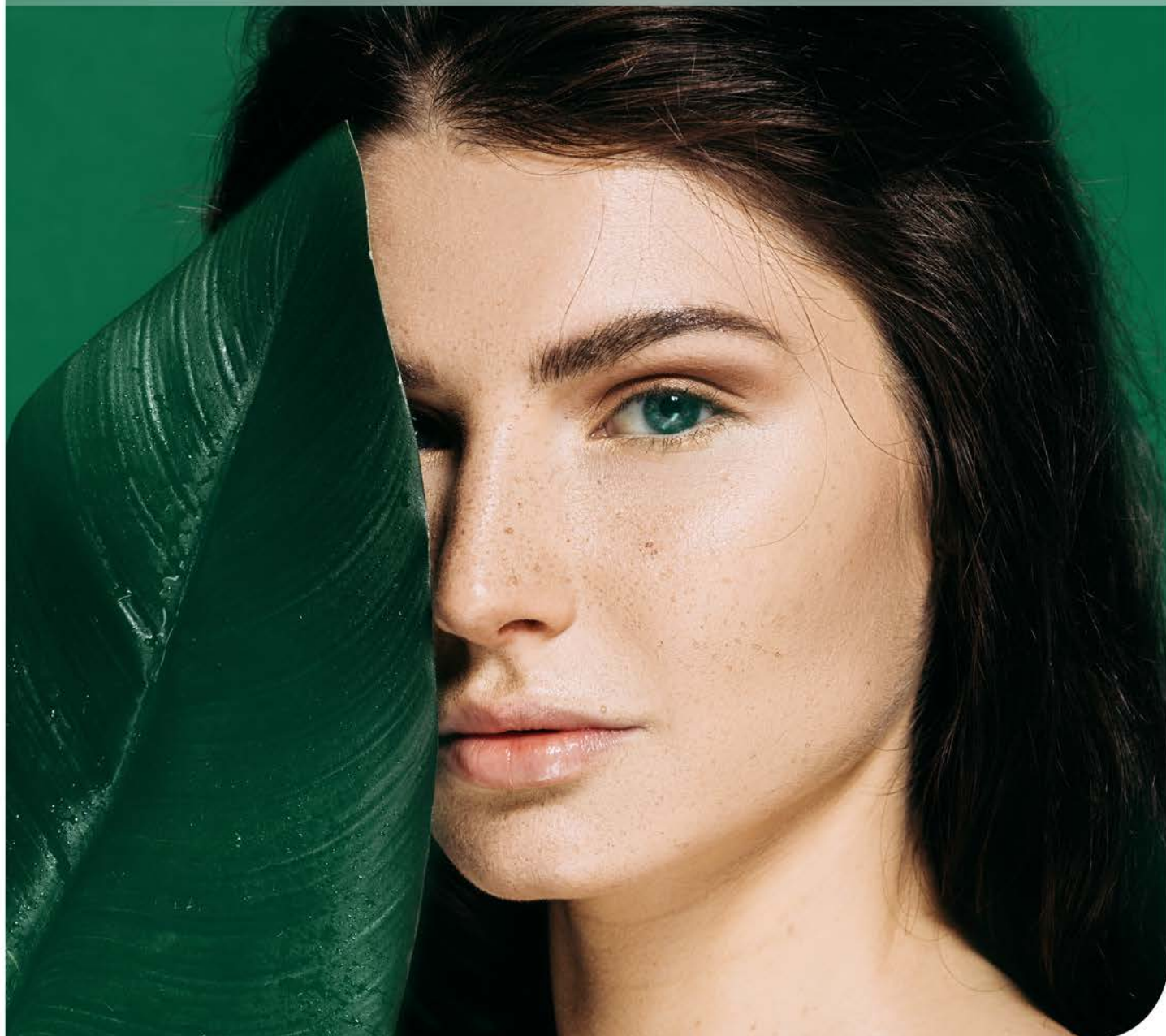


BioROKAMINA K40HC

Cocamidopropyl Betaine

PCC **Greenline**[®]



pcc
Exol

BioROKAMINA K40HC



Cocamidopropyl Betaine

BioROKAMINA K40HC is an ecological amphoteric surfactant of a very high purity, from the betaine group. It is available as a light yellow water solution, in which the concentration of the active substance is about 40% (a higher concentration compared to the ROKAMinas of the K30 series). BioROKAMINA K40HC is produced using a raw material called Greenline MCAA 80% UP Solution, i.e. very pure, 80% monochloroacetic acid produced on the base of the natural acetic acid obtained in the natural fermentation process. The use of Greenline MCAA 80% in the production of BioROKAMINA K40HC increases the value of its natural origin index (in accordance with ISO 16128, manufacturer's declaration available on customer's request). In addition, BioROKAMINA K40HC is made from a base of palm kernel oil obtained from the seeds of the African oil palm (*Elaeis guineensis* Jacq.), also known as palm oil.

