Rheozan® SH

Natural Rheology Polymer for Smooth & Velvety Skin Feel

SOLVAY

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Rheozan® SH is a rheology modifier that is certified 100% natural. It is an excellent stabilizer of formulations containing acidic actives and electrolytes. It provides a smooth and velvety skin feel and helps eliminate tackiness.

INCI: Succinoglycan

Features

- Validated natural by Ecocert
- Supplied as a free-flowing powder
- Typical use level: 0.2-1.0%

Excellent Performance with Acidic Actives

Rheozan® SH is highly compatible with acidic actives. Contrary to expectations, the viscosity build of Rheozan® SH increases with higher levels of acidic actives, as demonstrated in Figure 1. Oil-in-water emulsions containing acids that are stabilized by Rheozan® SH demonstrated excellent long-term stability.

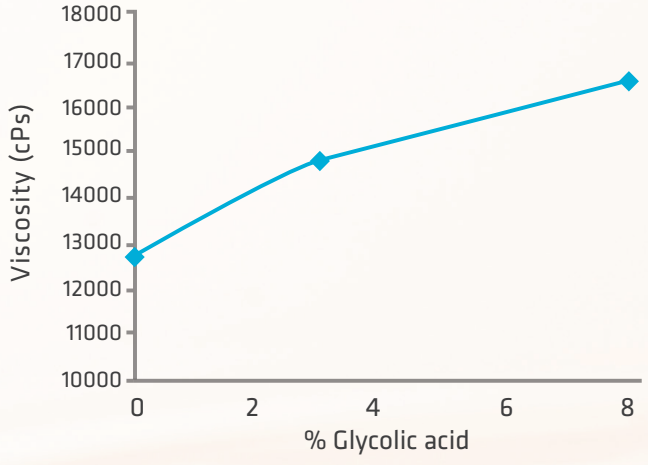

Figure 1: Effect of acidic active on the viscosity of an oil-in-water emulsion with Rheozan® SH at 0.5%

Excellent Performance with Electrolytes

Another key performance attribute of Rheozan® SH is its electrolyte tolerance. As shown in Figure 2, Rheozan® SH builds viscosity better in the presence of high salt levels, with excellent long-term stability.

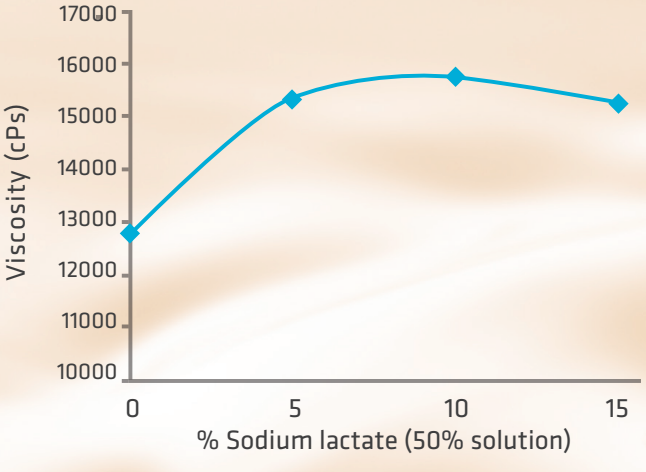

Figure 2: Effect of electrolytes on the viscosity of an oil-in-water emulsion containing 0.5% Rheozan® SH

Key Benefits

- Smooth, velvety skin feel
- Eliminates tackiness of oil-in-water formulations
- Excellent stabilizer for systems containing acidic actives, salts & electrolytes
- Wide pH range compatibility (<3 to >12)
- Hot- & cold-processable

Applications

- Skin & sun care formulations with salts/electrolytes or electrolyte-containing actives
- Skin & sun care formulations containing acidic active ingredients
- Natural, "Masstige" to Prestige skin care formulations where excellent skin feel is a key consideration

Formulating with Rheozan® SH

- It is recommended to pre-mix Rheozan® SH with glycerin, glycols and similar materials for easier dispersion and to avoid agglomeration. Add this premix to the water phase of your formulation and mix until Rheozan® SH is completely hydrated.
- No pH adjustment is necessary.
- Rheozan® SH is suitable for both hot and cold processes.
- Rheozan® SH is also recommended to improve the skin feel of oil-in-water formulations. A dosage of 0.2% is typically enough to provide a smooth, velvet after-feel to o/w formulations.

Skin Fairness Facial Cream

PHASE	Ingredients (INCI NAME)	Function	W/W%
A	Deionized Water	-	QS
	Mackamide® LAME-100(1) (Acetamide MEA (and) Lactamide MEA)	Humectant	4.0
	Rheozan® SH(1) (Succinoglycan)	Thickener	0.3
B	**Alkamuls® GS 100**(1) (Glyceryl Stearate (and) PEG-100 Stearate)	Emulsifier	4.0
	Isononyl Isononanoate	Emollient	3.0
	Mackaderm® OC(1) (Ethyhexyl Cocoate)	Emollient	6.0
	Neo Heliopan AV(2) (Ethylhexyl Methoxycinnamate)	Sunscreen active	5.0
	Neo Heliopan OS(2) (Ethylhexyl Salicylate)	Sunscreen active	4.0
	Cetearyl Alcohol	Co-emulsifier	2.0
C	Lactic acid and Fruit acids	Active	4.0
D	Preservative	Preservative	0.5

pH = 4.4; Brookfield Viscosity @25C, 10rpm, s#6: 18,800 mPas
Stability: 3 months at 25 °C and 40 °C; 1 month at 50 °C

Process
Disperse Rheozan® SH with Mackamide® LAME-100. When fully wet, add deionized water and mix until homogenous. Start heating Phase A to 70° C. Combine all ingredients in Phase B and heat to 70° C. Add Phase B to Phase A and emulsify using a homogenizer. Homogenise for 2 minutes. Cool down the batch to 40° C. Add Phase C & D with continuous mixing.

Dual Anti-Ageing & Hydrating Serum

PHASE	Ingredients (INCI NAME)	Function	W/W%
A	Deionized Water	-	QS
	Rheozan® SH(1) (Succinoglycan)	Sensory Modifier	0.2
	Mackamide® LAME-100(1) (Acetamide MEA (and) Lactamide MEA)	Humectant	3.0
	Glycerin		2.0
	Propylene Glycol		2.0
	Rheomer® SC Plus(1) (Acrylates/Beheneth-25 Methacrylate Copolymer)	Emulsifier & Rheology Modifier	3.5
	Triethanolamine	pH adjuster	QS
B	**Mackaderm® MCT**(1) (Caprylic/Capric Triglyceride)	Emollient	2.0
	Ethylhexyl hydroxystearate	Emollient	1.0
	Cyclomethicone	Emollient	3.0
	Dimethicone	Emollient	2.0
C	Matrixyl 3000(3)	Active	3.0
	Dragosine Plus(2) (Water, Pentylene Glycol, Carnosine)	Active	1.0
	Preservative	Preservative	0.5

pH =7; Brookfield Viscosity @25C, 10rpm, s#6 = 14,680 mPas
Stabiity: 3 months at 25° C and 40° C; 1 month at 50° C

Process
Disperse Rheozan® SH with glycerin, Mackamide® LAME and propylene glycol then add water. Add Rheomer® SC Plus with continuous mixing. Add triethanolmine to adjust pH to 6.5-7.0. Combine all ingredients in Phase B and add to Phase A with continuous mixing until homogenous. Add phase C. Check the final pH.

Suppliers: 1-Solvay 2-Symrise 3-Sederma

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