



PERFECT THICKENING SOLUTION

RHEO2GREEN SERIES

ONE OF THE CHALLENGES FOR FORMULATING GLUTAMATES IS THE FORMATION OF A STABLE MICELLAR THICKENING SYSTEM. WITH THE RHEO2GREEN-SERIES, WE OFFER READY-TO-USE SURFACTANT CONCENTRATES, BUILDING UP A REMARKABLE VISCOSITY WITH OUTSTANDING SKIN FEEL AND EXCELLENT RHEOLOGICAL PROPERTIES.

After dilution of Rheo2Green products with water (approx. 1:3 to 1:5) and reducing the pH in a cold process, the viscosity will increase immediately, leading to desirable flow and foam behavior of cleansing formulations. This is an inventive way to thicken in absence of polymers.

- Rich fine-pored foam
- Outstanding micellar self-thickening at pH 4.8 – 5.4
- Cold processable
- Mildness to skin
- Good cleansing ability
- Free of sulfates, solvents, fragrances

Product	INCI	Dry Matter (%)	PO / PKO*	pH	Certification
Rheo2Green1	Aqua, Lauryl Glucoside, Disodium Cocoyl Glutamate	42	0 / 16	9	COSMOS
Rheo2Green1 MB		42	0 / 7	9	COSMOS, NATRUE, RSPO - MB**
Rheo2Green2	Aqua, Lauryl Glucoside, Disodium Cocoyl Glutamate, Sodium Benzoate, Potassium Sorbate	42	0 / 16	9	COSMOS
Rheo2Green2 MB		42	0 / 7	9	COSMOS, NATRUE, RSPO - MB**
Rheo2Green3	Aqua, Sodium Lauroamphoacetate, Disodium Cocoyl Glutamate	42	0 / 16	9.5	
Rheo2Green3 MB		42	0 / 10	9.5	COSMOS in progress, RSPO - MB**
Rheo2Green4	Aqua, Cocamidopropyl Betaine, Sodium Lauroyl Sarcosinate	31	0 / 8	7.0	
Rheo2Green4 MB		31	0 / 8	7.0	RSPO - MB**

* PO Palm oil / PKO Palm kernel oil (%)

** RSPO Certificate Number CU-RSPO SCC-846664

SKIN CARE

- Shower gels
- Facial cleansing gels
- Micellar water
- Liquid hand soaps
- Medical soaps
- Baby bubble bath
- Wet wipes
- Shaving gels
- Natural / green / certified cosmetics
- Sulfate-free rinse-off products

HAIR CARE

- Mild baby shampoos
- Shampoos, conditioning shampoos

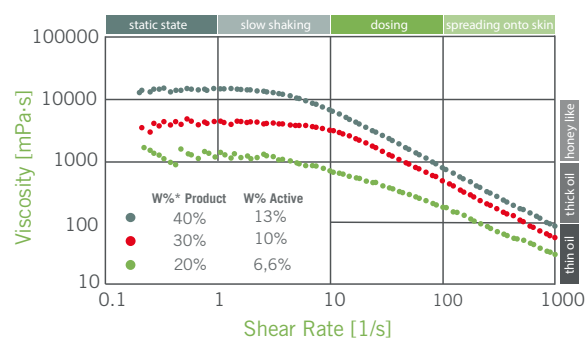
HOME CARE

- Laundry detergents
- Mild surface cleaning
- Manual dish wash

PET CARE

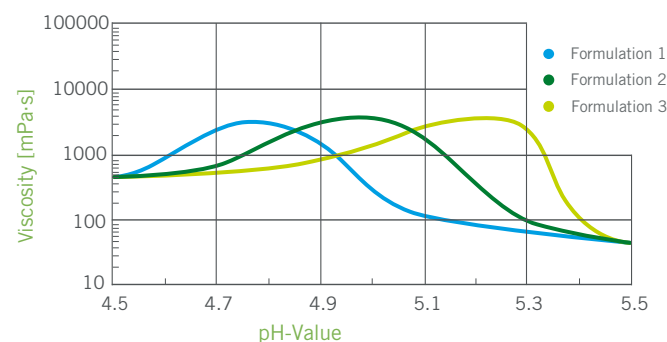
- Dog shampoos
- Mild cleaning products for pets

NATURAL PERCEPTION OF VISCOSITY



Rheological properties are based on pure micellar thickening, which is responsible for the desired viscoelasticity. Such flow behavior provides perfect natural sensation that is important for consumer acceptance: honey-like at slow shaking, thick oil when dosing, thin oil during spreading onto skin.

