

Sulfate-free and COSMOS suitable Hair Care The COSMOS-standard defines the criteria that companies must meet to prove to consumers that their products are either organic or natural cosmetics, produced according to the highest possible sustainability practices.**

The Cosmos-standard helps consumers identify truly natural hair care products. Cosmos suitable



In an effort to live more **sustainably**, younger adults are looking for ways to reduce their environmental footprint, and they expect brands and retailers to do the same.

In today's modern world, sustainability is at the forefront of consumers' minds, suggesting that broader societal trends also contribute to younger adults' ecofriendly tendencies.

Brands must lead the movement on **sustainability** and zero-waste in order to respond to and proactively shape this consumer lifestyle shift.*

Source: *GNPD Personal Care Consumer US, July 2020 / **https://www.cosmos-standard.org/

Sulfate-free claim increases continuously across all categories of Personal Care. The most impacted category is hair care with silicone free and sulfate-free as the most important ones.

> Consumer are demanding hair care products with formulations sulfate-free.



BT Chemical Distribution

Top 5 "free from" claims* in Hair Care product launches (2009-2021)



Source: GNPD Europe Personal Care 2022

Sulfate-free

ISO 16128 provides guidelines on definition and criteria for natural and organic cosmetic ingredients and products. This guideline allows you to indicate the **percentage of natural origin**.

Having products with high % of Natural Origin is well perceived among consumers.

% of Natural origin



ISO 16128 is the internationally agreed standard that cosmetic manufacturers can choose to apply or not, but is not legally binding. It is divided in 2 parts:

Part 1 covers definitions for ingredients (published, Feb. 2016).

Part 2 defines rules for calculation of the **natural & organic** content in ingredients and products (published, August 2017).





Source: GNPD Personal Care 2022

Providing our solutions for Hair Care products with formulation:

Cosmos + Sulfate-free+ >90% Natural Origin

The Cosmos standard can help identify truly environmentally friendly and sustainable products. The second secon

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Consumers' demand for Sulfate free products has increased significantly in the last years. Claiming "% of natural origin" according to ISO16128 provides more transparency for consumers.

BTC

Chemical Distribution



Top 5 most used alternative Surfactants







BASF Alternative Surfactant Portfolio

Suitable for Sulfate-Free and COSMOS conformity

Surfactants	INCIName	Eco-status	Preservation
Plantacare [®] Types	Lauryl Glucoside, Decyl Glucoside, Coco-Glucoside, Caprylyl/Capryl Glucoside	999	no
Plantapon [®] LGC Sorb *	Sodium Lauryl Glucose Carboxylate (and) Lauryl Glucoside	22	yes
Plantapon [®] SF-N *	Sodium Cocoamphoacetate (and) Glycerin (and) Lauryl Glucoside (and) Sodium Cocoyl Glutamate (and) Sodium Lauryl Glucose Carboxylate		no
Plantapon [®] ACG 50	Sodium Cocoyl Glutamate (INCI in formulations at pH < 8) Disodium Cocoyl Glutamate (as delivered pH 9.5 – 10.5)		no
Plantapon [®] ACG 35	Sodium Cocoyl Glutamate (INCI in formulations at pH < 8) Disodium Cocoyl Glutamate (as delivered pH 9.5 – 10.5)		no
Dehyton [®] AB 30 *	Coco-Betaine	1 1	no
Dehyton [®] PK 45 *	Cocamidopropyl Betaine		no
Dehyton [®] K COS *	Cocamidopropyl Betaine		no
Dehyton [®] MC *	Sodium Cocoamphoacetate		no

* According to Appendix V.3 – The petrochemical moieties in the products must not exceed a total of 2% of the total finished product



COSMOS suitable & Sulfate Free Performance meets Sustainability



Shampoos



Chemical Distribution

- Sulfate-Free Fluid Shampoo HB-DE-21-038-11
- Transparent Sulfate Free Shampoo HB-DE-21-038-17
- Easy Combing Sulfate-Free Shampoo HB-DE-21-038-30
- Easy Combing Sulfate-Free Shampoo 2.0 HB-DE-21-038-33

All shampoo formulations can be found in our concept.

You can contact us if you would like to know more in detail about them



Transparent Sulfate-Free Shampoo HB-DE-21-038-17

Clear sulfate-free formulation is designed to provide a gentle and mild cleaning performance. It is suitable for everyday use.

- COSMOS compliance.
- Sulfate free formulation.
- Made with 99% of natural origin*.
- Clear transparent formulation.
- Good combing performance

Key Ingredients:

Dehyquart[®] Guar TC Guar Hydroxypropyltrimonium Chloride

Conditioning polymer derived from guar flour, especially designed for transparent to clear rinse off formulations.

Plantacare[®] 2000 UP Decyl Glucoside

Nonionic, mild surfactant obtained from renewable, plant-derived feedstock. Suitable for various cosmetic cleansing preparations. Creates a perfect synergy of foaming performance and effective cleansing.

Plantapon[®] ACG 50 Sodium Cocoyl Glutamate

Anionic surfactant suitable for personal care formulations as mild shampoos.

