Technical Data Sheet

DOWSIL™ CE-1870 POE Emulsion

FEATURES & BENEFITS

- Improves dry combing
- Suitable for clear products

INCI NAME: Dimethiconol (and) TEA Dodecylbenzenesulfonate (and) Laureth-23

APPLICATIONS

DOWSIL™ CE-1870 POE Emulsion is designed particularly for ease of incorporation into water based hair care products, such as:

- Clear conditioning shampoos
- Rinse off conditioners
- Leave-in conditioners
- Hair styling/mousses

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Silicone content	wt%	25
Internal phase viscosity	cps	80,000
Appearance		Translucent to slightly hazy liquid
pH		6.5–8.0
Particle size	nm	< 40
Emulsifier type		Anionic
Suitable Diluent		Water

DESCRIPTION

DOWSIL CE-1870 POE Emulsion is a 25% anionic microemulsion of high molecular weight dimethiconol, designed particularly for clear hair care products.

HOW TO USE

DOWSIL CE-1870 POE Emulsion is best added below 40°C (104°F) to minimize risk of emulsion separation. The recommended concentration level is 1–10% in clear hair care products.

HANDLING PRECAUTIONS

INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON

THE DOW WEBSITE AT WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

Protect DOWSIL CE-1870 POE Emulsion from freezing.

DOWSIL CE-1870 POE Emulsion should be stored at or below 50°C (122°F) in the original, unopened containers.

PACKAGING INFORMATION

Multiple packaging sizes are available for this product.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, www.consumer.dow.com or consult your local Dow representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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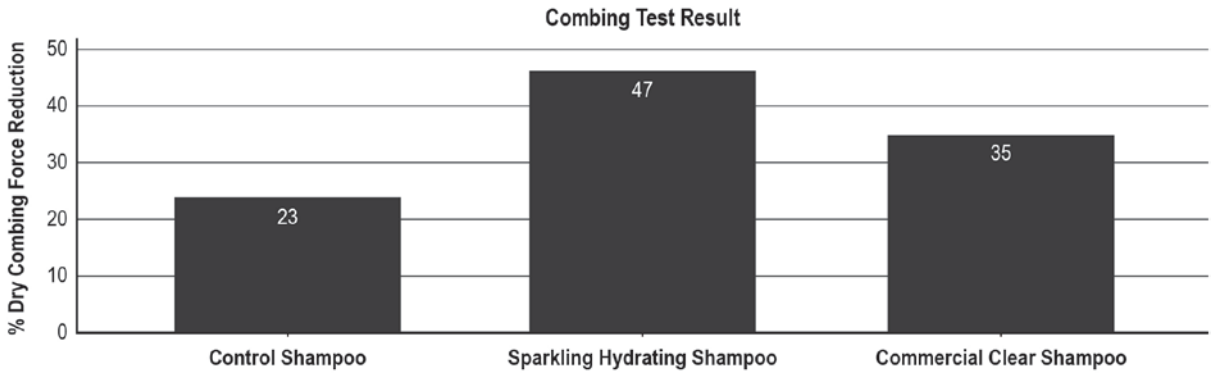
Figure 1: % Dry combing reduction test results of 4% DOWSIL CE-1870 POE Emulsion with 4% DOWSIL CE-8170 AF Microemulsion in Intensive clear conditioning shampoo: Sparkling Hydrating Shampoo. Compare with control base shampoo (without silicones) and a leading commercial clear shampoo.



Measure for % Dry combing force reduction. The higher the value, the better the conditioning shampoo.

Formulation:
Table 1: Sparkling Hydrating Shampoo (formulation number 21334-40)

Ingredient	Wt%	Trade name/ Supplier
Phase A		
1. Distilled water	Up to 100	
2. Acrylates Copolymer	5.0	Carbopol® Aqua SF-1 Polymer/ Lubrizol
3. TEA	0.3	
Phase B		
4. Distilled water	15.0	
5. Polyquaternium 10	0.3	Celquat SC-230 M/ Akzo Nobel
6. EDTA 2Na	0.1	
Phase C		
7. Sodium Lauryl Ether Sulfate (27% AI)	52.0	Texapon® N-8000/ Cognis
8. Cocamidopropyl Betaine	10.0	Dehyton® K/ Cognis
9. Amodimethicone (and) C11-15 Pareth-7 (and) Laureth-9 (and) Trideceth-12 (and) Glycerin	4.0	DOWSIL™ CE 8170 AF Microemulsion
10. Dimethiconol (and) TEA-dodecylbenzenesulfonate (and) Laureth-23	4.0	DOWSIL™ CE-1870 POE
Phase D		
11. PEG 150- Polyglyceryl-2 Tristearate (and) PEG 6-Capryl/ Capric Glyceride	2.0	Genapol DAT/ Clariant
12. Propylene Glycol	2.0	
13. D-Panthenol	0.2	
14. Propylene glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben	0.5	Germaben II/ISP
15. Calcium Aluminum Borosilicate (and) Silica (and) Titanium Dioxide (and) Tin Oxide	0.03	Ronastar Silver/ Merck
16. Perfume	0.8	Tender Bright 061/ Givaudan
17. Dye	q.s.	

Procedure
1. Mix Phase A together, adjust pH to 7–8
2. Mix Phase B together, heat to 50–60°C
3. Add Phase B into Phase A
4. Add Phase C one by one into the main mixer
5. Add Phase D one by one into the main mixer, mix until homogeneous