

VARISOFT® EQ 65 MB Technical Information

Readily biodegradable ester quat with excellent conditioning performance

Intended use

Conditioning agent.

Benefits at a glance

- Excellent conditioning agent with good cost performance relation
- Emulsifier with typical cationic skin feel
- Readily biodegradable
- Solvent-free and high flash point
- Vegetable based

INCI (PCPC Name)

Distearoylethyl Dimonium Chloride; Cetearyl Alcohol

Chemical and physical properties (not part of specifications)

Appearance (20 °C)	Pellets
Active matter	Approx. 65%

Properties

VARISOFT® EQ 65 MB is an ester quat based on high purity stearic acid and is compounded with Cetearyl Alcohol. It is a readily biodegradable conditioning agent with a high flash point.

VARISOFT® EQ 65 MB improves the conditioning properties of the wet and dry hair. It can also act as an emulsifier providing a sensory profile typical of cationic emulsions:

- Substantive to hair and skin
- Improves detangling and wet combing of hair
- Provides good wet feel of hair
- Superior dry combing and dry feel of hair
- Substantive to skin for good water resistance
- Cationic emulsifier for skin care emulsions

Conditioners including VARISOFT® EQ 65 MB have a very rich and creamy appearance.

In a cream rinse treatment, VARISOFT® EQ 65 MB showed an excellent rinseability and was more easily rinsed out of hair when compared to Behen-trimonium Chloride (VARISOFT® BT 85 Pellets), a high performance conditioning agent.

Figure 1 shows the combing force measurement results of virgin brown hair, predamaged by permanent wave treatment, generated with Diastron MTT 175. The results are based on 3 swatches each. The test formulations were conditioning rinses containing 1 wt% active conditioning agent based on 0.5% Cetearth-25; 5.0% Cetyl Alcohol; 1.5% VARISOFT® EQ 65 MB resp. VARISOFT® BT 85 Pellets; and water to 100.0%, pH = 4.

At a realistic rinsing time of 1 min., the reductions of wet coming forces are excellent and very comparable for both quaternaries. With increasing rinsing time, the efficacy of VARISOFT® EQ 65 MB decreases. This could be of advantage for the consumer (reduced water consumption, less time consuming).

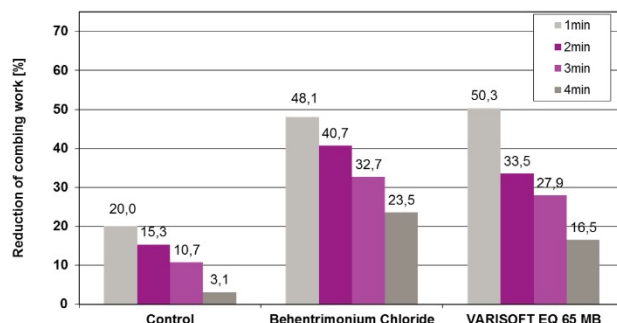


Figure 1: Reduction of combing work depending on rinsing time – comparison between Behentrimonium Chloride and VARISOFT® EQ 65 MB.

Conditioning efficacy

VARISOFT® EQ 65 MB shows excellent conditioning properties, which outperform Cetrimonium Chloride and are similar to the very efficient Behentrimonium Chloride.

Technical half head tests with 10 test persons – performed by an external test institute – verified the excellent conditioning properties of VARISOFT® EQ 65 MB.

The test formulations contained

0.5% TEGINACID® C Pellets (Cetareth-25)

5.5% Cetearyl Alcohol

2.0% active cationic

The pH value had been adjusted to 4.5.

Figure 2 half head study shows that for most parameters tested VARISOFT® EQ 65 MB outperformed CTAC (Cetrimonium Chloride).

