

Performance Additives Brochure





Non-Aqueous Systems

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CLiQSPERSE®

Wetting & Dispersing Agents for Non-Aqueous Systems

CLiQSPERSE®	Product Chemistry	Active	Solvents / Diluents
ВА	polymeric resin-like	73%	white spirit
BF	high molecular weight polyurethane dispersant	45%	xylene / MPA
ВІ	polyester amide polymer	100%	none
BL	high molecular weight polyurethane dispersant	43%	MPA / butyl acetate
BS	polyester amide polymer	40%	MPA
BU	high molecular weight polyurethane dispersant	45%	MPA
CA	salt of polycarbonic acid with polyamine	53%	xylene / isobutanol
CA-100	salt of polycarbonic acid with polyamine	100%	none
ES	polyester branched polymer	100%	none
HA-50	phosphate ester co-polymer	55%	aromatic hydrocarbon / MPA
НА	phosphate ester co-polymer	100%	none
HD	phosphate ester co-polymer	100%	none
НК	neutralised phosphate ester	100%	none
NI	block-copolymer	100%	none
NQ	block-copolymer	100%	none
PH-2	modified polymeric alkylammonium salt	100%	none

Function		Mair	n Applica	ition				
	Compatibility Agent	Agent Wetting Agent Dispersing Agent Coatings/ Paints Pigment Concentrates		Base Paints	Special Features			
		+	+++	+++	++	+	multi-purpose grinding resin	ВА
•		+	+++	++	+++	++	broad pigment compatibility excellent for resin based pigment concentrates	BF
•		+	+++	++	+++		highly recommended as pigment dispersant for 100% UV inks and coatings	BI
•		+	+++	++	+++	+++	aromatic-free dispersant with broad pigment and binder compatibility	BL
		+	+++	++	+++	++	broad system compatibility, for all colours including high-jet blacks and transparent pigments as well as matting agents	BS
		+	+++	++	+++	+++	broad pigment and system compatibility from low-to-high polar systems	BU
		+++	+	++	+	+++	organoclay activator; co-grinding dispersant	CA
•		+++	+	++	+	+++	for solvent-free and high-solid systems	CA-100
,			+++	+++	+++	+++	for high-solid and solvent-free reactive systems, like epoxy, polyurethane & polyaspartics	ES
			+++	+++	+	++	excellent for direct grinding of inorganic pigments and extenders	HA-50
,		+	+++	+++	+	++	excellent for inorganic pigments and extenders; for solvent-free applications	HA
•		+	+++	+++	+	++	economic VOC-free anionic dispersant for inorganic pigments and extenders	- HD
	+	++	+++	++	+++		excellent for inorganic pigments and extenders in all kinds of non-aqueous systems	HK
•		++	+++	+	+++	+	pigment dispersant, particularly carbon black; excellent for NC inks	- NI
,		++	+++	+	+++		highly recommended as pigment dispersant for 100% UV coatings and inks	NQ
		++	+++		+++		solvent-free and high solids coatings, adhesives, liquid masterbatches; excellent for carbon blacks	- PH-2

+ = Recommend

++ = Highly recommend

+++ = Strongly recommend

CLiQFLOW®

Rheological Additives for Non-Aqueous Systems

CLiQFLOW®	Product Chemistry	Active	Activation Requirements	
LP	organically modified smectite clay	100% powder	high shear, dwell time, polar activator, pre-gel	
LED	easy to disperse, organically modified smectite clay	100% powder	shear, dwell time, polar activator beneficial	
ММС	very easy to disperse organically modified mixed mineral	100% powder	shear, dwell time, polar activator beneficial	
707	hydrogenated castor oil	100% powder	shear, dwell time and temperature control	
709	amide modified hydrogenated castor oil	100% powder	shear, dwell time and temperature control	
755	polyethylene wax	20% liquid/paste xylene	shear, temperature	
780	urea urethane	40% liquid cyclic amide	stirring/mixing	

Performance Benefits

Main Application

provides storage stabiliy, sag resistance and flow control	aliphatic and aromatic non-aqueous systems; industrial and decorative coatings, greases and inks	LP
provides storage stability, sag resistance and flow control	aliphatic and aromatic non-aqueous systems; industrial and decorative coatings, greases and inks	LED
provides storage stability, sag resistance and flow control	non-aqueous systems; industrial and decorative coatings, thermosets; allows very high pre-gel conditions	ммс
provides strongly shear thinning flow storage stability, sag control	solvent-free and aliphatic non-aqueous systems; marine/ protective,industrial and powder coatings, adhesives	707
provides strongly shear thinning flow, storage stability, sag control	solvent-free, aliphatic and aromatic based systems; marine/protective, industrial and powder coatings, adhesives	709
anti-settling for pigmented systems, no influence on application viscosity	pigmented industrial systems, marines & protective coatings, aerosols	755
strong thixotropic flow for storage stability and sag resistance	solvent-free, aliphatic to high polar systems; industrial coatings, marine/protective	780