THICKENING AT THE RIGHT pH



The optimal pH for the maximum of viscosity can slightly move, depending on the formulation composition. Some ingredients can have an influence on the efficacy of thickening. Moreover, viscosity can be regulated through the variation of Rheo2Green concentration.

BUBBLE BATH

Part	INCI / Ingredient	% w/w
A	Aqua	60
	Rheo2Green3 MB Sodium Lauroamphoacetate, Disodium Cocoyl Glutamate, 42 %	30
	PERLASTAN SL MB Sodium Lauroyl Glutamate, 25 %	5
	Aloe Barbadensis Gel	2
	Chamomilla Recutita Extract	3
B	Lactic Acid	qs to pH
C	Preservatives, Fragrances etc.	qs

MANUFACTURING PROCEDURE

- Mix Part **A** until formulation is homogeneous
- Adjust pH-value with Part **B**
- Add Part **C**

PROPERTY

- Appearance: light yellowish, clear gel
- pH-value: 5.5
- Viscosity (Brookfield, Sp. 5, 5 rpm, RT): 2500 - 2800 mPa·s

ALL GREEN THICKENED SHAMPOO

Part	INCI / Ingredient	% w/w
A	Aqua	49.5
	RHEO2GREEN1 MB Lauryl Glucoside, Disodium Cocoyl Glutamate, 42 %	45.00*
B	Panthenol, 75 %	2.50
	Chamomilla Recutita Extract	2.50
	Hydrolyzed Wheat Protein	0.5
C	Lactic Acid	qs to pH
D	Preservatives, Fragrances etc.	qs

*Preservative might be based on Potassium Sorbate and Sodium Benzoate

MANUFACTURING PROCEDURE

- Mix Part **A**
- Add Part **B** to Part **A** in listed order and mix until formulation appears homogeneous
- Adjust pH-value with Part **C**
- Add Part **D**

PROPERTY

- Appearance: light yellowish, clear gel
- pH-value: 4.8 - 5.0
- Viscosity
 - a.)*** 45.00 % Part A: 4200 - 4500 mPa·s
 - b.)*** 37.50 % Part A: 1650 - 2900 mPa·s (Brookfield, Sp. 5, 5 rpm, RT)

SPORT SHOWER GEL WITH ODOUR CONTROL

Part	INCI / Ingredient	% w/w
A	Aqua	50.00
	GLDA, 47%	2.00
	RHE02GREEN4 MB Cocamidopropyl Betaine, Sodium Lauroyl Sarcosinate, 30%	45.00
	POLYFIX ZRC 30 PAC Propylene Glycol, Zinc Ricinoleate, Arginine, Citric Acid	2.00
	Panthenol	1.00
B	Lactic Acid	qs to pH
C	Preservatives, Fragrances etc.	qs

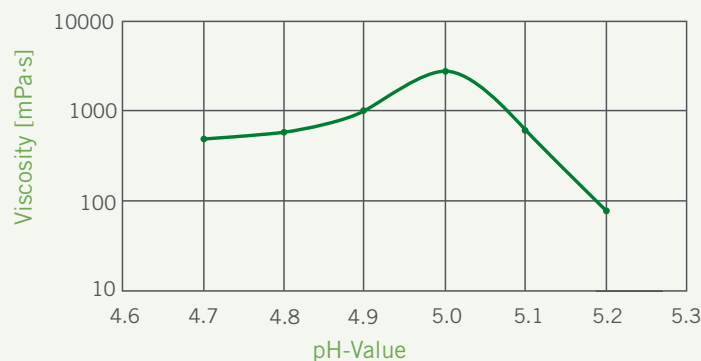
MANUFACTURING PROCEDURE

- Mix Part **A** in listed order while stirring until formulation appears homogeneous
- Adjust pH Value with Part **B**
- Add Part **C**

PROPERTY

- Appearance: colourless, clear gel
- pH-value: 5.0
- Viscosity (Brookefield, Sp. 5, 5 rpm, RT): 2200 - 2500 mPa·s

MAXIMUM VISCOSITY AT pH 5



pH Value	Viscosity in mPa·s
5.2	80
5.1	640
5.0	2410
4.9	1040
4.8	600
4.7	480

(Brookfield, Sp. 5, 5 rpm, RT)



**WATCH:
RHE02GREEN
TUTORIAL**



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