

VARISOFT® TA 100

Cationic surfactant for the production of hair conditioners
as well as skin care emulsions

- substantive to skin and hair
- good antistatic properties
- emulsifier for hair conditioners
- emulsifier for skin lotions with improved skin feel
- excellent combing of wet and dry hair
- reduces curl droop (for a better hold of the hairstyle)
- vegetable based

Personal Care

INCI Name (CTFA Name)

Distearyldimonium Chloride

Chemical and physical properties (not part of specifications)

Appearance (20 °C)	powder
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Properties

VARISOFT® TA 100 is a pure powder form of distearyldimethyl ammonium chloride.

VARISOFT® TA 100 is clearly soluble in ethanol and forms emulsions in water. It is compatible with non-ionic surfactants.

Use in rinse-off products as conditioner

VARISOFT® TA 100 has antistatic properties and is substantive to skin and hair.

Used in a hair rinse, VARISOFT® TA 100 improves synergistically wet comb properties together with a silicone based quaternary (ABIL® Quat 3474, Quaternium-80).

Curl droop, generally caused by hair rinses, can be reduced by using the more hydrophobic dialkylquat VARISOFT® TA 100, which leads to an improved hold of the hairstyle. This has been proven by a curl retention test (70% relative humidity, within 5 hours).

Use in leave on products as cationic emulsifier

The substantivity to the skin and the non-irritancy in application concentrations make it a suitable material for use in creams and lotions.

Advantages of the cationic surfactant in emulsions:

- Stable emulsions
- Good distribution to the skin
- Good uptake
- Smooth skin feel after application
- No excessive deposition of fat on the skin

Emulsions are easily produced with VARISOFT® TA 100. Simple skin lotion basic formulations allow the addition of special active substances and extracts, for example:

- Lactil® as a moisturizer
- Vitamins
- Vegetable extracts

Application

VARISOFT® TA 100 is used in hair rinses to improve dry and wet combing.

This pure powdered distearyldimethyl ammonium chloride is used as an emulsifier in skin and body lotions. It is also suitable for sun protection emulsions.

Preparation

Preparation temperature for dispersing: 70 to 80°C.

Suggested usage concentration

2 – 10 % VARISOFT® TA 100

Packaging

250 kg pallet (5 x 50 kg drums)

Hazardous goods classification

Information concerning

- classification and labelling 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 material safety data sheets.

Guide Line Formulations

Skin Lotion	
VARISOFT® TA 100	5.0 %
Paraffinum liquidum	5.0 %
TEGOSOFT® TN (C12-15 Alkyl Benzoate)	3.0 %
TEGO® Alkanol 16 (Cetyl Alcohol)	1.0 %
Glycerin	4.0 %
Water, deion., Preservative, Perfume	up to 100 %
Preparation:	
1. Warm up separately both phases to 80°C, then emulsify A in B, homogenize (the emulsion passes through an inversion phase).	
2. Cool down, perfume by stirring at approx. 40°C.	

Conditioning Hair Rinse for normal Hair UK 168/N/1	
Phase A	
VARISOFT® TA 100	1.0 %
TEGO® Alkanol 1618 (Cetearyl Alcohol)	2.5 %
TEGINACID® C (Ceteareth-25)	0.5 %
ABIL® Soft AF 100 (Methoxy PEG/PPG-7/3 Aminopropyl Dimethicone)	1.0 %
Phase B	
Water	94.0 %
Propylene Glycol	1.0 %
Phase Z	
Preservative, Perfume	q.s.
Preparation:	
1. Heat phases A and B separately up to approx. 65°C.	
2. Combine A and B and homogenize.	
3. Cool down while stirring.	
4. Add perfume below 45°C.	
5. Adjust pH value to approx. 4..	

Cationic O/W Sun Cream with balanced UV Protection System Ma 47/04-4	
Phase A	
VARISOFT® TA 100	3.5 %
TEGIN® M Pellets (Glyceryl Stearate)	2.0 %
TEGO® Alkanol 18 (Stearyl Alcohol)	1.0 %
TEGOSOFT® TN (C12-15 Alkyl Benzoate)	5.0 %
TEGOSOFT® DEC (Diethylhexyl Carbonate)	3.5 %
TEGOSOFT® CR (Cetyl Ricinoleate)	1.0 %
TEGOSOFT® TIS (Triisostearin)	
TEGO® Sun TDEC 45 (Titanium Dioxide; Diethylhexyl Carbonate; Polyglyceryl-6 Polyhydroxystearate)	5.0 %
Octocrylene	3.0 %
Ethylhexyl Methoxycinnamate	4.0 %
Butyl Methoxydibenzoylmethane	2.0 %
Phase B	
Glycerin	3.0 %
Water	66.0 %
Phase Z	
Preservative, Perfume	q.s.
Preparation:	
1. Heat phase A and B separately to 70 – 75°C.	
2. Add phase A to phase B with stirring. ¹⁾	
3. Homogenise.	
4. Cool with gentle stirring.	
¹⁾ Important: If phase A has to be charged into the vessel first, phase B must be added without stirring .	
SPF* (in vivo): 18	
Water resistance**: 57 %	
Star Rating***: 3	
* According to the Colipa International Test Method 2006	
** Spa Pool Method Colipa Europe	
*** Optometrics SPF 290S Analyser	

O/W Soft Cream F 18/03-9	
Phase A	
VARISOFT® TA 100	2.0 %
ABIL® Care 85 (Bis-PEG/PPG-16/16 PEG/PPG-16/16 Dimethicone; Caprylic/Capric Triglyceride)	1.0 %
TEGIN® M Pellets (Glyceryl Stearate)	2.5 %
TEGO® Alkanol 1618 (Cetearyl Alcohol)	1.5 %
TEGOSOFT® liquid (Cetearyl Ethylhexanoate)	9.0 %
TEGOSOFT® CT (Caprylic/Capric Triglyceride)	9.0 %
Phase B	
Glycerin	3.0 %
Water	72.0 %
Phase Z	
Preservative, Perfume	q.s.
Preparation:	
<ol style="list-style-type: none"> 1. Heat phase A and B separately to 75 – 80°C. 2. Add phase A to phase B with stirring. ¹⁾ 3. Homogenise. 4. Cool with gentle stirring. 	
¹⁾ Important:	
If phase A has to be charged into the vessel first, phase B must be added without stirring	

O/W Cationic Emulsion F 18/03-3	
Phase A	
VARISOFT® TA 100	1.0 %
TEGO® Care 450 (Polyglyceryl-3 Methylglucose Distearate)	2.0 %
TEGIN® M Pellets (Glyceryl Stearate)	2.0 %
TEGO® Alkanol 18 (Stearyl Alcohol)	1.0 %
TEGOSOFT® liquid (Cetearyl Ethylhexanoate)	9.0 %
TEGOSOFT® CT (Caprylic/Capric Triglyceride)	10.0 %
Phase B	
Glycerin	3.0 %
Water	72.0 %
Phase Z	
Preservative, Perfume	q.s.
Preparation:	
<ol style="list-style-type: none"> 1. Heat phase A and B separately to 70 – 80°C. 2. Add phase A to phase B with stirring. ¹⁾ 3. Homogenise. 4. Cool with gentle stirring. 	
¹⁾ Important:	
If phase A has to be charged into the vessel first, phase B must be added without stirring .	

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