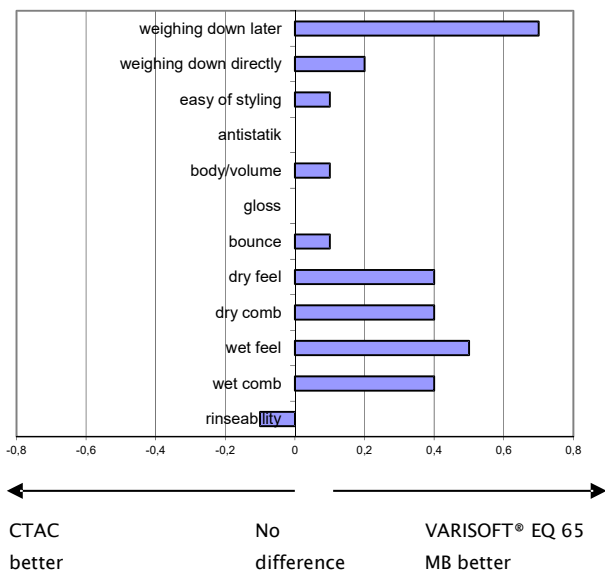


Figure 2: Half head test results – comparison between VARISOFT® EQ 65 MB and CTAC (Cetrimonium Chloride).

Figure 3 half head study shows that the conditioning properties of VARISOFT® EQ 65 MB are very similar to the ones of the highly efficient BTAC, VARISOFT® BT 85 Pellets (Behentrimonium Chloride).

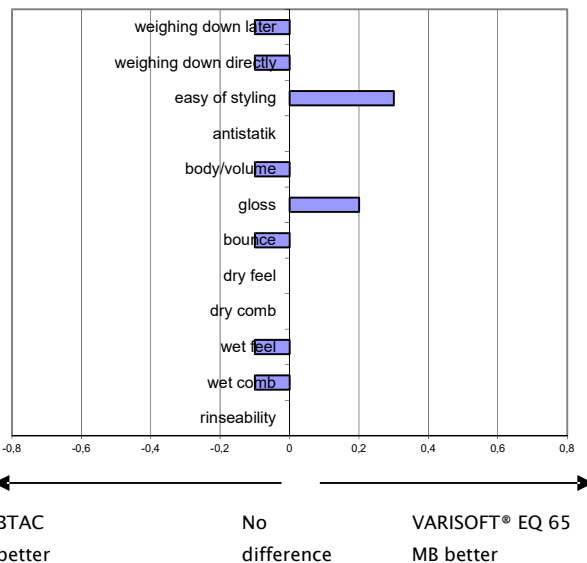


Figure 3: Half head test results – comparison between VARISOFT® EQ 65 MB and BTAC (Behentrimonium Chloride), i.e. VARISOFT® BT 85 Pellets.

Application

VARISOFT® EQ 65 MB can be used for formulating

- Hair conditioners (rinse-off and leave-in)
- Skin care creams and lotions

Due to the content of Cetearyl Alcohol, the amount of additional fatty alcohol can be reduced.

Preparation

VARISOFT® EQ 65 MB can be dispersed in water at approximately 75 °C. Addition of nonionic emulsifiers such as Cetareth-25 would improve the processability of VARISOFT® EQ 65 MB in water.

The viscosity of conditioners including VARISOFT® EQ 65 MB can be optimized by applying a second homogenization step after cooling down to room temperature.

VARISOFT® EQ 65 MB shows great stability at lower pH values. At formulation-pH of 5 and above, VARISOFT® EQ 65 MB tends to hydrolyze. Therefore, we recommend adjusting the pH of a cream rinse conditioner formulation containing VARISOFT® EQ 65 MB to around 4.

Product specification

Material VARISOFT EQ 65 MB
Spec.Code K00 Standard

Inspection Characteristics	Method	Limits	Units	Z
Appearance 25°C	GM_0170_00	white/ivory pellets		X
Odour	GM_0175_02	TYPICAL, TYPICAL		X
pH-Value 5 %	GM_0133_01	3.0-6.0	pH-Value	X
Colour to Gardner	GM_0140_02	<=3.0		X
Quaternary uncorrected	GM_0502_07	60.00-64.00	%	X
Methylchloride	GM_5071_01	<=50	ppm	X
Appearance 25°C	OK			
Odour	TYPICAL			

Report on inspection certificate: X = specific/actual value, C = unspecific value/conformity, T = not reported

This product only starting with a S in the batch number is certified according to the rules set out by the RSPO, Supply Chain Mass Balance (MB).

RSPO Certification Number : RSPO-V-14-13553.

This document is computer printed and therefore valid without signature.

