ABIL® Soft AF 100

Silicone based conditioning agent for improved body and volume of hair

- Strongly substantive to hair and skin keratin due to the aminofunctional groups.
- For conditioners and shampoos (especially clear ones).
- Easy to use, self-emulsifying.
- Liquid, high active.

Personal Care

INCI Name (CTFA Name)

Methoxy PEG/PPG-7/3 Aminopropyl Dimethicone

Chemical and physical properties (not part of specifications)	
Appearance	liquid
Type	aminofunctional siloxane

Properties

ABIL® Soft AF 100 conditions and volumizes fine hair. Hair treated with ABIL® Soft AF 100 is easier to comb and smoother. These benefits are especially evident on chemically treated hair.

ABIL® Soft AF 100 improves the substantivity of skin care emulsions.

ABIL® Soft AF 100 is a liquid and easy to handle. During preparation, the self emulsifying property is beneficial as it forms a fine dispersed emulsion in water.

ABIL® Soft AF 100 contains hydrophilic groups. This makes it more compatible with aqueous systems when compared to Amodimethicone. Since ABIL® Soft AF 100 is easy to solubilize with surfactants, it can be used in *clear* shampoo or shower bath formulations.

Application

ABIL® Soft AF 100 is used in

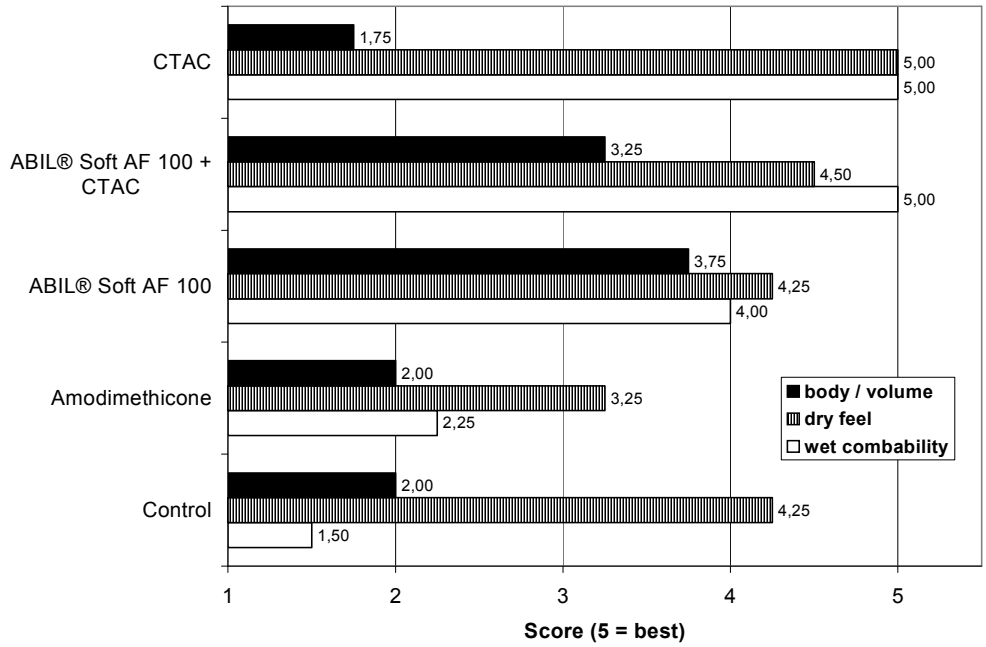
- Conditioners and emulsions
- Shampoos and skin cleansing formulations

ABIL® Soft AF 100 improves the manageability of the hair. The loss of volume, which is common when using traditional hair conditioners, can be avoided by using ABIL® Soft AF 100.

Figure 1 shows the result of a sensory test on hair swatches. Cetrimonium Chloride (CTAC = VARISOFT® 300) provides in a standard conditioner formulation (0.5 % Ceteareth-25, 2 % Cetyl Alcohol, 2 % conditioning agent, pH 4) a very good wet combability. It is known that the influence of CTAC on the volume in this application is poor. By combining CTAC with ABIL® Soft AF 100 the judgement of the volume effect will be significantly improved.

In this test Amodimethicone shows no positive influence on body/volume. "Control" marks the test formulation without conditioning additive.

The combination of ABIL® Soft AF 100 with cationic conditioning additives is especially advantageous. By combining it with an alkyltrimethyl ammonium chloride like VARISOFT® 300 (Cetrimonium Chloride) or VARISOFT® BT 85 (Behentrimonium Chloride) an optimum of conditioning effect is obtained.