BioROKAMINA K40HC is a 100% ecological surfactant that is safe for people and the environment. Its raw material composition is a determinant of the high level of the natural origin index of this product. Therefore, this surfactant is especially recommended for use in cosmetic formulations, in particular in natural, vegan and hypoallergenic cosmetics, or washing preparations with a very gentle effect on the skin and hair. BioROKAMINA K40HC is a safe and highly efficient cosmetic ingredient that can be safely used in Eco, Organic, Vegan, Paraben Free and GMO Free products.

BioROKAMINA K40HC version also available as RSPO Mass Balance (MB)



BioROKAMINA K40HC is a surfactant unique in its composition, used as a component of natural and ecological cleansing cosmetics, designed to remove impurities from the surface of the hair and skin. The product is characterised by excellent foaming properties in a wide range of pH and water hardness levels. In combination with anionic surfactants (SLS, SLES), it shows a positive, synergistic increase in the foam volume and improves the stability of preparations. BioROKAMINA K40HC is a very good rheology modifier in preparations containing anionic surfactants in the presence of electrolytes. Moreover, the product shows high stability in solutions with a high salinity content. These features have the effect of increasing the efficiency of the use of surfactants in finished cosmetic formulations.

BioROKAMINA K40HC is a surfactant which can also successfully act as a hydrotrope, i.e. a substance that improves the clarity of cosmetic formulations. It is a product that works perfectly as a component of personal care products because it dramatically reduces irritating and sensitising properties in comparison to standard ingredients used in the cosmetics industry.

BioROKAMINA K40HC perfectly smooths and softens the skin and hair, making them sleek and pleasant to the touch. An additional advantage of the product is the ability to mitigate the irritating effects of anionic surfactants contained in the formulation. Moreover, it has an antistatic effect – reducing the static charge of the hair.

In addition, BioROKAMINA K40HC is used as a component of All Purpose Cleaning (APC) preparations, mainly in household spray cleaners. These products are used for glass and glossy surfaces due to the lower tendency to leave streaks. This property is used on the surfaces of black or stainless steel appliances, metal or ceramic sinks, chrome fittings, polished stone countertops, glass panes or mirrors.

Advantages of the product:

- product made from natural raw materials (palm kernel oil derivatives from certified sources and the unique **Greenline MCAA 80% UP**);
- very gentle action on the skin;
- reduces the irritating effect of anionic surfactants contained in washing cosmetics;
- use in cosmetic preparations for sensitive skin prone to irritation;
- use in care cosmetics for children;
- very good foaming and thickening properties in a wide range of pH and water hardness levels;
- has an antistatic effect;
- biodegradable product;
- product manufactured on installations certified with the federal GMP EFCI certificate (Good Manufacturing Practices implemented in accordance with the European Federation for Cosmetic Ingredients standard).

BioROKAMINA K40HC

Cocamidopropyl Betaine

TECHNICAL REQUIREMENTS

Appearance at temperature (20÷25)°C	light yellow liquid
Colour (Hazen units) at (20÷25)°C	max 150 (ASTM D1209-05(2019), spectrophotometric method)
pH of product	4.5 ÷ 5.5 (PN-EN 1262:2004, at 20°C)
Active substance, %(m/m)	37.0 ÷ 42.0 (calculation method: 100% - (% water + % chloride))
Water, %(m/m)	52 ÷ 56 (PN-ISO 760:2001, external dissolution method)
Chlorides as NaCl, %(m/m)	5.8 ÷ 7.3 (LA/2152)

INFORMATIVE DATA*

Molecular weight, g/mol	approx. 360
Solubility in water	unlimited
Other solvents	ethanol, isopropyl alcohol
Density at 25°C, g/mL	approx. 1.07
Solidification point, °C	below -10
Preservative	lack



BioROKAMINA K40HC MB

Cocamidopropyl Betaine

TECHNICAL REQUIREMENTS

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BioROKAMINA K40HC
is a safe and highly efficient
cosmetic ingredient.



Applications



cosmetics and detergents



shampoos and colouring shampoos



hair conditioners



shaving foams



bubble bath



liquid soaps



shower gels



face cleansers



oral hygiene products



intimate hygiene products

BioROKAMINA K40HC is a 100% ecological surfactant that is safe for people and the environment.



