



Silicone Free Conditioning Shampoo

MICONIUM PQ-10 J3000

- > High conditioning effect, viscous enhancer

ECO SMOOTH™ SILK

- > Provides an alternative to silicone in shampoo formulations
- > Provides equivalent conditioning and hair strength, superior volume at competitive price
- > Matches silicone performance on Asian hair in panel test
- > Similar wet comb performance on Asian hair
- > Matches silicone performance on damage European hair
- > Provides better foam volume and less foam reduction (foam test after three minutes)

METHOCEL™ 40-0202

- > Viscosity control
- > Lather enhancement/stabilization
- > Film formation
- > Surface activity
- > Lubricity
- > Binder
- > Suspending properties

NELONE™ PE

- > Activity versus gram positive and gram negative bacteria, yeasts, and molds
- > Effective alternative to formaldehyde releasers
- > Effective alternative to parabens
- > Ease of use in manufacturing
- > Compatible with a wide range of personal care raw materials including surfactants and emulsifiers, zinc, pyrithione and avobenzone
- > Excellent stability over a wide range of pH (2 to 12) and temperature

Ingredients

Phase A	WT %	INCI	Supplier
DI Water	29.70	DI Water	Univar
Versene™ 100 XL	0.05	Tetrasodium EDTA	Dow Chemical
Miconium J3000	0.25	Polyquaternium-10 J3000	Miwon
Phase B			
DI Water	10.00	DI Water	Univar
Methocel™ 40-0202	0.20	Hydroxypropyl Methy Cellulose	Dow Chemical
AMP Ultra™ PC 2000	0.001	2-Amino-2-methyl-1-propanol	Dow Chemical
Phase C			
Steol® CS 230	45.00	Sodium Laureth Sulfate	Stepan
Amphosol® GS	5.00	Cocamidopropyl Betaine	Stepan
Stepanpearl® 4	3.00	Sodium Laureth Sulfate/Glycol Distearate/Cocamide MEA/Laureth-12	Stepan
Eco-Smooth™ Silk	3.60	Ethylene/Octene Copolymer (and) Ethylene/Sodium Acrylate Copolymer	Dow Chemical
Phase D			
Neolone™ PE	1.00	Phenoxyethanol (and) Methylisothiazolinone	Dow Chemical
Nectarin & Ginger 0811-0466	0.20	Fragrance	Alpha Aromatics
Phase E			
Sodium Chloride	2.00	Salt	Sifto

Procedure

1. Add Tetrasodium ETDA into the water phase and slowly sprinkle with PQ-10. Mix well for 15 minutes.
2. Mix Methocel™ in 10% DI water then slowly add AMP to bring the pH up to 8. Let the Methocel™ hydrate until a clear gel is obtained. Slowly while mixing, add phase B ingredients.
3. Add phase C and D one after another. Mix well for 15 minutes then adjust the pH by using citric acid to 6.5.
4. Add preservative and fragrance.
5. Adjust the viscosity using salt.



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