Standard conditioner formulation:
0.5 % Ceteareth-25
2.0 % Cetyl Alcohol
2.0 % conditioning agent
pH 4

Fig. 1: Results of a sensory test with conditioning rinse on hair swatches.

Suggested usage concentration

0.3 – 4.0 % ABIL® Soft AF 100 in conditioners.
0.1 – 2.0 % ABIL® Soft AF 100 in shampoos and skin cleansing preparations.
0.2 – 1.0 % ABIL® Soft AF 100 in skin care emulsions.

Packaging

200 kg drum

Hazardous goods classification

Information concerning

- classification and labeling according to regulations for transport and for dangerous substances
- protective measures for storage and handling
- measures in accidents and fires
- toxicity and ecological effects

is given in our safety material data sheets.

Processing hints

For conditioners and emulsions:

Add ABIL® Soft AF 100 to the oil phase.

For shampoo formulations:

Solubilize ABIL® Soft AF 100 with anionic surfactant(s), water insoluble ingredients and solubilizers, if necessary, and stir until it is homogeneous. Add the water and then the amphoteric surfactants (e.g. TEGO® Betain or REWODERM®), water soluble ingredients, thickeners (e.g. ANTIL®, REWODERM® LIS 80) and pearlizers (e.g. TEGO® Pearl), if wanted.

Guide Line Formulations

In-Shower Hair and Body Conditioner (O/W emulsion) SG 877/3	
Phase A	
ABIL® Soft AF 100	0.5 %
TEGO® Alkanol 16 (Cetyl Alcohol)	2.0 %
VARISOFT® BT 85 Pellets (Behentrimonium Chloride)	1.0 %
Phase B	
Glycerin	2.0 %
Water	94.2 %
Perfume	0.2 %
Preservatives	q.s.

Preparation:

Heat phases A and B separately to 80 °C (the VARISOFT® BT 85 Pellets must be melted). Mix B with A and cool while stirring. Homogenize at 65 °C. Add the perfume below 45 °C.

Clear Conditioning Shampoo WA 156/1/4	
Sodium Laureth Sulfate (28 %)	32.0 %
ABIL® Soft AF 100	0.4 %
Perfume	0.5 %
Water	54.6 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	10.0 %
VARISOFT® PATC (Palmitamidopropyltrimonium Chloride)	2.0 %
NaCl	0.5 %
Preservatives	q.s.

Preparation:

Mix the ingredients in the given order.

Conditioning Shampoo for fine Hair WA 156/1/5	
Sodium Laureth Sulfate (28 %)	28.6 %
Perfume	0.3 %
ABIL® Soft AF 100	0.2 %
Water	56.3 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	5.3 %
REWOTERIC® AM C (Sodium Cocoamphoacetate)	5.3 %
ANTIL® 171 (PEG-18 Glyceryl Oleate/Cocoate)	3.0 %
NaCl	1.0 %
Preservatives	q.s.
Preparation: Mix the ingredients in the given order.	

Styling Cream (W/O emulsion) WA 156/5/13	
Phase A	
ABIL® EM 90 (Cetyl PEG/PPG-10/1 Dimethicone)	2.0 %
Mineral Oil	2.0 %
ABIL® OSW 5 (Cyclopentasiloxane; Dimethiconol)	8.0 %
ABIL® Soft AF 100	0.5 %
TEGOSOFT® CT (Caprylic/Capric Triglceride)	3.0 %
Hydrogenated Castor Wax	0.5 %
Cyclopentasiloxane	4.0 %
Perfume	0.3 %
Phase B	
Water	79.2 %
NaCl	0.5 %
Preparation: Heat phases A and B to 70 °C. Stir B into A and cool while stirring. Homogenize at 65 °C. Add the perfume below 45 °C.	

Hair Tip Fluid (O/W emulsion) WA 156/4/2	
Phase A	
TEGINACID® C (Ceteareth-25)	0.5 %
ABIL® Soft AF 100	0.3 %
TEGO® Alkanol 16 (Cetyl alcohol)	2.0 %
TEGIN® M Pellets (Glyceryl Stearate)	1.0 %
ABIL® OSW 5 (Cyclopentasiloxane; Dimethiconol)	7.5 %
Perfume	0.3 %
Phase B	
Water	88.4 %
Preservatives	q.s.
Preparation: Heat phases A and B to 70 °C. Mix A into B and homogenize at 65 °C. Add the perfume below 45 °C.	

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Evonik Industries AG Goldschmidtstraße 100 45127 Essen, Germany
P.O. BOX 45116 Essen PHONE +49 201 173-2854 FAX +49 201 173-1828
personal-care@evonik.com www.evonik.com/personal-care

EVONIK INDUSTRIES