All warranty claims in respect of the conformity of our product are subject to our General Terms and Conditions of Sale and Delivery. The data listed above reflects the criteria for our internal quality tests. We do not hereby make any express or implied warranty, whether for specific properties or for fitness for any particular application or purpose. All values are valid for the product when despatched from the works.

The Standard Test Methods can be obtained from specialized publishers. Evonik's test methods are available on request.

Recommended usage concentration

1 - 10 % VARISOFT® EQ 65 MB

Guideline formulations

If you are interested in guideline formulations please visit our homepage <https://personal-care.evonik.com>.

Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transport of chemicals
- protective measures for storage and handling
- measures in case of accidents and fire
- toxicological and ecotoxicological effects

is given in our safety data sheets.

Material: VARISOFT EQ 65 MB	Spec-Code: K00 Standard	Page 1 from 1
Print date: 11.04.2019	Valid from: 01.06.2017	
	Version: 5	

I metodi di analisi non indicati sono metodi interni del produttore ottenibili su specifica richiesta

Le informazioni sopra riportate non Vi sollevano dall'obbligo di identificare il prodotto prima dell'impiego. DERMOLIFE non si assume alcuna responsabilità per danni a persone o cose derivanti dall'impiego dei prodotti da noi commercializzati

The analytical methods not listed are internal methods of the manufacturer obtainable upon specific request

The above information will not relieve you to identify the product before use. DERMOLIFE does not assume any responsibility for damage to persons or property arising by the use of the products we sell



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C.F. MRGMFR66A69L378D

VARISOFT® EQ 65 MB

Product data record (PDR)

1. General information

1.1 Supplier

Evonik Nutrition & Care GmbH
Business Line Care Solutions
Goldschmidtstrasse 100
D-45127 Essen / Germany
personal-care@evonik.com
<http://www.evonik.com/personal-care>

1.2 Product Description

1.2.1 Raw material category/function Cationic Surfactant with Conditioning Properties

1.2.2 Ingredients according to INCI

Distearoylethyl Dimonium Chloride; Cetearyl Alcohol

1.2.3 Composition (INCI)

Components	Source	Percentage
Distearoylethyl Dimonium Chloride	vegetable / synthetic	approx. 65 %
Cetearyl Alcohol	vegetable	approx. 35 %

This composition information serves for information of our customers only.

It is neither relevant for the composition listing according to Regulation (EC) No 1223/2009, nor does it reflect the chemical composition according to the different chemical regulations in the world which is disclosed in the table "information on ingredients/hazardous components" in the relevant parts of the respective (Material) Safety Data Sheets.

1.2.4 Solvents, preservatives and other additives

INCI	CAS No.	EINECS / EC No.	content	Function
no additives				

Unless mentioned in our PDR under section 2.1 (By products) or 2.2 (CMR), no components which are listed in Annex II of the Regulation (EC) No 1223/2009 and its modifications and updates are added to and are not to be expected in the above mentioned product due to the raw materials used and the production process.

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2. Information on production process

General description of production process:

Mixture

The product is not irradiated.

VARISOFT® EQ 65 MB are produced in the strictest absence of any animal derived material of any type.

Residual plant based source (dominant origin of main constituents): palm oil, rapeseed oil

CITES:

VARISOFT® EQ 65 MB is not based on raw materials from species listed in CITES appendices.

GMO-Status:

The item does not contain ingredients that might have been derived from GM sources. However max 0.9 % cross-contamination is possible. Any protein or DNA is not present. Consequently the product will be PCR negative when tested.

2.1 By products/Impurities

1,4-Dioxane	not applicable
Residual organic solvents	not applicable
Dichloroacetic acid	not applicable
Monochloroacetic acid	not applicable
Free amines	1.2 % free amine (average)
Pesticides	meets the valid regulatory requirements for limits on agricultural pesticides
Nitrosamines	not determined
Total heavy metals	max. 20 ppm
As, Cd, Co, Cr, Hg, Ni, Pb, Sb	Each < 1 ppm
Latex	not to be expected in the product due to the raw materials used and the production process
VOC	< 3 % according to SR (Swiss Right) 814.018

Any by-products are not added intentionally during the process and are technically unavoidable.

