



Rheology modifiers guideline for skin care and skin cleansing applications



Skin Care	Viscosity Build		Emulsifying		Stabilizing		Sensory Benefits	
Creams	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ 22 ¹ METHOCEL™ 40-0100 ² WALOCEL™ CRT 40000 PA ²	3-6% 3-6% 1-3% 0.1-0.3% 0.1-0.5%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ 22 ¹	3-6% 3-6% 0.8-2%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ Excel ¹ ACULYN™ 38 ¹ CELLOSIZETM PCG-10 ²	3-6% 3-6% 0.5-1% 0.5-1% 0.5-1.5%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹	3-6% 3-6%
Gel creams	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ 28 ¹	3-6% 3-6% 1-3%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ 28 ¹	3-6% 3-6% 1-5%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ Excel ¹ ACULYN™ 38 ¹	2-3% 2-3% 0.5-1% 0.5-1%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹	3-6% 3-6%
Alpha Hydroxy Acid Creams	ACULYN™ Siltouch ¹ ACULYN™ 44 ¹ CELLOSIZETM PCG-10 ²	4-7% 1-3% 0.5-1%	ACULYN™ Siltouch	4-7%	ACULYN™ Siltouch ¹ CELLOSIZETM PCG-10 ²	4-7% 0.2-1%	ACULYN™ Siltouch ¹	4-7%
Foundations/BB/CC creams	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ 38 ¹ METHOCEL™ 40-0202 ² WALOCEL™ CRT 3000 PA ²	3-6% 3-6% 1-3% 0.1-0.3% 0.3-0.8%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ 22 ¹ ACULYN™ 28 ¹	3-6% 3-6% 1.5-3% 0.8-2%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ CELLOSIZETM QP-4400H ² ACULYN™ Excel ¹ ACULYN™ 38 ¹	3-6% 3-6% 0.5-1% 0.5-2% 0.5-3%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹	3-6% 3-6%
Serums	ACULYN™ 28 ¹ ACULYN™ 88 ¹ CELLOSIZETM PCG-10 ²	1-2% 2-3% 0.2-1%	ACULYN™ 28 ¹	1-5%	ACULYN™ Excel ¹ ACULYN™ 88 ¹ ACULYN™ 38 ¹	0.5-1% 2-3% 0.5-1%		
Lotions	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ CELLOSIZETM PCG-10 ²	2-3% 2-3% 0.2-1.0%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ 22 ¹	2-3% 2-3% 1.5-2%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹ ACULYN™ Excel ¹ ACULYN™ 88 ¹ ACULYN™ 38 ¹	2-3% 2-3% 0.5-1% 2-3% 0.5-1%	ACULYN™ Siltouch ¹ ACULYN™ 2051 ¹	2-3% 2-3%
Emulsion Sprays	ACULYN™ 38 ¹	1-2%	ACULYN™ 38 ¹	2-3%				
AP/DEO Roll on	CELLOSIZETM PCG-10 ² ACULYN™ 44 ¹	0.2-1.0% 1-5%						
Lipsticks/Lip Gloss	ETHOCEL™ STD 7 PRM ² ETHOCEL™ STD 10 PRM ²	1-5% 1-5%						
Body Oils	ETHOCEL™ STD 100 PRM ² ETHOCEL™ STD 7 PRM ²	1-4% 1-5%						

