



EcoSmooth™  
reinvent conditioning



EcoSmooth™ Satin  
**Formulation Guidelines**



Personal Care

*Sincerely Yours*



## Formulating Guidelines for EcoSmooth™ Satin Conditioning Polymer in 2-in-1 Conditioning Shampoo and Body Wash

- **Use EcoSmooth™ Satin Conditioning Polymer as a one-to-one replacement for cationic polymer in body washes and non-silicone containing 2-in-1 shampoos**
  - Use EcoSmooth™ Satin as a replacement for cationic guar or PQ-7
  - Use levels of 0.2 to 1.0% are recommended. However, higher levels may be added without excessive viscosity generation.
- **In shampoo/body wash formulations, EcoSmooth™ Satin Conditioning Polymer can be used over a wide pH range**
  - Good stability is expected from pH 5 to 11.
- **EcoSmooth™ Satin Conditioning Polymer can be added at any point in the formulation process**
  - EcoSmooth™ Satin Conditioning Polymer is tolerant to heat and pH variation.
- **EcoSmooth™ Satin Conditioning Polymer can yield clear formulations**
  - Depending on the surfactant type and concentration of EcoSmooth™ Satin Conditioning Polymer and other components, shampoo/body wash formulations with EcoSmooth™ Satin are clear to slightly hazy.
  - SLES/betaine formulations are clear to slightly hazy with use of 0.25 to 0.5% EcoSmooth™ Satin Conditioning Polymer.
  - SLES/disodium cocamphodiacetate formulations are very clear up to 2% EcoSmooth™ Satin Conditioning Polymer.
- **Mix EcoSmooth™ Satin Conditioning Polymer gently prior to use to ensure uniformity prior to use**



### Example Shampoo Formula #1:

Ingredient	% (based on active)	% (as supplied)
Deionized Water	q.s. to 100	q.s. to 100
Tetrasodium EDTA	0.1	0.26
<b>EcoSmooth™ Satin Conditioning Polymer (25% active)</b>	<b>0.25</b>	<b>1.0</b>
Cocamidopropyl Betaine (30% active)	2.4	8.0
Sodium Laureth Sulfate (70% active)	12	17.1
Citric Acid, 10% solution	As needed	As needed
<b>NEOLONE™ PE Preservative</b>		<b>0.55</b>
Sodium Chloride	1.5	1.5

#### Processing Instructions:

1. Introduce the ingredients in the order listed above, taking care to homogenize properly after each introduction.
2. Use citric acid to adjust pH to the target pH of 6.0.

#### Product Characteristics:

Parameter	Result	Method
pH	6.0	pH meter
Viscosity	9000 cPs	Brookfield LV, spindle 4, 12 rpm
Appearance	Clear	Visual



## Example Body Wash Formula

Ingredient	% (based on active)	% (as supplied)
Water	q.s. to 100	q.s. to 100
Sodium Laureth Sulfate (25.5% active)	12.0	47.0
Cocamidopropyl Betaine (35% active)	2.6	7.4
Glycerin	1	1.0
<b>EcoSmooth™ Satin Conditioning Polymer (25% active)</b>	<b>0.3</b>	<b>1.2</b>
Sodium Chloride	1.7	1.7
Citric Acid (10%)	as needed	as needed
<b>KATHON™ CG Preservative</b>	<b>90 ppm</b>	<b>0.90</b>

### Processing Instructions:

1. Introduce the ingredients in the order listed above, taking care to homogenize properly after each introduction.
2. Use citric acid to adjust pH to the target pH of 6.0

### Product Characteristics:

Parameter	Result	Method
pH	6.0	pH meter
Viscosity	12900 cPs	Brookfield LV, spindle RV5/20rpm
Appearance	Clear	Visual



## Example Shampoo Formula #2

Ingredient	% (based on active)	% (as supplied)
Deionized Water	q. s. to 100	q. s. to 100
Disodium Cocoamphodiacetate (38.5%)	2.7	6.9
Sodium Laureth Sulfate (25%)	15.2	60.8
<b>EcoSmooth™ Satin Conditioning Polymer (25%)</b>	0.3	1.2
Sodium Hydroxide	As needed	As needed
<b>Kathon™ CG Preservative</b>	<b>0.0015</b>	<b>0.10</b>
Citric Acid (pH to 5-6)	As needed	As needed

### Processing Instructions:

1. Introduce the ingredients in the order listed above, taking care to homogenize properly after each introduction.
2. Use citric acid to adjust pH to the target pH of 6.0.

### Product Characteristics:

Parameter	Result	Method
pH	6.3	pH meter
Viscosity	16000 cPs	Brookfield LV, spindle 4, 12 rpm
Appearance	Clear	Visual

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the Customer is responsible for determining whether products and the information in this document are appropriate for the Customer's use and for ensuring that the Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. **NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

Form Number: 324-00432-0511