CLiQSMART®

Defoamer & Special Additives for Non-Aqueous Systems

CLiQSMART®	Product Chemistry	VOC-free / Solvent		
AF	polysiloxane defoamer	no / DIBK		
АН	polysiloxane modified polymeric defoamer	no / hydrocarbon		
AK	polyolefin defoamer	VOC-free		
АМ	polymeric defoamer	VOC-free		
AP-20	polymeric defoamer	no / white spirit		
PD-21	polysiloxane modified polymeric defoamer	no / hydrocarbon		
HV-30	MEKO-free anti-skinning agent	no / DPM		
LA-390	levelling agent acrylate based	VOC-free		

Application Field

Clear systems	Pigmented systems	Gloss systems	Silk gloss systems	Matt systems	Main Application/Remarks		
+	+++	++	++	+++	multi-purpose defoamer for industrial non-aqueous coatings		
++	+++	++	++	+++	particularly recommended for aromatic-free conventional coating systems		
+	+++	++	++	+++	broad system compatibility for solvent-free and high solid systems; excellent for high build systems like floor-coatings	AK	
+	+++	++	++	+++	broad system compatibility for solvent-free and high solid systems; highly efficient in high build systems like floor-coatings	АМ	
	+++	+	++	+++	polysiloxane free multi-purpose defoamer for industiral coatings	AP-20	
	+++ + +++		+++	excellent defoamer for conventional high build epoxy systems	PD-21		
prevents skin formation in air dry alkyds					decorative and light industrial alkyds; MEKO alternative	HV-30	
improves levelling of high build systems		tems	especially recommended for floor coatings	LA-390			

CLiQSPERSE®

Wetting & Dispersing Agents for Aqueous Systems

CLiQSPERSE®	Product Chemistry	Active	Solvents / Diluents
123	polyglycolether	100%	VOC-free
124	polyglycolether	90%	water, VOC-free
125	polyglycolether	100%	VOC-free
126	polyglycolether	100%	VOC-free
127	modified polyglycolether	100%	VOC-free
140	polyglycolether	100%	VOC-free
142	modified polyglycolether	60%	water / VOC-free

Function		Main	Applica	tion				
	Compatibility Agent	Wetting Agent	Dispersing Agent	Coatings/ Paints	Pigment Concentrates	Base Paints	Special Features	
	+	+++	+	+	+++	+	pigment wetting agent; improves colour strength and reduces viscosity in waterborne concentrates	123
	++	+++		+++	++	+++	labelling-free economic wetting agent and compatibilizer for coatings and pigment concentrates	124
	++	+++	++	+++	++	+++	wetting agent with stabilising properties for industrial coatings	125
	+++	+++	+	++	+++	++	environmentally friendly, labelling-free multi purpose wetting agent for universal colorants	126
	+	+++	+	+++	+	+++	environmentally friendly, labelling-free dynamic wetting agent, low foam formation	
		+++		++	+++		excellent wetting agent for effect pigments and high gloss industrial/decorative coatings	140
		++	+++		+++	+	particularly recommended for all pigments concentrates for inks and carbon blacks	142

CLiQSPERSE®

Wetting & Dispersing Agents for Aqueous Systems

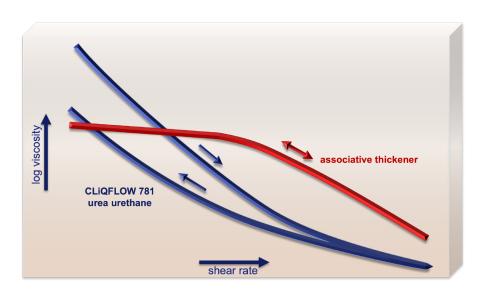
CLiQSPERSE®	Product Chemistry	Active Content	Solvents / Diluents
100 BR	barium sulfate dispersion	35%	water, VOC-free
128	polymeric carboxylate	25%	water
130	polymeric carboxylate	20%	water, VOC-free
132	fatty acid modified polyester	100%	VOC-free
133	fatty acid modified polyester	100%	VOC-free
135	neutralised phospate ester	100%	VOC-free
149	polymeric dispersant	100%	VOC-free
150	polymeric dispersant	40%	water, VOC-free
151	polymeric dispersant	40%	water, VOC-free
152	polymeric/surfactant blend	38%	water
153	polymeric dispersant	100%	VOC-free
155	polymeric dispersant	40%	VOC-free
163	anionic surfactant	70%	propylene glycol
172	sodium polycarboxylate	45%	water, VOC-free
176	ammonium polycarboxylate	40%	water, VOC-free
180	polymeric dispersant	35%	water