HAND FOAM (KD-206)

Phase	INCI name	Brand name	Concentration [%]	Function
A	Aqua		up to 100	solvent
	Glycerin		1.00	moisturising agent
	Sodium Lauryl Sulfate	ROSULfan L/PH	2.00	surfactant
	Coco-Glucoside		8.00	surfactant
	Betaine		1.00	active
	Aqua, Sodium Benzoate, Potassium Sorbate		0.50	preservative
	Lactic Acid		q.s	active/ pH adjuster
	Aloe Barbadensis Leaf Juice Powder		0.10	active
	Parfum		q.s.	fragrance
	B	Cocamidopropyl Betaine	BioROKAMINA K40HC	2.00

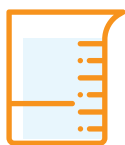
APPEARANCE

visual method

clear, colorless liquid

pH

4.5 – 5.5



1. In a main vessel combine ingredients from phase A. Add ingredients from phase A to water. Mix until uniform.
2. Add BioROKAMINA K40HC during mixing. Mix until uniform.
3. If necessary, adjust pH by Lactic Acid to 4.5 – 5.5.

COOL BODY WASH (KD-205)

Phase	INCI name	Brand name	Concentration [%]	Function
A	Aqua		up to 100.00	solvent
	Benzyl Alcohol, Benzoic Acid, Dehydroacetic Acid, Tocopherol		0.70	preservative
	Betaine		0.50	active
B	Ammonium Lauryl Sulfate	ROSULfan A	25.00	surfactant
C	Cocamidopropyl Betaine	BioROKAMINA K40HC	4.00	surfactant
D	Parfum		q.s.	fragrance
	Menthol		0.10	refreshing
E	Sodium Chloride		1.80	thickener



APPEARANCE	visual method	transparent gel
pH		4.5 – 5.5
VISCOSITY [cP]	Brookfield LV, spindle 34, speed 6.0 RPM, T: 25°C	2000 – 6000

- In a main vessel combine ingredients from phase A. Mix until uniform.
- Add ROSULfan A while mixing. Mix until uniform.
- Combine ingredients from phase D - mix until uniform.
- Add slowly BioROKAMINA K40HC and Parfum/ Menthol while mixing. Mix until uniform.
- Add slowly Sodium Chloride. Mix until uniform. Add Sodium Chloride in small portions. Control the viscosity after each portion.

PCC EXOL SA

Sustainable technologies for new generations



PCC EXOL SA is a company that combines cutting-edge technologies with rich experience in production of surfactants (surface active agents). The company is located in Brzeg Dolny (Poland), where anionic, nonionic and amphoteric surfactant production plants have been launched. Due to the flexible production processes, the company offers a wide spectrum of surfactants and industrial formulations, which are often suited for the individual customers operating in plenty of various industry sectors. As one of the leading surfactant manufacturers, PCC EXOL SA carries out new investment projects and implements innovative technologies based on the global sustainability trends.

PCC EXOL SA portfolio includes surfactants with a broad range of applications. Besides of the mass production for personal care and detergents industry, the substances produced by PCC EXOL SA also include specialized products used in various branches, such as textile, agrochemical, metal cleaning, oil drilling, building & construction, paints & coatings, paper industry, extraction & drilling, and many others. The company comprehensive portfolio is continuously enriched with new innovative products, which meet even the strictest market requirements and adapt to the individual needs of customers. This is possible due to the dynamic development of the research facili-

A large background graphic consisting of a grid of light blue and white hexagons, some of which are slightly offset to create a 3D effect. On the left side, there are faint, glowing blue lines and dots, resembling a molecular or network structure.

PCC EXOL SA combines innovative technologies with experience in designing, producing and selling surfactants and chemical formulations

ties, flexible production, knowledge as well as experienced personnel.

PCC EXOL SA has the key competence necessary for a worldwide production of surfactants. The ongoing projects will soon bring the new opportunities for the company's further development and expansion into new markets. The company offers not only a wide portfolio and professional servicing but most of all flexible production and comprehensive system solutions that meet individual customer demands. The strategic PCC EXOL SA investor is PCC SE, operating on international markets of the chemical raw materials, transport, energy, coal,

coke, petrol, plastics and metallurgy. PCC SE includes 80 companies operating in 39 different locations in 17 countries.



In accordance with our environmental concerns, this publication from the PCC Group was printed on Cocoon Silk - ecological double-sided-coated matt paper. This paper is made of 100% waste paper using an environmentally friendly technology. The FSC® Certificate confirms that the raw materials used in the paper production process come from well-managed forests or other certified and controlled sources.

TEXT PAGES

Brand	Cocoon Silk
Grammage	150
Number of pages	12

COVER PAGES

Brand	Cocoon Silk
Grammage	250
Number of pages	4

PUBLICATION

Size (cm)	21 x 29.7
Quantity	100

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- 11**  kg of landfill
- 1**  kg CO₂ and greenhouse gases
- 15**  km in an average European car
- 447**  litres of water
- 24**  kWh of energy
- 18**  kg of wood

Carbon footprint data evaluated by Labelia Conseil in accordance with the Bilan Carbone® methodology. Calculations are based on a comparison between recycled paper versus virgin fibre paper - according to the latest European BREF data (virgin fibre paper) available.



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