2.2 CMR (Carcinogenic, Mutagenic or Reprotoxic)

The use in cosmetic products of substances classified as CMR substances, of category 1A or 1B or 2 under Part 3 of Annex VI to Regulation (EC) No 1272/2008 shall be prohibited.

Further Information:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:342:0059:0209:en:PDF>

Some of the CMR substances mentioned below and listed in Annex VI to Regulation (EC) No 1272/2008 may be used as starting materials or solvents for the production of our cosmetic raw materials and may require reporting under California Proposition 65 or the Safe Cosmetics Act,

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SB 484.

The presence of these prohibited substances has to be seen as non-intended. It is stemming unavoidable in good manufacturing practice.

CMR substance	Starting material	max. concentration/Remark
Ethylene Oxide	no	
Propylene Oxide	no	
Octamethylcyclotetrasiloxane (D4)	no	
2-Ethylhexanoic Acid	no	
n-Hexane	no	
Methyl Chloride	yes	< 50 ppm
Dimethyl Sulphate	no	
Formaldehyde	no	Formaldehyde is a ubiquitous material and may be detected in small traces in almost all natural and synthetic products. For details, a separate statement is available on request.

2.3 "Allergens" according to the Regulation (EC) No 1223/2009

The presence of substances, the mentioning of which is required under the column 'Other' in Annex III, shall be indicated in the list of ingredients in addition to the terms perfume or aroma.

The cosmetic raw materials and the cosmetic actives supplied by Evonik Personal Care are manufactured without the use of perfumes and fragrances. An analytical proof for the absence in traces of the substances to be mentioned in addition to the terms perfume or aroma is not performed in cosmetic raw materials, which are chemically produced.

None of these substances have been intentionally added to our cosmetic raw materials or are formed during the manufacturing process according to our knowledge of the chemistry.

2.4 Food Ingredients listed in Annex II of Regulation (EU) No 1169/2011

None of these substances have been intentionally added to our cosmetic raw materials or are formed during the manufacturing process according to our knowledge of the chemistry.

2.5 Nanomaterial

The product is not a nanomaterial according to the Cosmetics Regulation (EC) No 1223/2009, the Commission Recommendation on the definition of nanomaterial 2011/696/EU and the French Decree No. 2012-232. For details, a separate statement is available on request.

3. Microbiological status

Total Viable Count max. 100 cfu/g

Pathogens* absent/g

*Pathogens are: Enterobacteria, Pseudomonas, Enterococci, Candida albicans, Staphylococci

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4. Shelf life / storage conditions

720 days after production (unopened original packaging)

5. Regulatory Status

5.1 HS-Code 382499
EU-CN-Code 38249993

5.2 Regulatory status (chemical regulations)

Europe

Components	REACH status	CAS No.	EINECS / EC No.
Distearoylethyl Dimonium Chloride	Reg. No. 01-2120121302-78	67846-68-8	267-382-0
Cetearyl Alcohol	Reg. No. 01-2119485907-20 Reg. No. 01-2119485905-24	112-92-5 36653-82-4	204-017-6 253-149-0

Other countries/regions

Country		yes / no	Remark
Distearoylethyl Dimonium Chloride			
Australia	AICS:	no	
China	IECSC:	yes	
Canada	DSL: NDSL:	yes	
Taiwan	TCSI:	yes	
Cetearyl Alcohol			
Australia	AICS:	yes	
China	IECSC:	yes	
Canada	DSL: NDSL:	yes	
Taiwan	TCSI:	yes	

In the following countries the relevant authorities currently do not request pre-market approval for cosmetic raw materials:

Brazil, Japan, South Korea, Philippines, USA

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5.2.1 Regulatory status (cosmetic regulation)

Country		yes / no	Remark
Distearoylethyl Dimonium Chloride			
China	CFDA:	yes	
Japan	JSQI:	no	

Country		yes / no	Remark
Cetearyl Alcohol			
China	CFDA:	yes	
Japan	JSQI:	yes	JSQI No. 101316, but specifications not controlled

6. Toxicology and Ecotoxicology

Refer to summary of ecotoxicological and toxicological data

7. Packaging size

560 kg (28 x 20 kg bag)

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