Function		Function Main Application					
Compatibility Agent	Wetting Agent	Dispersing Agent	Coatings/ Paints	Pigment Concentrates	Base Paints	Special Features	
		+++		+++		spacing agent to improve colour development; especially recommended for high jet blacks	100 BR
	+	+++	+++	+++	++	excellent resin compatibility, general industrial coating	128
	+	+++	+++	+++	++	excellent resin compatibility, decorative coatings	130
+	++	+++		+++	+	performs as universal dispersant in pigment concentrates for decorative coatings	132
+	++	+++		+++	+	for universal colorants to improve compatibility; for all pigment types	133
+	++	+++	+	+++	+	for decorative aqueous and universal pigment concentrates; excellent for inorganic pigments	135
	++	+++	+	+++		particularly recommended for organic pigments and high jetness black	149
		+++	++	+++	+++	universal for all pigments used in decorative and industrial coatings and pigment concentrates	150
		+++	++	+++	++	dispersant for all pigments; low concentrate viscosities at high loading	151
+	+++	+++	+++	+++	++	for resin free pigment concentrates; excellent for high performing wood and industrial coatings	152
		+++	++	+++	++	universal for all pigments; used in decorative coatings and pigment concentrates	153
		+++	++	+++	+++	for industrial coatings and pigment concentrates	155
+++	+++			++	+++	highly efficient compatibilizer specifically for non-aqueous alkyd paints	163
		++	+++		++	highly efficient for inorganic pigments and fillers; odourless	172
		++	+++		++	highly efficient for inorganic pigments and fillers	176
+	+++	+++	+++	+++	+++	for all pigments; excellent for high performing wood and industrial coatings/pigment concentrates	180

CLiQFLOW®

Rheological Additives for Aqueous Systems

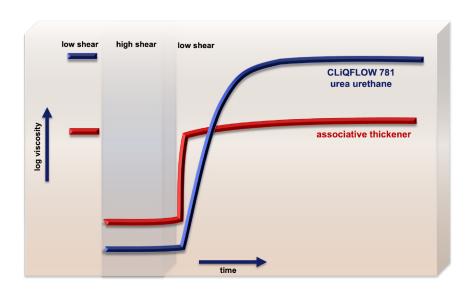
CLiQFLOW®	Product Chemistry	Active	Solvents / Diluents
601	beneficated and activated smectite clay	100% powder	none
602	organically modified smectite clay	100% powder	none
603	organically modified smectite clay	100% powder	none
615	highly activated smectite clay	100% powder	none
535	hydrophobically modified alkali swellable emulsion	30% liquid	water, VOC-free
538	hydrophobically modified alkali swellable emulsion	30% liquid	water, VOC-free
781	urea urethane	40% liquid	cyclic amide



Flow behaviour CLiQFLOW 781

VIscosity Development

Low Shear	Mid Shear	High Shear	Special Features	
+++	+		mineral based construction systems, high pvc emulsion paints	601
+++	++		epoxy coatings, emulsion paints, construction systems	602
+++	++	+	emulsion and silicate paints, industrial coatings; provides a strongly shear thinning flow with excellent sag resistance and storage stability	603
+++	+		high value decorative and industrial systems; provides a clear gel, excellent for clear coat	615
++	++	+	provides a balanced sag and levelling performance with good storage stability; reduces spattering during rolling application	535
+	+	++	highly efficient in high shear thickening; improves brush drag and reduces spattering during rolling application	538
+++	+		provides structure and storage stability with a strongly thixotropic flow; excellent for industrial spray applied and dip coatings	781

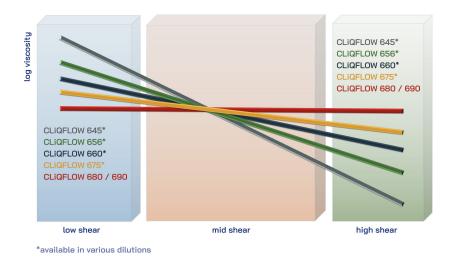


Structure recovery CLiQFLOW 781

CLiQFLOW®

Rheological Additives for Aqueous Systems

CLiQFLOW®	Product Chemistry	Active	VOC compliant	
645 VR	non-ionic polyurethane associative thickener	25% liquid	yes; water and BTG	
656 VR	non-ionic polyurethane associative thickener	20% liquid	yes; water and BTG	
660 VR 660 VR (40%) 660 VF-3	non-ionic polyurethane associative thickener	25% liquid 40% liquid 20% liquid	yes; water and BTG yes; water and BTG yes; water and surfactant	
661 VR	non-ionic polyurethane associative thickener	40% liquid	yes; water and BTG	
675 675 VR 675 VR (40%) 675 VF	non-ionic polyurethane associative thickener	25% liquid 25% liquid 40% liquid 25% liquid	no; water and BDG yes; water and BTG yes; water and BTG yes; water and surfactant	
680	non-ionic polyurethane associative thickener	20% liquid	yes; water	
690	non-ionic polyurethane associative thickener	20% liquid	yes; water	
681	non-ionic polyurethane associative thickener	40% liquid	yes; water	

