



Clear 'n' EFFERVESCENT Shampoos (3% perfume)

Challenges! How to formulate a stable shampoo with *high perfume, high clarity, good viscosity, and good foaming?*

Common core ingredients, i.e. salt, perfume, hydrophobic thickener, perfume oils and perfume solubilizers, can cause unexpected negative effects on clarity and viscosity when go up to certain concentration thresholds.

Solution--- **SorbiThix L-100** is the best in the class of non-ionic associative thickeners to bring high clarity and high viscosity to any surfactant system in the market.

With a six-arm molecular structure, **SorbiThix L-100** can form a series of *Clear 'n' EFFERVESCENT shampoos*, even the most challenging glutamate surfactant system.

Clear 'n' EFFERVESCENT shampoos clean and condition hair, leaving hair with a creamy soft feel and a pleasant effervescent wild Currant & Orange flower scent.

Clear 'n' EFFERVESCENT SCENT



	<i>INCI Name, (Trade Name)</i>	<i>SLES Wt%</i>	<i>AOS Wt%</i>	<i>SCG Wt %</i>	<i>Functions</i>
1	Distilled Water	68.4	68.4	70.1	Liquid carrier
2	Disodium EDTA	0.10	0.10	0.10	Stabilizer
3	Guar Hydroxypropyltrimonium Chloride(Jaguar Excel)	0.10	0.10	0.10	Naturally derived hair conditioner
4	Glycerin	1.00	1.00	1.00	Humectant
5	Cocamidopropyl Betaine (35% active)	10.0	10.0	8.00	Amphoteric surfactant
6	Cocamidopropyl hydroxysultaine (ColaTeric CBS-HP) (50% active)			4.00	Amphoteric surfactant
7	Decyl glucoside (Plantaren 2000) UP)		6.00		Non-ionic surfactant
8	Sodium Cocoyl Glutamate(SCG) (Amisoft CS-11)			9.00	Anionic surfactant
9	Sodium Lauryl Ether Sulfonate (70%)	14.0			
10	Sodium C14-16 Olefin Sulfonate (Bioterge AS-90 Bead)		8.00		Anionic surfactant
11	Amodimethicone (and) C11-15 Pareth-7 (and) laureth-9 (and) Glycerin (and) Trideceth	1.00	1.00		Silicone hair conditioner
12	Aqua (and) Silicone Quaternium-18 (and) Trideceth-6 (and) Trideceth-12 (Silsoft Q PMF)			1.00	Silicone hair conditioner
13	SorbiThix L-100	2.45	2.45	3.75	Non-ionic associate thickener
14	Wild Currant & Orange Flower perfume (Creative 8661)	3.00	3.00	3.00	Perfume
15	Citric acid to pH 5.5	q.s.	q.s.	q.s.	
16	Symsave H + Euxyl 9010 (1:1 blend)	1.00	1.00	1.00	<i>Symsave H from Symrise, Inc.</i>

Features: Clear and Pleasant flow (viscosity ~ 10,000 cp)

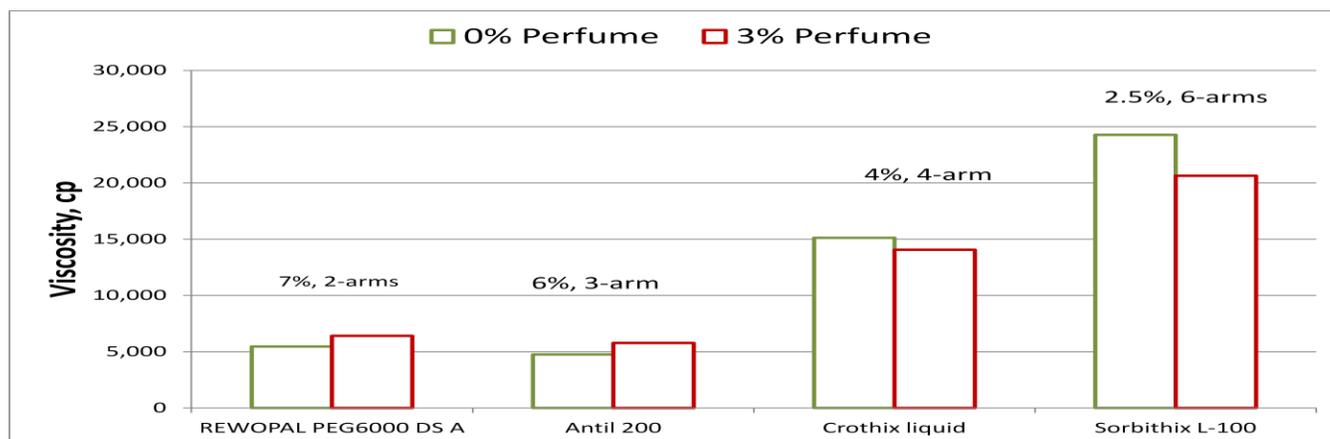
Process:

- 1) Add #1-2 and heat to 60 C.
- 2) Pre-mix #3-4, and then add to vessel and mix.
- 3) Add # 5-13 while mixing at 60C until uniform.
- 4) Cool to 40C, and add # 14 - 16 while mixing.

SORBITHIX L-100™

INCI: Sorbeth-230 Teteroleate (and) Decyl glucoside (and) Sorbitan Laurate.

- A patent-pending, user-friendly, **versatile** liquid non-ionic associative thickener with unique six arm molecular structure. It is the best in class of non-ionic associative thickeners for **thickening** every single surfactant system in the market, including the AOS and the very mild amino acid-based **glutamate surfactants**.
- Rich and pleasant flowing sensory, and **no negative impact on foaming**
- Easy-to-use in manufacturing and in formulation
- Synergy in thickening with salt and common hydrophobic thickeners
- Compatible with cationic, anionic, and non-ionic surfactants and polymers
- Mild and non-irritating to skin and eyes



Formulation base: Water, SLES (70%) 20%; Cocamidopropyl Betaine 10%, etc; Total active: 17.5%, pH 5.5

Applications: All personal cleansing products - shampoo, body wash, foam bath, facial cleanser, hand cleanser, liquid soaps, detergent gel, etc.

Formulation and manufacturing tips:

- Suitable for pH 4.5 - 7
- 0.5 – 5 % dosage. Add at any stage of processing before temperature cools down below 35C, and mix until dissolved completely.
- **Rescuing Production Batches** - there are two specific methods for boosting viscosity in batches that fail to meet specifications:

Method 1:

- A) Mix in a pail or drum the SorbiThix L-100 with a decyl glucoside APG surfactant at 1:1 ratio at 40-45 C for 10-20 minutes until solution is clear.
- B) Add this blend into the tank and mix at 25 C and above. The actual mixing time required depends on the size of tank, mixing equipments, and the temperature. At 25 C, it may take about 30 minutes. At 30 -35 C, it takes much less time.

Method 2:

If you can warm the batch up to about 35C, you can add SorbiThix L-100 directly into the tank, and mix to the right viscosity. The amount of time it takes to dissolve the SorbiThix L-100 into the shampoo or shower gel depends on the tank geometry, size, and mixing equipments. That said, internal lab testing has shown that it can take as little as 5 minutes.

** dissolution rate depends greatly on temperature.