to 5.0 and mix until completely hydrated and homogeneous. Add remaining ingredients. Adjust pH to 6.0.

## Foaming Hand Soap

No. 4002

Produces a dense, cushiony foam using mild, high-foaming surfactants to minimize irritation and repeat washing without dryness.

INGREDIENT / INCI	%
1 Water	qs to 100.00
2 Glycerin	2.00
3 <b>Cola®Lux MCO</b> / Myristamine Oxide	6.00
4 <b>Poly Suga®Quat TM8610P</b> / Polyquaternium-77	2.00
5 Zemea® / Propanediol	0.50
6 Fruity Pineapple WS / Fragrance	0.20
7 Euxyl® PE 9010 / Phenoxyethanol Ethylhexylglycerin	0.60

Clear Liquid, pH 6.0, Viscosity: 20 cP

- With mixing, combine 1-6. Heat to 40°C. Add 7. Mix until clear. Adjust pH as necessary.



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