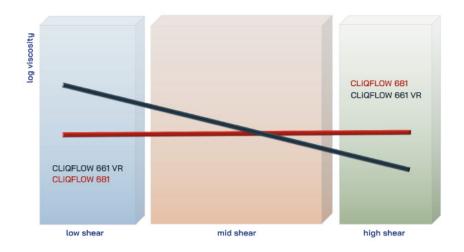


Flow behaviour of CLiQFLOW associative thickeners



VIscosity Development

Low Shear	Mid Shear	High Shear	Special Features	
+++	+		provides extremely low shear viscosity; excellent for spray applied and dip coatings	645 VR
+++	+		low shear thickener with mid shear contribution; for industrial and decorative coatings	656 VR
++	++	+	low and mid-shear thickener for decorative and industrial systems for excellent sag/levelling balance	660 VR 660 VR (40%) 660 VF-3
++	++	+	excellent for pigment concentrates and industrial coatings; excellent for PUD's	661 VR
+	+++	++	balanced thickener for decorative and industrial coatings; providing mid-shear and high-shear viscosity	675 675 VR 675 VR (40%) 675 VF
	+	+++	Newtonian flow, to improve brush drag; reduces spattering during roller application	680
	+	+++	highly efficient Newtonian thickener; improves brush drag and reduces spattering during roller application	690
	++	++	excellent for pigment concentrates and industrial coatings; recommended for blade, roller and brush application	681



Flow behaviour of CLiQFLOW associative thickeners

CLiQSMART®

Special Additives for Aqueous Systems

CLiQSMART®	Product Chemistry	Active	VOC-compliant
129	urethane based humectant	75% liquid	yes; water
129-30	modified urethan based humectant; VOC-free	90% liquid	yes; water
HM-1	modified polymeric based humectant; VOC-free	100% liquid	yes; none
HM-2	polymeric humectant, VOC-free	100% liquid	yes; none
N-1	amine based neutraliser	90% liquid	no, water
RI-1	nitrite free corrosion inhibitor	50% liquid	no, water

CLiQSMART®

Defoamer for Aqueous Systems

CLiQSMART®	Product Chemistry	Active	VOC-compliant
110	polymeric defoamer emulsion mineral-oil and silicone-free	55%	yes; water
111	bio based polymeric defoamer, mineral-oil free and silicone-free	100%	yes; none
112	polymeric defoamer, mineral-oil and silicone-free	100%	yes; none
1031	polyglycol	100%	yes; none
1032	1032 polyglycol emulsion		yes; water
1052 polysiloxane emulsion		11%	yes; water
1061	modified polysiloxane	100%	yes; none

Performance Benefits

Main Application

prevents drying-out of highly concentrated pigment pastes; glycol replacement	pigment concentrates for in-shop-tinting; can also be applied in in-plant-tinting systems	129
prevents drying-out of highly concentrated pigment pastes; glycol replacement	pigment concentrates for in-shop-tinting; can also be applied in in-plant-tinting systems	129-30
prevents drying-out of highly concentrated pigment pastes; glycol replacement	pigment concentrates for in-shop and in-plant-tinting; provides additional wetting properties	HM-1
prevents drying-out of highly concentrated pigment pastes; glycol replacement	pigment concentrates for in-shop and in-plant-tinting, provides similar performance to lower molecular weight PEG	HM-2
wetting agent for inorganic pigments and fillers, neutralising agent	industrial and decorative coatings, extender slurries and inorganic concentrates to improve stability	N-1
liquid corrosion inhibitor for in-can and flash-rust inhibition	industrial and decorative coatings, direct-to-metal aqueous protective coatings	RI-1

Application Field

Clear	Pigmented systems	Gloss systems	Silk gross + systems	Matt systems	Main Application/Remarks easy to incorporate defoamer emulsion for emulsion paints pvc > 30%, plasters and adhesives	110
	+++		++	+++	emulsion paints pvc > 50%, plasters and adhesives with high bio polymer content	111
	+++		++	+++	emulsion paints pvc > 30%, plasters and adhesives	112
++	+++	++	+++		mineral oil- and silicone-free for mid-to-high pvc emulsion paints, adhesives and inks	1031
	+++	+	++	+++	emulsion paints and adhesives; excellent system compatibility	1032
	+++	+	++	+++	economic grade for pigmented low-to-semi gloss systems with pvc < 50%	1052
	+++		+	+++	excellent for industrial coatings and pigment concentrates, requires high shear incorporation	1061



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