Ansparent Sulfate Free Shampoo HB-DE-21-038-17 G-DE-00045

* according to ISO 16128 (based on % of renewable C) provided that glycerin, ethanol and citric acid are from natural sources



Transparent Sulfate-Free Shampoo

HB-DE-21-038-17

Phase	Ingredients	INCI	% by weight	t Function
А	Water, demin.	Aqua	67.00	
	Sodium Benzoate	Sodium Benzoate	0.50	Preservative
	Rheocare® XGN	Xanthan Gum	0.45	Rheology modifier
В	Plantacare [®] 2000 UP	Decyl Glucoside	12.00	Surfactant
	Perfume	Parfum	0.35	Fragrance
	Plantasil [®] Micro	Dicaprylyl Ether, Decyl Glucoside, Glyceryl Oleate	1.50	Conditioning agent
С	Plantapon [®] ACG 50	Sodium Cocoyl Glutamate	8.00	Surfactant
D	Water, demin.	Aqua	10.00	
	Dehyquart [®] Guar TC	Guar Hydroxypropyltrimonium Chloride	0.20	Conditioning agent
	Citric Acid (50% solution)	Citric Acid	q.s.	Neutralizing agent
Е	Citric Acid (50% solution)	Citric Acid	q.s.	pH Adjustment



Transparent Sulfate-Free Shampoo

HB-DE-21-038-17

Specifications:

- Viscosity (Brookfield; RVF; spindle 4; 10 rpm; 23°C) 3 800 mPas
- pH Value (23°C) 4.5 4.9
- Appearance Transparent and Clear

Manufacturing Process:

- Phase A : Dissolve sodium benzoate in water. Add Rheocare XGN while stirring and stir until a homogeneous gel is built.
- Phase B: Premix phase B until everything is homogeneous. Then add phase C to phase B.
- Phase D: Add Dehyquart to the water while stirring. Add some drops of citric acid 50% and stir until a clear homogeneous gel is built (at least stir about 15 minutes).
- Add phase B+C to phase A and stir until everything is homogeneous. Add phase D to phase A+B+C and stir until homogeneous. Adjust the pH with phase E.

Perfume:

Düllberg: Kiwi

Performance:

- Residual dry combing work 34.1%
- Residual wet combing work 93.2%







COSMOS suitable & Sulfate-Free Performance meets Sustainability



Conditioners

Chemical Distribution

- Conditioning Cream HB-DE-21-038-46
- Pasty Conditioning Cream HB-DE-21-038-47
- Creamy Conditioner HB-DE-21-038-48

All conditioner formulations can be found in our concept.

You can contact us if you would like to know more in detail about them



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Conditioning Cream

HB-DE-21-038-46

G-DE-00048

le for experimental use only

Conditioning Cream HB-DE-21-038-46

An extra white and creamy formulation that shows excellent conditioning effect with outstanding wet and dry combing work.

- COSMOS compliance.
- Sulfate free formulation.
- Made with 98.3% natural origin*.
- White creamy caring appearance.
- Excellent wet and dry combing work.

Key Ingredients:

Cetiol[®] SB 45 Butyrospermum Parkii Butter

Special fraction of the natural shea butter, characterized by a high melting point and higher content of unsaponifiable.

Gluadin[®] Kera-PLM Hydrolyzed Vegetable Protein

The mild ingredient is derived from 100% renewable feedstocks and produced by an enzymatic method (non-GMO). It can be processed cold and qualifies for hair care products with COSMOS.

Dehyquart[®] Guar HP Guar Hydroxypropyltrimonium Chloride

High Performance conditioning polymer derived from guar flour, with superior conditioning properties for all kind of opaque/pearlized rinse off formulations.

according to ISO 16128 (based on % of renewable C) provided that glycerin, ethanol and citric acid are from natural sources



Conditioning Cream

HB-DE-21-038-46

Phase	Ingredients	INCI	% by weight	t Function
А	Water, demin.	Aqua	73.80	
В	Sodium Benzoate	Sodium Benzoate	0.50	Preservative
	Dehyquart [®] Guar HP	Guar Hydroxypropyltrimonium Chloride	0.20	Conditioning agent
	Varisoft EQ 65 MB (Evonik)	Distearoylethyl Dimonium Chloride, Cetearyl Alcohol	5.00	Conditioning agent
	Lanette® O	Cetearyl Alcohol	10.00	Consistency agent
	Cetiol [®] CC	Dicaprylyl Carbonate	3.30	Emollient
С	Cetiol [®] SB 45	Butyrospermum Parkii Butter	1.00	Emollient
	Coconut Oil	Cocos Nucifera (Coconut) Oil	5.00	Emollient
	Gluadin [®] Kera-P LM	Hydrolyzed Vegetable Protein	1.00	Active ingredient
	Citric Acid (50% solution)	Citric Acid	q.s.	pH Adjustment
	Perfume	Parfum	0.20	Fragrance



Conditioning Cream

HB-DE-21-038-46

Specifications:

- Viscosity (Brookfield; RVF; spindle 4; 10 rpm; 23°C) 287 500 mPas
- pH Value (23°C) 4.5 4.9
- Appearance White

Manufacturing Process:

- Phase A: Heat up the water to 80° C. Add sodium benzoate w hile stirring at 80° C and after that add Dehyquart Guar HP to phase A at 80° C and add some drops of citric acid and stir unt il a homogenous gel is built.
- Phase B: Heat up phase B to 90° C. Add phase B to phase A a t 80° C and stir until a homogenous emulsion has built.
- Cool down and homogenize the formulation at 50° C.
- Phase C: Add phase C to A+B at 30° C one after an other and adjust the pH to 4.5-4.9

Perfume:

Düllberg: Mild Grapefruit

Performance:

- Residual dry combing work 28.4%
- Residual wet combing work 12.0%







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