¹Rheology Modifier ²Thickener

Skin Cleansing	Viscosity Build		Suspension		Foam Boosting	
Hand & Body Washes (Synthetic surfactants based)	ACULYN™ 22 ¹ ACULYN™ 28 ¹ METHOCEL™ 40-0202 ² CELLOSIZETM PCG-10 ²	2-4% 3-5% 0.2-1.5% 0.2-0.5	ACULYN™ Excel ACULYN™ 88 ¹	4-8% 4-8%	METHOCEL™ 40-0202 ²	0.2-0.8%
Hand & Body Washes (Mixed soap/surfactants based)	ACULYN™ Excel ¹ ACULYN™ 88 ¹	4-8% 4-8%	ACULYN™ Excel ACULYN™ 88 ¹	4-8% 4-8%	METHOCEL™ 40-0202 ²	0.2-0.8%
Oil-based Body Washes	ETHOCEL™ STD 100 PRM ²	5-8%				
Facial Washes	ACULYN™ 28 ¹ ACULYN™ 88 ¹ METHOCEL™ 40-0202 ²	3-4% 3-5% 0.2-1.5%	ACULYN™ Excel ACULYN™ 88 ¹		METHOCEL™ 40-0202 ²	0.2-0.8%
Shaving Preparations	CELLOSIZETM PCG-10 ² METHOCEL™ 40-0100 ²	0.8-1.5% 0.1-0.3%			METHOCEL™ 40-0202 ² METHOCEL™ E50 PRM ²	0.1-0.4% 2-3%
Hydroalcoholic hand sanitizers	ACULYN™ 38 ¹ ACULYN™ 88 ¹	5-10% 5-10%				

¹Rheology Modifier ²Thickener



ACULYN™ Rheology Modifiers Acrylics & Acrylic Hybrids	ACULYN™ Excel Rheology Modifier	ACULYN™ 22 Rheology Modifier	ACULYN™ 28 Rheology Modifier	ACULYN™ 38 Rheology Modifier	ACULYN™ 44 Rheology Modifier	ACULYN™ 88 Rheology Modifier	ACULYN™ 2051 Rheology Modifier	ACULYN™ Siltouch Rheology Modifier
INCI Name	Acrylates Copolymer	Acrylates/ Steareth-20 Methacrylate Copolymer	Acrylates/ Beheneth-25 Methacrylate Copolymer	Acrylates/ Vinyl Neodecanoate Crosspolymer	PEG-150/ Decyl Alcohol/ SMDI Copolymer	Acrylates/ Steareth-20 Methacrylate Crosspolymer	Sodium Polyacrylate (and) Dimethicone (and) Cyclopentasiloxane (and) Trideceth-6 (and) PEG/PPG 18/18 Dimethicone	Sodium Acrylate / Sodium Acryloyldimethyl Taurate Copolymer (and) Dimethicone (and) Trideceth-6 (and) PEG/PPG -18/18 Dimethicone
Key Features	Excellent suspending agent for clear systems usable across a broad pH including acidic pH	Efficient for difficult to thicken surfactant systems	General purpose thickener very efficient at building viscosity and excellent polymeric emulsifier	Excellent suspending agent for thin pour formulation. Exhibiting a non-sticky feel providing formulations with excellent viscosity stability.	Associative thickener specifically suited for cationic ingredients containing formulations	Very efficient associative rheology modifier at building low shear viscosity and impart a mild, non-greasy, non-sticky rich feel to formulations.	Easy to use thickener with excellent emulsifying properties enabling silicone like feel	Easy to use thickener with excellent emulsifying properties enabling a silicone touch usable over a wide pH range
Sensory Profile	NA	NA	Watery, refreshing feel	NA	Luxurious creamy feel	Smooth creamy feel	Smooth, light feel, non sticky	Smooth, light feel, non sticky
Rheology Profile	Nice pouring flow	Rich feel, non sticky, slightly stringy	Quick break, excellent spreadability	Thin pouring texture	Good pick-up	Thick pouring, rich texture	Supple, good pick-up	Supple, good pick-up
Thickening Capability	High	Very High	Very High	Moderate	Low	High	High	High
Associative behaviour	Intermediate	High	Very High	None	High	High	None	None
Ionicity	Anionic	Anionic	Anionic	Anionic	Nonionic	Anionic	Anionic	Anionic
pH of use	pH 3-10	pH 6-10	pH 5-10	pH 6-10	pH 3-10	pH 6-10	pH 5-10	pH 4-10
pH as supplied	3.5	2.7	3	3	8.5	3.8	NA	NA
% Solids	31%	30%	20%	29%	35%	29%	25%	27%
China compliant	Y	Y	Y	Y	Y	Y	Y	Y

CELLOSIZETM Thickeners Water soluble nonionic thickeners for texture adjustments and stabilization		
INCI: Hydroxyethylcellulose, Listed in the catalogue of Cosmetic Ingredients used in China		
Grades	Viscosity Ranges of CELLOSIZETM HEC Aqueous Solutions (mPa.s, 25°C)	Pseudoplasticity
CELLOSIZETM QP-4400H Thickener	4800-6000 (at 2%, 60rpm)	Medium
CELLOSIZETM QP-15000H Thickener	1100-1500 (at 1%, 30 rpm)	Medium
CELLOSIZETM QP-30000H Thickener	1500-2400 (at 1% 30 rpm)	High
CELLOSIZETM QP-52000H Thickener	2400-3000 (at 1% 30 rpm)	High
CELLOSIZETM PCG-10 Thickener	4400-6000 (at 1%,30 rpm)	High
METHOCELTM Thickeners Water soluble nonionic thickeners especially designed for viscosity building in mild cleansing ssystems and for foam boosting		
INCI: Hydroxypropyl Methycellulose, Listed in the catalogue of Cosmetic Ingredients used in China		
Grades	Viscosity Ranges of METHOCELTM HPMC Aqueous Solutions (mPa.s - 20°C - Ubbelohde tube viscometer)	Cold dispersible
METHOCELTM 40-0100 Thickener	10000-16500 (at 2%)	Yes
METHOCELTM 40-0101 Thickener	60000-90000 (at 2%)	Yes
METHOCELTM 40-0202 Thickener	3500-5500 (at 2%)	Yes
METHOCELTM E4M PRM Thickener	2600-5000 (at 2%)	No
METHOCELTM E50 PRM Thickener	40-60 (at 2%)	No
METHOCELTM K100M PRM Thickener	75000-140000 (at 2%)	No

ETHOCEL™ Thickeners			
Oil soluble thickeners providing thickening and film forming properties			
INCI: Ethylcellulose, Listed in the Catalogue of Cosmetic Ingredients Used in China			
Grades	Viscosity Ranges of ETHOCEL™ at 5% solution in 80% toluene and 20% ethanol (cPs - 25°C - Ubbelohde tube viscometer)		Fine powder available
ETHOCEL™ STD 4 PRM Thickener	3-5.5		No
ETHOCEL™ STD 7 PRM Thickener	6-8		Yes
ETHOCEL™ STD 10 PRM Thickener	9-11		Yes
ETHOCEL™ STD 45 PRM Thickener	41-49		No
ETHOCEL™ STD 100 PRM Thickener	90-110		Yes

WALOCEL™ Thickeners			
Anionic water soluble thickeners designed for color cosmetics and oral cosmetics			
INCI: Cellulose Gum, Listed in the Catalogue of Cosmetic Ingredients Used in China			
Grades	Viscosity Ranges of WALOCEL™ CMC Aqueous Solutions (cPs, 25°C)	Degree of Substitution*	Particle size (GA:Granule; PA: Powder; PPA: Fine powder)
WALOCEL™ CRT 1000 Thickener	550-800 (at 2%, 30 rpm)	0.7 0.9	PA GA, PA
WALOCEL™ CRT 2000 Thickener	1900-2800 (at 2%, 30 rpm)	0.7 0.9	GA, PA GA, PA
WALOCEL™ CRT 10000 Thickener	900-1500 (at 2%, 30 rpm)	0.9	GA, PA
WALOCEL™ CRT 15000 Thickener	1900-2600 (at 1%, 30 rpm)	0.9	PPA
WALOCEL™ CRT 30000 Thickener	3000-4000 (at 1%, 30 rpm)	0.9	GA, PA
WALOCEL™ CRT 40000 Thickener	4000-5000 (at 1%, 30 rpm)	0.9	GA, PA
WALOCEL™ CRT 60000 Thickener	4000-5000 (at 2%, 30 rpm)	0.7	GA, PA

*average number of carboxymethyl groups per glucose unit

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